

**PERANCANGAN MANAJEMEN SISTEM APLIKASI
LEARNING BERBASIS ANDROID
(Studi Kasus: SMK Muhammadiyah 1 Prambanan Klaten)**

ABSTRAK

Pokok permasalahan dalam skripsi ini adalah 1) media yang digunakan guru dalam proses pembelajaran belum bervariasi, guru cenderung menggunakan buku paket dan LKS sehingga membuat siswa kurang tertarik mengikuti proses pembelajaran, 2) Siswa diperbolehkan menggunakan handphone sebagai sumber belajar, 3) Di sekolah kapasitas wifi sudah tersedia namun belum digunakan secara optimal dalam proses pembelajaran karena keterbatasan media dalam penggunaannya, 4) Siswa lebih tertarik dalam pencarian tugas lewat internet, 5) Siswa lebih tertarik mencari tugas menggunakan hp daripada buku yang ada di perpustakaan, 6) Guru masih kurang menggunakan multimedia dalam proses pembelajaran, 7) Sekolah kurang mengintegrasikan kebudayaan lokal contohnya materi pembelajaran belum memuat kebudayaan kearifan lokal, maka peneliti merancang aplikasi *e-learning* berbasis *android* terintegrasi dengan kebudayaan lokal. Penelitian ini bertujuan untuk menghasilkan yang aplikasi *e-learning* berbasis *android* terintegrasi dengan kebudayaan lokal yang valid dan praktis untuk SMK Muhammadiyah 1 Prambanan Klaten. Penelitian ini dibuat dengan menerapkan desain arsitektur REST API dan MVP. Model-View-Presenter (MVP) adalah salah satu dari pola arsitektur yang mengusung pemisahan kepentingan, yang memisahkan antara grafis antarmuka dan proses logika bisnis. Aplikasi yang dihasilkan dikembangkan menggunakan bahasa pemrograman kotlin dan PHP. Hasil uji aplikasi menggunakan metode Whitebox menyatakan bahwa aplikasi berjalan dengan lancar dan sesuai perkiraan. Dengan menerapkan desain arsitektur REST API dan pola arsitektur MVP menghasilkan aplikasi *e-Learning* berbasis *android* yang ringan dan *user friendly*. Kedepannya, penelitian ini akan dikembangkan sehingga aplikasi yang dihasilkan lebih banyak fiturnya.

Kata Kunci: SMK Muhammadiyah 1 Prambanan Klaten, E-Learning, Android, REST API, MVP.

N a m a : Argenta Maulana Isnan
Kewarganegaraan : Indonesia
Alamat : Kejambon Kidul RT02/RW14, Sindumartani, Ngemplak,
Sleman, Yogyakarta
Kode Pos : 55584

N a m a : 2. Agus Suhendar.S.T.,M.Eng
Kewarganegaraan : Indonesia
Alamat : Degan II, 082/041, Banjararum, Kalibawang, Kulon Progo,
Yogyakarta
Kode Pos : 55672

Daftar Nama Pengusul

N a m a : 1. Argenta Maulana Isnan
Kewarganegaraan : Indonesia
Alamat : Kejambon Kidul RT02/RW14, Sindumartani, Ngemplak,
Sleman, Yogyakarta
Kode Pos : 55584
No Hp : 08975917811
Alamat email : argenta2705@gmail.com

N a m a : 2. Agus Suhendar,S.T.,M.Eng
Kewarganegaraan : Indonesia
Alamat : Degan II, 082/041, Banjararum, Kalibawang, Kulon
Progo, Yogyakarta
Kode Pos : 55672
No Hp : 081578888331
Alamat email : agus.suhendar@staff.uty.ac.id

PROVINSI DAERAH ISTIMEWA YOGYAKARTA
KABUPATEN SLEMAN

NIK : 3404112705010001

Nama : ARGENTA MAULANA ISNAN
Tempat/Tgl Lahir : SLEMAN, 27-05-2001
Jenis kelamin : LAKI-LAKI Gol. Darah : -
Alamat : KEJAMBON KIDUL
RT/RW : 002/014
Kel/Desa : SINDUMARTANI
Kecamatan : NGEMPLAK
Agama : ISLAM
Status Perkawinan : BELUM KAWIN
Pekerjaan : PELAJAR/MAHASISWA
Kewarganegaraan : WNI
Berlaku Hingga : SEUMUR HIDUP



SLEMAN
06-09-2018

PROVINSI DAERAH ISTIMEWA YOGYAKARTA
KABUPATEN KULON PROGO

NIK : 3401122007870001

Nama : AGUS SUHENDAR, S.T. M.Eng.
Tempat/Tgl Lahir : KOTABUMI, 20-07-1987
Jenis kelamin : LAKI-LAKI Gol. Darah : B
Alamat : DEGAN II
RT/RW : 082/041
Kel/Desa : BANJARARUM
Kecamatan : KALIBAWANG
Agama : ISLAM
Status Perkawinan : KAWIN
Pekerjaan : DOSEN
Kewarganegaraan : WNI
Berlaku Hingga : SEUMUR HIDUP



KULON PROGO
21-05-2018

A handwritten signature in black ink, consisting of a large, stylized letter 'A' followed by several horizontal strokes.

MANUAL SISTEM

**PERANCANGAN MANAJEMEN SISTEM APLIKASI
LEARNING BERBASIS ANDROID**

(Studi Kasus: SMK Muhammadiyah 1 Prambanan Klaten)



OLEH:

1. Agus Suhendar. S.T.,M.Eng
2. Argenta Maulana Isnani

(NIDN. 110919178)
(NPM. 5200411428)

UNIVERSITAS TEKNOLOGI YOGYAKARTA
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DAFTAR ISI

DAFTAR ISI.....	i
DAFTAR GAMBAR.....	ii
1. TAMPILAN DAN KODE PROGRAM.....	1
1.1 Halaman Home e-Learning	1
1.1.1. Tampilan Halaman Home e-Learning.....	1
1.1.2. Source Code View Home.....	1
1.1.3. Source Code Fragment Home	4
1.1.4. Source Code Presenter Home	6
1.2 Halaman My course	8
1.2.1. Tampilan My course.....	8
1.2.2. Source Code Model Course.....	8
1.2.3. Source Code Course Activity	8
1.3 Halaman Search Course	10
1.3.1. Tampilan Halaman Search Course	10
1.3.2. Source Code activity course.....	10
1.4 Halaman Detail Course.....	12
1.4.1 Tampilan Halaman Detail Course Sebelum add ke my course	12
1.4.2 Tampilan Halaman Detail Course Setelah add ke my course	13
1.4.3 Source Code activity module	13
1.4.4 Source Code module activity	16
1.4.5 Source Code module presenter	18
1.5 Halaman Materi	14
1.5.1 Tampilan Halaman materi.....	14
1.5.2 Source Code activity detail.....	14
1.5.3 Source Code detail activity.....	16
1.5.4 Source Code detail presenter	18
1.6 Halaman Tugas.....	19
1.6.1 Tampilan Halaman Tugas	19
1.6.2 Source Code rv item tugas	19
1.6.3 Source Code Tugas Presenter	21
1.6.4 Source Code Tugas Model.....	22
1.7 Halaman Upload & Download Tugas	23
1.7.1 Tampilan Halaman upload dan download	23

1.7.2	Source code activity Kumpul tugas	23
1.7.3	Source code Kumpul tugas activity	26
1.7.4	Source code Kumpul tugas presenter	30
2.	PENGUNAAN PROGRAM	32
2.1	Langkah Login Aplikasi	32
2.2	Langkah Halaman Home	33
2.3	Langkah download materi	34
2.4	Langkah Tugas.....	34

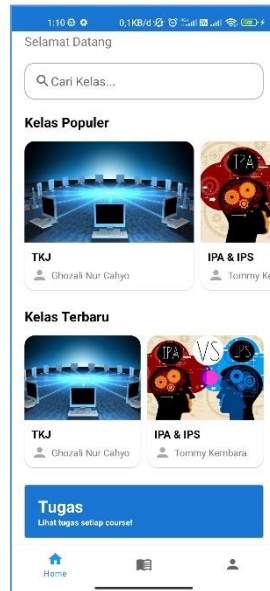
DAFTAR GAMBAR

Gambar 1 - Halaman Home	1
Gambar 2 – Halaman My course	8
Gambar 3 – Halaman Search Course	10
Gambar 4 – Halaman detail course sebelum add	12
Gambar 5 - Halaman detail course setelah add	13
Gambar 6 – Halaman unduh materi	14
Gambar 7 – Unduh Materi	14
Gambar 8 – tugas sebelum dikerjakan	19
Gambar 9 – tugas setelah dikerjakan	19
Gambar 10 – Halaman upload	23
Gambar 11 – halaman download	23
Gambar 12 – Login	32
Gambar 13 – Halaman Home.....	33
Gambar 14 Langkah add course.....	33
Gambar 15 – Langkah download materi.....	34
Gambar 16 Langkah Tugas	34

1. TAMPILAN DAN KODE PROGRAM

1.1 Halaman Home e-Learning

1.1.1. Tampilan Halaman Home e-Learning



Gambar 1 - Halaman Home

1.1.2. Source Code View Home

```
<?xml version="1.0" encoding="utf-8" ?>
<androidx.swiperefreshlayout.widget.SwipeRefreshLayout
    android:id="@+id/swipe"
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ui.home.HomeFragment"
    >

    <androidx.core.widget.NestedScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        >

        <androidx.constraintlayout.widget.ConstraintLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:paddingTop="20dp"
            android:paddingBottom="20dp"
            >
            <TextView
                android:id="@+id/text_title"
                android:layout_width="0dp"
                android:layout_height="wrap_content"
                android:layout_marginStart="20dp"
```



```

        android:layout_marginEnd="20dp"
        android:textColor="@color/black"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:text="Halo, Argenta" />

<TextView
    android:id="@+id/label_subtitle"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginTop="5dp"
    android:textSize="18sp"
    app:layout_constraintEnd_toEndOf="@+id/text_title"
app:layout_constraintStart_toStartOf="@+id/text_title"

app:layout_constraintTop_toBottomOf="@+id/text_title"
    android:text="Selamat Datang"
    tools:ignore="HardcodedText" />

<com.google.android.material.card.MaterialCardView
    android:id="@+id/card_search"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    app:cardCornerRadius="15dp"
    app:layout_constraintEnd_toEndOf="@+id/text_title"

app:layout_constraintStart_toStartOf="@+id/text_title"

app:layout_constraintTop_toBottomOf="@+id/label_subtitle"
    app:strokeColor="@android:color/darker_gray"
    app:strokeWidth="1dp">

    <EditText
        android:id="@+id/edit_search"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="@android:color/transparent"
        android:drawableStart="@drawable/ic_search"
        android:hint="Cari Kelas..."
        android:padding="15dp"
        android:focusable="false"
        tools:ignore="HardcodedText" />

</com.google.android.material.card.MaterialCardView>

<TextView
    android:id="@+id/label_popular"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:textColor="@color/black"
    android:textSize="20sp"
    android:textStyle="bold"

app:layout_constraintStart_toStartOf="@+id/text_title"
    app:layout_constraintEnd_toEndOf="@+id/text_title"

```

```

app:layout_constraintTop_toBottomOf="@+id/card_search"
    android:text="Kelas Populer" />

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/list_popular"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        android:orientation="horizontal"
        android:clipToPadding="false"
        android:paddingStart="15dp"
        android:paddingEnd="15dp"

app:layoutManager="androidx.recyclerview.widget.LinearLayoutManager"
"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/label_popular"
    tools:listitem="@layout/adapter_popular" />

    <TextView
        android:id="@+id/label_latest"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:textColor="@color/black"
        android:textSize="20sp"
        android:textStyle="bold"

app:layout_constraintStart_toStartOf="@+id/text_title"

app:layout_constraintTop_toBottomOf="@+id/list_popular"
    android:text="Kelas Terbaru" />

    <TextView
        android:id="@+id/text_latest"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textColor="@color/blue_500"
        android:textSize="14sp"
        android:textStyle="bold"

app:layout_constraintBottom_toBottomOf="@+id/label_latest"
    app:layout_constraintEnd_toEndOf="@+id/text_title"

app:layout_constraintTop_toTopOf="@+id/label_latest"
    tools:text="Lihat Semua" />

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/list_latest"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        android:layout_marginStart="15dp"
        android:layout_marginEnd="15dp"

app:layoutManager="androidx.recyclerview.widget.GridLayoutManager"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"

```

```

app:layout_constraintTop_toBottomOf="@+id/label_latest"
    app:spanCount="2" />

    <com.google.android.material.card.MaterialCardView
        android:id="@+id/card_tugas"
        android:layout_width="0dp"
        android:layout_height="80dp"
        android:layout_marginTop="20dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/list_latest"
    app:strokeColor="@android:color/darker_gray"
    app:strokeWidth="1dp"
    android:layout_marginStart="20dp"
    android:layout_marginEnd="20dp"
    app:cardBackgroundColor="@color/blue_700"
    >
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:gravity="center_vertical"
        android:layout_marginHorizontal="20dp"
        >
        <TextView
            android:id="@+id/text_tugas"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textColor="@color/white"
            android:textSize="24sp"
            android:textStyle="bold"
            android:text="Tugas" />
        <TextView
            android:id="@+id/text_subtugas"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textColor="@color/white"
            android:textSize="12sp"
            android:textStyle="bold"
            android:text="Lihat tugas setiap course!"
        />
    </LinearLayout>
    </com.google.android.material.card.MaterialCardView>
</androidx.constraintlayout.widget.ConstraintLayout>

</androidx.core.widget.NestedScrollView>
</androidx.swiperefreshlayout.widget.SwipeRefreshLayout>

```

1.1.3. Source Code Fragment Home

```

package com.tugasakhir.learningsmk.ui.home

import android.content.Intent
import android.os.Bundle
import android.view.LayoutInflater
import android.view.View
import android.view.ViewGroup
import android.widget.Toast

```



```

import androidx.fragment.app.Fragment
import com.tugasakhir.learningsmk.databinding.FragmentHomeBinding
import com.tugasakhir.learningsmk.preferences.PrefManager
import com.tugasakhir.learningsmk.network.ApiClient
import com.tugasakhir.learningsmk.ui.course.*
import com.tugasakhir.learningsmk.ui.login.LoginData
import com.tugasakhir.learningsmk.ui.module.ModuleActivity
import com.tugasakhir.learningsmk.ui.tugas.TugasActivity

class HomeFragment : Fragment(), HomeView {

    private lateinit var binding: FragmentHomeBinding
    private lateinit var presenter: HomePresenter
    private lateinit var popularAdapter: PopularAdapter
    private lateinit var latestAdapter: CourseAdapter

    override fun onCreateView(
        inflater: LayoutInflater,
        container: ViewGroup?,
        savedInstanceState: Bundle?
    ): View? {
        binding = FragmentHomeBinding.inflate(inflater, container,
false)
        presenter = HomePresenter(
            this,
            PrefManager(requireContext()),
            ApiClient.getService()
        )

        binding.cardTugas.setOnClickListener {
            val i = Intent(requireActivity(),
TugasActivity::class.java)
            startActivity(i)
        }

        return binding.root
    }

    override fun onViewCreated(view: View, savedInstanceState:
Bundle?) {
        super.onViewCreated(view, savedInstanceState)
        binding.editSearch.setOnClickListener {
            startActivity(Intent(requireContext(),
CourseActivity::class.java))
        }
    }

    override fun setupListener() {
        popularAdapter = PopularAdapter(arrayListOf(), object:
PopularAdapter.AdapterListener {
            override fun onClick(course: CourseData) {
                startActivity(
                    Intent(requireContext(),
ModuleActivity::class.java)
                        .putExtra("id", course.id)
                )
            }
        })
        binding.listPopular.adapter = popularAdapter
        latestAdapter = CourseAdapter(arrayListOf(), object:
CourseAdapter.AdapterListener {

```

```

        override fun onClick(course: CourseData) {
            startActivity(
                Intent(requireContext(),
ModuleActivity::class.java)
                    .putExtra("id", course.id)
            )
        }
    })
    binding.listLatest.adapter = latestAdapter
    binding.swipe.setOnRefreshListener {
        presenter.fetchHome()
    }
}

override fun user(user: LoginData) {
    binding.textTitle.text = "Halo, ${user.name}"
}

override fun homeLoading/loading: Boolean) {
    binding.swipe.isRefreshing = loading
}

override fun homeResponse(response: HomeResponse) {
    popularAdapter.addList( response.data.popular )
    latestAdapter.addList( response.data.latest )
}

override fun homeError(msg: String) {
    Toast.makeText(requireContext(), msg,
Toast.LENGTH_SHORT).show()
}
}

```

1.1.4. Source Code Presenter Home

```

package com.tugasakhir.learningsmk.ui.home

import com.tugasakhir.learningsmk.preferences.PrefManager
import com.tugasakhir.learningsmk.network.ApiService
import com.tugasakhir.learningsmk.ui.login.LoginData
import com.tugasakhir.learningsmk.util.userLogin
import kotlinx.coroutines.*

class HomePresenter (
    private val view: HomeView,
    private val pref: PrefManager,
    private val api: ApiService,
) {

    init {
        view.setupListener()
        view.user( userLogin( pref ) )
        fetchHome()
    }

    fun fetchHome() {
        view.homeLoading(true)
        GlobalScope.launch {

            val response = api.home()

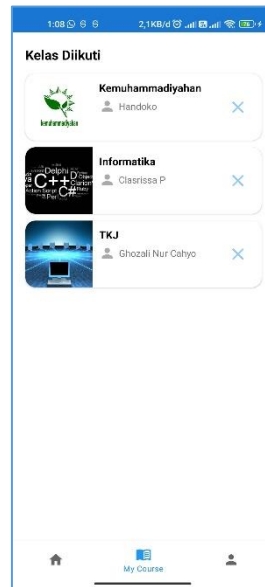
```

```
        if (response.isSuccessful) {
            withContext(Dispatchers.Main) {
                view.homeResponse( response.body()!! )
                view.homeLoading(false)
            }
        } else {
            view.homeError("Terjadi kesalahan")
        }
    }
}

interface HomeView {
    fun setupListener()
    fun user(user: LoginData)
    fun homeLoading(loading: Boolean)
    fun homeResponse(response: HomeResponse)
    fun homeError(msg: String)
}
```


1.2 Halaman My course

1.2.1. Tampilan My course



Gambar 2 – Halaman My course

1.2.2. Source Code Model Course

```
package com.tugasakhir.learningsmk.ui.course

data class CourseResponse(
    val data: List<CourseData>
)

data class CourseData (
    val id: Int,
    val category: String,
    val guru: String,
    val title: String,
    val description: String,
    val group: String,
    val thumbnail: String,
)

data class CategoryResponse(
    val data: List<CategoryData>
)

data class CategoryData (
    val id: Int,
    val name: String
)
```

1.2.3. Source Code Course Activity

```
package com.tugasakhir.learningsmk.ui.course

import android.content.Intent
import android.os.Bundle
```

```

import android.view.inputmethod.EditorInfo
import android.widget.Toast
import androidx.core.widget.doAfterTextChanged
import com.tugasakhir.learningsmk.databinding.ActivityCourseBinding
import com.tugasakhir.learningsmk.network.ApiClient
import com.tugasakhir.learningsmk.ui.BaseActivity
import com.tugasakhir.learningsmk.ui.module.ModuleActivity

class CourseActivity : BaseActivity(), CourseView {

    private val binding by lazy {
        ActivityCourseBinding.inflate(layoutInflater) }
    private lateinit var presenter: CoursePresenter
    private lateinit var courseAdapter: CourseAdapter
    private lateinit var categoryAdapter: CategoryAdapter
    private var keyword = ""

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(binding.root)
        presenter = CoursePresenter(this, ApiClient.getService())
    }

    override fun setupListener() {
        courseAdapter = CourseAdapter(arrayListOf(), object:
        CourseAdapter.AdapterViewListener {
            override fun onClick(course: CourseData) {
                startActivity(
                    Intent(this@CourseActivity,
                    ModuleActivity::class.java)
                    .putExtra("id", course.id)
                )
            }
        })
        binding.listCourse.adapter = courseAdapter

        categoryAdapter = CategoryAdapter(arrayListOf(), object:
        CategoryAdapter.AdapterViewListener {
            override fun onClick(category: CategoryData) {
                if (category.id == 0 ) presenter.fetchCourse(
                keyword )
                else presenter.fetchCourse( category.id )
            }
        })
        binding.listCategory.adapter = categoryAdapter

        binding.editSearch.doAfterTextChanged {
            keyword = it.toString()
        }
        binding.editSearch.setOnEditorActionListener { textView,
        id, keyEvent ->
            if (id == EditorInfo.IME_ACTION_SEARCH) {
                presenter.fetchCourse(keyword)
            }
            false
        }

        binding.swipe.setOnRefreshListener {
            presenter.fetchCourse(keyword)
        }
    }
}

```

```

override fun courseLoading(loading: Boolean) {
    binding.swipe.isRefreshing = loading
}

override fun courseResponse(response: CourseResponse) {
    courseAdapter.addList( response.data )
}

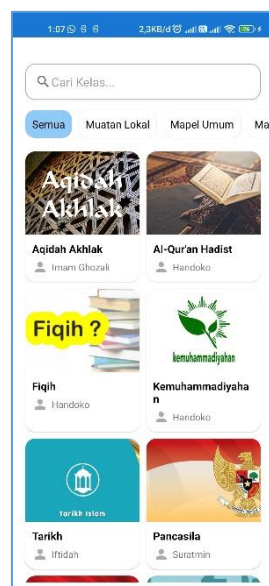
override fun categoryResponse(response: CategoryResponse) {
    categoryAdapter.addList( response.data )
}

override fun courseError(msg: String) {
    Toast.makeText( applicationContext, msg,
Toast.LENGTH_SHORT ).show()
    binding.swipe.isRefreshing = false
}
}

```

1.3 Halaman Search Course

1.3.1. Tampilan Halaman Search Course



Gambar 3 – Halaman Search Course

1.3.2. Source Code activity course

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ui.course.CourseActivity"
    android:paddingTop="20dp"
>

```



```

<com.google.android.material.card.MaterialCardView
    android:id="@+id/card_search"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:layout_marginStart="20dp"
    android:layout_marginEnd="20dp"
    app:cardCornerRadius="15dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:strokeColor="@android:color/darker_gray"
    app:strokeWidth="1dp">

    <EditText
        android:id="@+id/edit_search"
        android:inputType="text"
        android:imeOptions="actionSearch"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="@android:color/transparent"
        android:drawableStart="@drawable/ic_search"
        android:hint="Cari Kelas..."
        android:padding="15dp"
        tools:ignore="HardcodedText" />

</com.google.android.material.card.MaterialCardView>

<androidx.recyclerview.widget.RecyclerView
    android:id="@+id/list_category"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginTop="10dp"

app:layoutManager="androidx.recyclerview.widget.LinearLayoutManager"
"
    android:orientation="horizontal"
    app:spanCount="2"
    android:clipToPadding="false"
    android:paddingStart="15dp"
    android:paddingEnd="15dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/card_search"
    tools:listitem="@layout/adapter_category"
/>

<androidx.swiperefreshlayout.widget.SwipeRefreshLayout
    android:id="@+id/swipe"
    android:layout_width="0dp"
    android:layout_height="0dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/list_category"
    app:layout_constraintBottom_toBottomOf="parent"
>
    <androidx.core.widget.NestedScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        >
        <androidx.constraintlayout.widget.ConstraintLayout

```

```

        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:paddingTop="10dp"
        android:paddingBottom="20dp"
        android:paddingStart="15dp"
        android:paddingEnd="15dp"
    >
    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/list_course"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginTop="10dp"

app:layoutManager="androidx.recyclerview.widget.GridLayoutManager"
    app:spanCount="2"
    tools:listitem="@layout/adapter_course" />

    </androidx.constraintlayout.widget.ConstraintLayout>
</androidx.core.widget.NestedScrollView>
</androidx.swiperefreshlayout.widget.SwipeRefreshLayout>

</androidx.constraintlayout.widget.ConstraintLayout>

```

1.4 Halaman Detail Course

1.4.1 Tampilan Halaman Detail Course Sebelum add ke my course



Gambar 4 – Halaman detail course sebelum add

1.4.2 Tampilan Halaman Detail Course Setelah add ke my course



Gambar 5 - Halaman detail course setelah add

1.4.3 Source Code activity module

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:fitsSystemWindows="true"
    tools:context=".ui.module.ModuleActivity"
    >
    <com.google.android.material.appbar.AppBarLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:backgroundTint="@color/white"
        >
        <com.google.android.material.appbar.CollapsingToolbarLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            app:layout_scrollFlags="scroll|exitUntilCollapsed"
            >
            <com.google.android.material.card.MaterialCardView
                android:id="@+id/card_room"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_margin="10dp"
                app:cardCornerRadius="15dp"
                app:layout_collapseMode="parallax"
                >
                <androidx.constraintlayout.widget.ConstraintLayout
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    >
```

```

        <ImageView
            android:id="@+id/image_cover"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:adjustViewBounds="true"
            android:src="@drawable/placeholder"
            android:scaleType="fitCenter"

app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintTop_toTopOf="parent"
        />
        <ImageView
            android:id="@+id/image_bookmark"
            android:layout_width="50dp"
            android:layout_height="50dp"
            android:layout_margin="10dp"
            android:src="@drawable/ic_bookmark_add"
            app:tint="@color/blue_200"
            app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintTop_toBottomOf="@+id/image_cover"

app:layout_constraintBottom_toBottomOf="parent"
            tools:ignore="ContentDescription" />
        <TextView
            android:id="@+id/text_title"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:paddingStart="10dp"
            android:paddingEnd="10dp"
            android:paddingTop="10dp"
            tools:text="Personal Branding 101"
            android:textColor="@color/black"
            android:textSize="24sp"
            android:textStyle="bold"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/image_cover"
        />
        <TextView
            android:id="@+id/text_mentor"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:paddingStart="10dp"
            android:paddingEnd="10dp"
            android:paddingTop="5dp"
            android:paddingBottom="10dp"
            tools:text="Argenta Maulana"
            android:textSize="16sp"

app:drawableStartCompat="@drawable/ic_person"

app:drawableTint="@android:color/darker_gray"
            android:drawablePadding="5dp"
            android:gravity="center"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/text_title"

```



```

        />

        <TextView
            android:id="@+id/text_modules"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:paddingStart="10dp"
            android:paddingEnd="10dp"
            android:paddingTop="20dp"
            android:paddingBottom="10dp"
            tools:text="10 Pelajaran"
            android:textSize="12sp"

app:drawableStartCompat="@drawable/ic_books"

app:drawableTint="@android:color/darker_gray"
            android:drawablePadding="5dp"
            android:gravity="center"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/text_mentor"
        />
        <TextView
            android:id="@+id/text_views"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:paddingStart="10dp"
            android:paddingEnd="10dp"
            android:paddingTop="20dp"
            android:paddingBottom="10dp"
            tools:text="10x dilihat"
            android:textSize="12sp"
            app:drawableStartCompat="@drawable/ic_eye"

app:drawableTint="@android:color/darker_gray"
            android:drawablePadding="5dp"
            android:gravity="center"

app:layout_constraintStart_toEndOf="@+id/text_modules"

app:layout_constraintTop_toBottomOf="@+id/text_mentor"
        />

</androidx.constraintlayout.widget.ConstraintLayout>
    </com.google.android.material.card.MaterialCardView>

</com.google.android.material.appbar.CollapsingToolbarLayout>
    </com.google.android.material.appbar.AppBarLayout>

    <androidx.swiperefreshlayout.widget.SwipeRefreshLayout
        android:id="@+id/swipe"
        android:layout_width="match_parent"
        android:layout_height="match_parent"

app:layout_behavior="@string/appbar_scrolling_view_behavior"
    >
        <androidx.constraintlayout.widget.ConstraintLayout
            android:layout_width="match_parent"

```

```

        android:layout_height="match_parent"
    >
    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/list_module"
        android:layout_width="0dp"
        android:layout_height="0dp"
        android:layout_marginStart="10dp"
        android:layout_marginEnd="10dp"
        android:layout_marginTop="10dp"

app:layoutManager="androidx.recyclerview.widget.LinearLayoutManager"

        tools:listitem="@layout/adapter_module"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"

app:layout_constraintBottom_toTopOf="@+id/button_link"
    />
    <com.google.android.material.button.MaterialButton
        android:id="@+id/button_link"
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:layout_margin="20dp"
        android:text="Ada pertanyaan?"
        android:textAllCaps="false"
        android:textSize="18sp"
        app:cornerRadius="10dp"
        android:backgroundTint="@color/blue_500"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintTop_toBottomOf="@+id/list_module"
        app:layout_constraintBottom_toBottomOf="parent"
        tools:ignore="HardcodedText" />

    </androidx.constraintlayout.widget.ConstraintLayout>

</androidx.swiperefreshlayout.widget.SwipeRefreshLayout>

</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

1.4.4 Source Code module activity

```

package com.tugasakhir.learningsmk.ui.module

import android.content.Intent
import android.net.Uri
import android.os.Bundle
import android.util.Log
import com.tugasakhir.learningsmk.R
import com.tugasakhir.learningsmk.databinding.ActivityModuleBinding
import com.tugasakhir.learningsmk.network.ApiClient
import com.tugasakhir.learningsmk.persistence.DatabaseClient
import com.tugasakhir.learningsmk.preferences.PrefManager
import com.tugasakhir.learningsmk.ui.BaseActivity
import com.tugasakhir.learningsmk.ui.course.CourseData
import com.tugasakhir.learningsmk.util.loadImage

```

```

class ModuleActivity : BaseActivity(), ModuleView {

    private val binding by lazy { ActivityModuleBinding.inflate(
        layoutInflater ) }
    private lateinit var presenter: ModulePresenter
    private lateinit var adapter: ModuleAdapter
    private lateinit var course: CourseData
    private val id by lazy { intent.getIntExtra("id", 0) }

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(binding.root)
        presenter = ModulePresenter(
            this,
            ApiClient.getService(),
            DatabaseClient.getService(this).courseDao(),
            PrefManager(this)
        )
    }

    override fun onStart() {
        super.onStart()
        if (id != 0) {
            presenter.fetchModule(id)
            presenter.find(id)
        }
    }

    override fun setupListener() {
        adapter = ModuleAdapter(arrayListOf(), object :
ModuleAdapter.AdapterListener {
            override fun onClick(detail: DetailData) {
                startActivity(
                    Intent(this@ModuleActivity,
DetailActivity::class.java)
                        .putExtra("id", detail.id)
                )
            }
        })
        binding.listModule.adapter = adapter
        binding.imageBookmark.setOnClickListener {
            if (this::course.isInitialized) presenter.addBookmark(
course )
        }
        binding.swipe.setOnRefreshListener {
            if (id != 0) {
                presenter.fetchModule(id)
                presenter.find(id)
            }
        }
    }

    override fun moduleLoading/loading: Boolean) {
        binding.swipe.isRefreshing = loading
    }

    override fun moduleResponse(response: ModuleResponse) {

        course = response.data.course
        val module = response.data.detail
        Log.e("module ", module.toString())
    }
}

```

```

        loadImage( binding.imageCover, course.thumbnail )
        binding.textTitle.text = course.title
        binding.textMentor.text = course.guru //guru

        adapter.addList( module )
        binding.textModules.text = "${module.size} Pelajaran"

        var views = 0
        module.forEach {
            views += it.view.toInt()
            binding.textViews.text = "${views}x dilihat"
        }

        binding.buttonLink.setOnClickListener {
            val openURL = Intent(Intent.ACTION_VIEW)
            openURL.data = Uri.parse( course.group )
            startActivity(openURL)
        }
    }

    override fun moduleError(msg: String) {
        binding.swipe.isRefreshing = false
    }

    override fun isBookmark(bookmark: Int) {
        Log.e("isBookmark", "bookmark $bookmark")
        when (bookmark) {
            1 -> binding.imageBookmark.setImageResource(
                R.drawable.ic_bookmark_added )
            else -> binding.imageBookmark.setImageResource(
                R.drawable.ic_bookmark_add )
        }
    }
}

```

1.4.5 Source Code module presenter

```

package com.tugasakhir.learningsmk.ui.module

import com.tugasakhir.learningsmk.network.ApiService
import com.tugasakhir.learningsmk.persistence.Course
import com.tugasakhir.learningsmk.persistence.CourseDao
import com.tugasakhir.learningsmk.preferences.PrefManager
import com.tugasakhir.learningsmk.ui.course.CourseData
import com.tugasakhir.learningsmk.util.userLogin
import kotlinx.coroutines.*

class ModulePresenter (
    private val view: ModuleView,
    private val api: ApiService,
    private val db: CourseDao,
    private val pref: PrefManager,
) {

    init {
        view.setupListener()
    }

    fun fetchModule(id: Int) {

```

```

        view.moduleLoading(true)
        GlobalScope.launch {
            val response = api.courseById( id )
            if (response.isSuccessful) {
                withContext(Dispatchers.Main) {
                    view.moduleResponse( response.body()!! )
                    view.moduleLoading(false)
                }
            } else {
                view.moduleError("Terjadi kesalahan")
            }
        }
    }

    fun find(id: Int){
        GlobalScope.launch {
            val bookmark = db.find(id, userLogin(pref).id)
            withContext(Dispatchers.Main) {
                view.isBookmark( bookmark )
            }
        }
    }

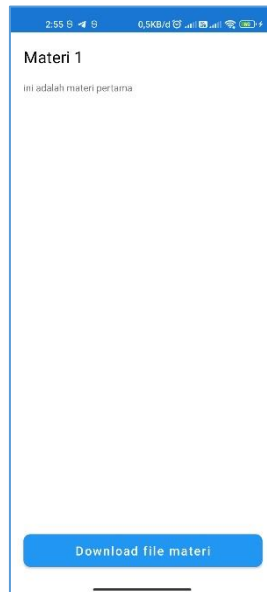
    fun addBookmark(data: CourseData) {
        val course = Course (
            id = data.id,
            user_id = userLogin(pref).id,
            thumbnail = data.thumbnail,
            title = data.title,
            guru = data.guru //guru
        )
        GlobalScope.launch {
            db.add(course)
            withContext(Dispatchers.Main) {
                view.isBookmark( 1 )
            }
        }
    }
}

interface ModuleView {
    fun setupListener()
    fun moduleLoading(loading: Boolean)
    fun moduleResponse(response: ModuleResponse)
    fun moduleError(msg: String)
    fun isBookmark( bookmark: Int )
}

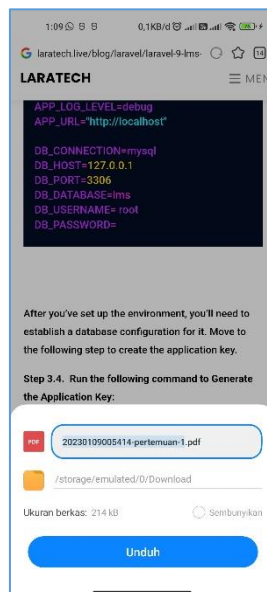
```


1.5 Halaman Materi

1.5.1 Tampilan Halaman materi



Gambar 6 – Halaman unduh materi



Gambar 7 – Unduh Materi

1.5.2 Source Code activity detail

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ui.module.DetailActivity">

    <cn.jzvd.JzvdStd
```

```

tools:visibility="visible"
android:visibility="gone"
android:id="@+id/video_file"
android:layout_width="0dp"
android:layout_height="200dp"
app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
app:layout_constraintTop_toTopOf="parent"
/>

<com.pierfrancescosoffritti.androidyoutubeplayer.core.player.views.
YouTubePlayerView
    tools:visibility="gone"
    android:visibility="gone"
    android:id="@+id/video_youtube"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/video_file"
    />
<androidx.swiperefreshlayout.widget.SwipeRefreshLayout
    android:id="@+id/swipe"
    android:layout_width="0dp"
    android:layout_height="0dp"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/video_youtube"
    app:layout_constraintBottom_toTopOf="@+id/button_download"
    >
    <androidx.constraintlayout.widget.ConstraintLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        >
        <TextView
            android:id="@+id/text_title"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:padding="20dp"
            tools:text="title"
            android:textSize="24sp"
            android:textColor="@color/black"
            app:layout_constraintLeft_toLeftOf="parent"
            app:layout_constraintRight_toRightOf="parent"
            app:layout_constraintTop_toTopOf="parent"
            />
        <TextView
            android:id="@+id/text_description"
            android:layout_width="0dp"
            android:layout_height="0dp"
            android:paddingStart="20dp"
            android:paddingEnd="20dp"
            android:paddingBottom="20dp"
            tools:text="desc"
            app:layout_constraintLeft_toLeftOf="parent"
            app:layout_constraintRight_toRightOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/text_title"
            app:layout_constraintBottom_toBottomOf="parent"
            />

```

```

        </androidx.constraintlayout.widget.ConstraintLayout>
    </androidx.swiperefreshlayout.widget.SwipeRefreshLayout>
    <com.google.android.material.button.MaterialButton
        tools:visibility="visible"
        android:visibility="gone"
        android:id="@+id/button_download"
        android:layout_width="match_parent"
        android:layout_height="60dp"
        android:layout_margin="20dp"
        android:text="Download file materi"
        android:textAllCaps="false"
        android:textSize="18sp"
        app:cornerRadius="10dp"
        android:backgroundTint="@color/blue_500"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        tools:ignore="HardcodedText" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

1.5.3 Source Code detail activity

```

class DetailActivity : AppCompatActivity(), DetailView {

    private val binding by lazy {
        ActivityDetailBinding.inflate(layoutInflater) }
    private lateinit var presenter: DetailPresenter
    private val id by lazy { intent.getIntExtra("id", 0) }

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(binding.root)
        presenter = DetailPresenter(this, ApiClient.getService())
    }

    override fun onStart() {
        super.onStart()
        if (id != 0) presenter.fetchDetail(id)
    }

    override fun setupListener() {
        binding.swipe.setOnRefreshListener {
            presenter.fetchDetail(id)
        }
    }

    override fun detailLoading/loading: Boolean) {
        binding.swipe.isRefreshing = loading
    }

    override fun detailResponse(response: DetailResponse) {
        val detail = response.data
        binding.textTitle.text = detail.title
        binding.textDescription.text = HtmlCompat.fromHtml(
            detail.description, 0)
        when (detail.module type) {

```



```

        "file" -> {
            when (detail.file type) {
                "pdf" -> {
                    binding.buttonDownload.apply {
                        visibility = View.VISIBLE
                        setOnClickListener {
                            val openURL =
Intent(Intent.ACTION_VIEW)
detail.document )
                                openURL.data = Uri.parse(
                                    startActivity(openURL)
                                )
                            }
                        }
                    }
                "mp4" -> {
                    binding.videoFile.apply {
                        visibility = View.VISIBLE
                        setUp(
                            detail.document,
                            detail.title
                        )
                    }
                }
            }
        }
        "youtube" -> {
            lifecycle.addObserver(binding.videoYoutube)
            binding.videoYoutube.apply {
                visibility = View.VISIBLE
                addYouTubePlayerListener(object :
AbstractYouTubePlayerListener() {
                    override fun onReady(youTubePlayer:
YouTubePlayer) {
                        super.onReady(youTubePlayer)
                        youTubePlayer.loadVideo( detail.youtube
, OF)
                    }
                })
            }
        }
    }

    override fun detailError(msg: String) {
        Toast.makeText(applicationContext, msg,
Toast.LENGTH_SHORT).show()
        binding.swipe.isRefreshing = false
    }

    override fun onDestroy() {
        super.onDestroy()
        Log.e("DetailActivity", "onDestroy")
        binding.videoFile.apply {
            if (visibility == View.VISIBLE) setUp("", "")
        }
    }
}

```

1.5.4 Source Code detail presenter

```
class DetailPresenter (
    private val view: DetailView,
    private val api: ApiService
) {

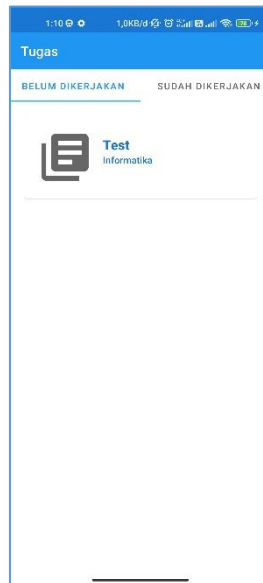
    init {
        view.setupListener()
    }

    fun fetchDetail(id: Int) {
        view.detailLoading(true)
        GlobalScope.launch {
            val response = api.moduleById( id )
            if (response.isSuccessful) {
                withContext(Dispatchers.Main) {
                    view.detailResponse( response.body()!! )
                    view.detailLoading(false)
                }
            } else {
                view.detailError("Terjadi kesalahan")
            }
        }
    }
}

interface DetailView {
    fun setupListener()
    fun detailLoading(loading: Boolean)
    fun detailResponse(response: DetailResponse)
    fun detailError(msg: String)
}
```

1.6 Halaman Tugas

1.6.1 Tampilan Halaman Tugas



Gambar 8 – tugas sebelum dikerjakan



Gambar 9 – tugas setelah dikerjakan

1.6.2 Source Code rv item tugas

```
<?xml version="1.0" encoding="utf-8"?>
<layout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto">

    <data>
        <variable
            name="Tugas"
            type="com.example.newlearn.ui.tugas.Tugas" />
    </data>
```

```

<com.google.android.material.card.MaterialCardView
    android:id="@+id/cvTugas"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:paddingVertical="10dp"
    app:cardCornerRadius="5dp"
    android:elevation="7dp"
    android:clickable="true"
    android:layout_marginBottom="5dp"
    app:strokeWidth="1dp"
>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="125dp"
        android:padding="5dp"
        android:orientation="horizontal"
        android:weightSum="3">

<com.google.android.material.imageview.ShapeableImageView
    android:id="@+id/iv_icon"
    android:layout_width="0dp"
    android:layout_weight="1"
    android:layout_height="match_parent"
    android:src="@drawable/ic_books"
    android:padding="15dp"
    android:scaleType="centerCrop"
/>

    <LinearLayout
        android:layout_weight="2"
        android:layout_width="0dp"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:gravity="center"
    >
        <TextView
            android:id="@+id/tvNama"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="@{Tugas.judulTugas}"

android:textAppearance="@style/TextAppearance.MaterialComponents.Headline6"

            android:textColor="@color/blue_700"
            android:textStyle="bold" />

        <TextView
            android:id="@+id/tvJudulCourse"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_below="@id/tvNama"
            android:layout_centerVertical="true"
            android:text="@{Tugas.judulCourse}"

android:textAppearance="@style/TextAppearance.MaterialComponents.Subtitle2"

            android:textColor="@color/blue_700" />

```

```

        <TextView
            android:id="@+id/tvTanggalBuat"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_below="@id/tvJudulCourse"
            android:layout_centerVertical="true"
            android:text="@{Tugas.tanggalTugas }"

android:textAppearance="@style/TextAppearance.MaterialComponents.Su
btitle2"
            android:textColor="@color/blue_700" />
        </LinearLayout>

    </LinearLayout>

</com.google.android.material.card.MaterialCardView>
</layout>

```

1.6.3 Source Code Tugas Presenter

```

class TugasPresenter(
    private val view: TugasView,
    private val pref: PrefManager,
    private val api: ApiService,
) {
    init{
        view.setupListener()
        view.user( userLogin( pref ) )
    }

    fun fetchBelumKumpul(student_id: Int) {
        view.tugasLoading(true)
        GlobalScope.launch {
            val response = api.getTugasBelumKumpul(student_id)
            if (response.isSuccessful) {
                withContext(Dispatchers.Main) {
                    view.belumKumpulTugasResponse (
response.body()!! )
                    view.tugasLoading(false)
                }
            } else {
                view.courseError("Terjadi kesalahan")
            }
        }
    }

    fun fetchSudahKumpul(student_id: Int) {
        view.tugasLoading(true)
        GlobalScope.launch {
            val response = api.getTugasSudahKumpul(student_id)
            if (response.isSuccessful) {
                withContext(Dispatchers.Main) {
                    view.sudahKumpulTugasResponse (
response.body()!! )
                    view.tugasLoading(false)
                }
            } else {
                view.courseError("Terjadi kesalahan")
            }
        }
    }
}

```

```

    }
}

interface TugasView {
    fun setupListener()
    fun user(user: LoginData)
    fun tugasLoading(loading: Boolean)
    fun belumKumpulTugasResponse(response: TugasModel)
    fun sudahKumpulTugasResponse(response: TugasModel)
    fun courseError(message: String)
}

```

1.6.4 Source Code Tugas Model

```

data class TugasModel(
    val success: Boolean,
    val data: MutableList<Tugas>?,
    val message: String
)

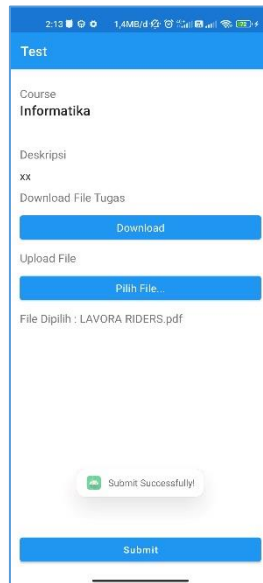
data class SingleTugasModel(
    val success: Boolean,
    val data: Tugas?,
    val message: String
)

data class Tugas(
    @SerializedName("tugas_id"           ) var tugasId       : Int?
= null,
    @SerializedName("materi_id"         ) var materiId       : Int?
= null,
    @SerializedName("judul_course"      ) var judulCourse    :
String? = null,
    @SerializedName("judul_materi"      ) var judulMateri    :
String? = null,
    @SerializedName("judul_tugas"       ) var judulTugas     :
String? = null,
    @SerializedName("batas_waktu"       ) var batasWaktu     :
String? = null,
    @SerializedName("deskripsi"         ) var deskripsi      :
String? = null,
    @SerializedName("tanggal_tugas"     ) var tanggalTugas  :
String? = null,
    @SerializedName("status_periksa"    ) var statusPeriksa  :
String? = null,
    @SerializedName("nilai"             ) var nilai           : String? =
null,
    @SerializedName("file_tugas"        ) var fileTugas      :
String? = null,
    @SerializedName("file_tugas_siswa"  ) var fileTugasSiswa :
String? = null,
    @SerializedName("created_at"        ) var createdAt      :
String? = null,
    @SerializedName("updated_at"        ) var updatedAt      :
String? = null,
): java.io.Serializable

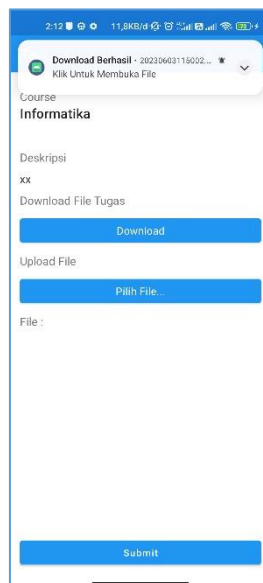
```


1.7 Halaman Upload & Download Tugas

1.7.1 Tampilan Halaman upload dan download



Gambar 10 – Halaman upload



Gambar 11 – halaman download

1.7.2 Source code activity Kumpul tugas

```
<?xml version="1.0" encoding="utf-8"?>
<layout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools">

    <data>
        <variable
            name="Tugas"
            type="com.example.newlearn.ui.tugas.Tugas" />
    </data>
```

```

<RelativeLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ui.tugas.KumpulTugasActivity">

    <com.google.android.material.appbar.AppBarLayout
        android:id="@+id/appBarLayout"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <com.google.android.material.appbar.MaterialToolbar
            android:id="@+id/topAppBar"
            android:layout_width="match_parent"
            android:layout_height="?attr/actionBarSize"
            app:title="@{Tugas.judulTugas}"

style="@style/Widget.MaterialComponents.Toolbar.Primary" />

    </com.google.android.material.appbar.AppBarLayout>

    <LinearLayout
        android:id="@+id/llComp"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:layout_margin="15dp"
        android:layout_below="@id/appBarLayout">
    <androidx.core.widget.NestedScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:fillViewport="true">

        <RelativeLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:layout_marginTop="10dp"
            >

            <TextView
                android:id="@+id/tvJudulCourseText"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Course"
                android:textSize="17sp"
                />

            <TextView
                android:id="@+id/tvJudulCourse"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="@{Tugas.judulCourse}"

android:textAppearance="@style/TextAppearance.MaterialComponents.Headline6"

android:layout_below="@id/tvJudulCourseText"
                />

            <TextView
                android:id="@+id/tvJudulTugas"

```

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@{Tugas.judulMateri}"

android:textAppearance="@style/TextAppearance.MaterialComponents.Su
btitle1"

        android:layout_below="@id/tvJudulCourse"
        android:layout_marginTop="10dp"
    />

<TextView
    android:id="@+id/tvDeskripsiText"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Deskripsi"
    android:textSize="17sp"
    android:layout_below="@id/tvJudulTugas"
    android:layout_marginTop="10dp"
/>

<TextView
    android:id="@+id/tvDeskripsi"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="@{Tugas.deskripsi}"

android:textAppearance="@style/TextAppearance.MaterialComponents.Su
btitle1"

        android:layout_below="@id/tvDeskripsiText"
        android:layout_marginTop="10dp"
    />

<TextView
    android:id="@+id/tvFileTugasText"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Download File Tugas"
    android:textSize="17sp"
    android:layout_below="@id/tvDeskripsi"
    android:layout_marginTop="10dp"
/>

<Button
    android:id="@+id/btnDownloadFileTugas"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Download"

android:textAppearance="@style/TextAppearance.MaterialComponents.Su
btitle1"

        android:layout_below="@id/tvFileTugasText"
        android:layout_marginTop="10dp"
    />

<TextView
    android:id="@+id/tvChooseFileText"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Upload File"
    android:textSize="17sp"

```

```

android:layout_below="@id/btnDownloadFileTugas"
        android:layout_marginTop="10dp"
    />

    <Button
        android:id="@+id/btnChooseFile"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Pilih File..."

android:textAppearance="@style/TextAppearance.MaterialComponents.Su
btitle1"
        android:layout_below="@id/tvChooseFileText"
        android:layout_marginTop="10dp"
    />

    <TextView
        android:id="@+id/tvSelectedFile"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="File : "
        android:textSize="17sp"
        android:layout_below="@id/btnChooseFile"
        android:layout_marginTop="10dp"
    />

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:layout_alignParentBottom="true">

        <Button
            android:id="@+id/btnSubmitTugas"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Submit"
            android:textAllCaps="false" />

    </LinearLayout>
</RelativeLayout>
</androidx.core.widget.NestedScrollView>
</LinearLayout>
</RelativeLayout>
</layout>

```

1.7.3 Source code Kumpul tugas activity

```

class KumpulTugasActivity : AppCompatActivity(), KumpulView {
    private val binding by lazy {
        ActivityKumpulTugasBinding.inflate(layoutInflater) }
    private lateinit var presenter: KumpulTugasPresenter
    private lateinit var pref: PrefManager
    private lateinit var getTugas: Tugas

    // declaring variables
    lateinit var notificationManager: NotificationManager

```

```

lateinit var notificationChannel: NotificationChannel
lateinit var builder: Notification.Builder
private val channelId = "i.newlearn.notif.tugas"
private val description = "Download Notif"

private val PICK_REQUEST = 99

// file
private lateinit var selectedFile: File

private var student_id: Int = 9999
private var tugas_id: Int = 9999

override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(binding.root)
    pref = PrefManager(this)
    presenter = KumpulTugasPresenter(this, pref,
ApiClient.getService())
    notificationManager =
getSystemService(Context.NOTIFICATION_SERVICE) as
NotificationManager

    getTugas = intent.getSerializableExtra("tugas") as Tugas
    binding.tugas = getTugas

    binding.btnDownloadFileTugas.setOnClickListener {
        presenter.downloadFileTugas(this, getTugas.fileTugas!!)
    }
    student_id = pref.getStudentId()
    tugas_id = getTugas.tugasId!!

    binding.btnChooseFile.setOnClickListener {
        val intent = Intent(Intent.ACTION_GET_CONTENT)
        intent.type = "application/pdf"
        intent.addCategory(Intent.CATEGORY_OPENABLE)
        startActivityForResult(intent, PICK_REQUEST)
    }

    binding.btnSubmitTugas.setOnClickListener {
        kumpulTugas()
    }
}

override fun setupListener() {

}

override fun kumpulLoading/loading: Boolean) {

}

override fun submitTugasResponse(response: SingleTugasModel) {
    if(response.success){
        binding.btnSubmitTugas.isEnabled = false
        finish()
    }

    Toast.makeText(this, "" + response.message,
Toast.LENGTH_SHORT).show()
}

```

```

    }

    override fun submitError(message: String) {

    }

    override fun downloadResponse(status: Boolean, fileName:
String) {
        if(status){
            val intent = openFile(fileName)
            val pendingIntent =
PendingIntent.getActivity(baseContext, 0, intent,
PendingIntent.FLAG_IMMUTABLE)
            // checking if android version is greater than oreo(API
26) or not
            if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O) {
                notificationChannel =
NotificationChannel(channelId, description,
NotificationManager.IMPORTANCE_HIGH)
                notificationChannel.enableLights(true)
                notificationChannel.lightColor = Color.GREEN
                notificationChannel.enableVibration(true)
                notificationChannel.setVibrationPattern(
                    longArrayOf(
                        100,
                        200,
                        300,
                        400,
                        500,
                        400,
                        300,
                        200,
                        400
                    )
                )
            }

notificationManager.createNotificationChannel(notificationChannel)

            builder = Notification.Builder(this, channelId)
                .setSmallIcon(R.drawable.logosmk)

                .setLargeIcon(BitmapFactory.decodeResource(this.resources,
R.drawable.ic_launcher_background))
                .setContentTitle("Download Berhasil")
                .setContentText("Klik Untuk Membuka File")
                .setSubText(fileName)
                .setContentIntent(pendingIntent)
        } else {
            builder = Notification.Builder(this)
                .setSmallIcon(R.drawable.logosmk)

                .setLargeIcon(BitmapFactory.decodeResource(this.resources,
R.drawable.ic_launcher_background))
                .setContentTitle("Download Berhasil")
                .setContentText("Klik Untuk Membuka File")
                .setSubText(fileName)
                .setContentIntent(pendingIntent)
        }

        notificationManager.notify(12345, builder.build())
    }
}

```



```

    }

    private fun openFile(fileName: String): Intent {
        val extension =
            fileName.substring(fileName.lastIndexOf(".") + 1)
        var type: String? = "application/$extension"
        if (extension != null) {
            type =
                MimeTypesMap.getSingleton().getMimeTypeFromExtension(extension)
        }

        val path = getExternalFilesDir("tugas")!!.path
        val file = File("$path/$fileName")
        val uri = FileProvider.getUriForFile(applicationContext,
            applicationContext.packageName + ".provider", file)
        val intent = Intent(Intent.ACTION_VIEW)
        intent.setFlags(Intent.FLAG_ACTIVITY_NEW_TASK)
        intent.addFlags(Intent.FLAG_GRANT_READ_URI_PERMISSION);
        intent.setDataAndType(uri, type)
        val chooser = Intent.createChooser(intent, "Open File
        With")
        return chooser
    }

    override fun onActivityResult(requestCode: Int, resultCode:
    Int, data: Intent?) {
        super.onActivityResult(requestCode, resultCode, data)
        if (requestCode == PICK_REQUEST && resultCode == RESULT_OK
        && data != null && data.data != null) {
            val uri = data.data
            try{
                if(uri != null){
                    val filePath = PathUtil.getRealPath(this, uri)
                    if (filePath != null){
                        selectedFile = File(filePath)
                        binding.tvSelectedFile.text = "File Dipilih
                        : " + selectedFile.name
                    }
                }
            }catch (ex: Exception){
                Log.e("File Selekt", "" + ex.message)
            }
            // Lakukan proses upload file PDF menggunakan Retrofit
            di sini
        }
    }

    fun kumpulTugas(){
        if (selectedFile == null){
            Toast.makeText(this, "Terjadi Kesalahan : File Belum
            Dipilih", Toast.LENGTH_SHORT).show()
            return
        }

        val extension =
            selectedFile.name.substring(selectedFile.name.lastIndexOf(".") + 1)
        var type: String? = "application/$extension"
        if (extension != null) {
            type =
                MimeTypesMap.getSingleton().getMimeTypeFromExtension(extension)

```

```

    }

    val requestFile =
    RequestBody.create(type?.toMediaTypeOrNull(), selectedFile)
    val filePart =
    MultipartBody.Part.createFormData("file_tugas_siswa",
    selectedFile.name, requestFile)
    presenter.submitTugas(student_id, tugas_id, filePart)
    }
}

```

1.7.4 Source code Kumpul tugas presenter

```

class KumpulTugasPresenter(
    private val view: KumpulView,
    private val pref: PrefManager,
    private val api: ApiService,
) {
    init{
        view.setupListener()
    }

    fun submitTugas(student_id: Int, tugas_id: Int,
file_tugas_siswa: MultipartBody.Part){
        view.kumpulLoading(true)
        GlobalScope.launch {
            val response = api.submitTugas(student_id, tugas_id,
file_tugas_siswa)
            if (response.isSuccessful) {
                withContext(Dispatchers.Main) {
                    view.submitTugasResponse( response.body()!! )
                    view.kumpulLoading(false)
                }
            } else {
                view.submitError("Terjadi kesalahan")
            }
        }
    }

    fun downloadFileTugas(context: Context, file_tugas: String){
        view.kumpulLoading(true)
        GlobalScope.launch {
            val response = api.getFile(file_tugas)
            if (response.isSuccessful) {
                withContext(Dispatchers.Main) {
                    val fileName=
file_tugas.substring(file_tugas.lastIndexOf("/") +1)
                    val saving = saveFile(context, response.body(),
fileName)

                    if(saving.isEmpty()){
                        view.downloadResponse(false, fileName)
                    }else{
                        view.downloadResponse(true, fileName)
                    }
                    view.kumpulLoading(false)
                }
            } else {
                view.submitError("Terjadi kesalahan")
            }
        }
    }
}

```

```

    }

    private fun saveFile(context: Context, body: ResponseBody?,
fileName: String): String {
        if (body == null) {
            return ""
        }

        var input: InputStream? = null
        try {
            input = body.byteStream()
            val path = context.getExternalFilesDir("tugas")!!.path
            val fos = FileOutputStream(path + "/" + fileName)
            fos.use { output ->
                val buffer = ByteArray(4 * 1024) // or other buffer
size
                var read: Int
                while (input.read(buffer).also { read = it } != -1)
{
                    output.write(buffer, 0, read)
                }
                output.flush()
            }
            return path
        } catch (e: Exception) {
            Log.e("saveFileTugas", e.toString())
        } finally {
            input?.close()
        }
        return ""
    }
}

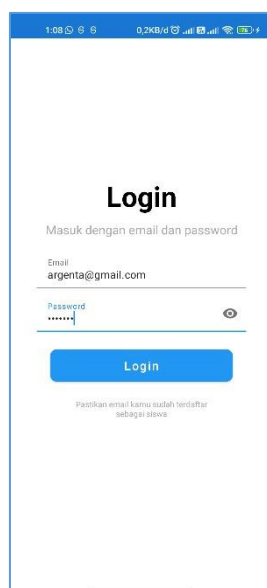
interface KumpulView {
    fun setupListener()
    fun kumpulLoading(loading: Boolean)
    fun submitTugasResponse(response: SingleTugasModel)
    fun submitError(message: String)
    fun downloadResponse(status: Boolean, file: String)
}

```

2. PENGGUNAAN PROGRAM

Aplikasi *e – learning* merupakan aplikasi yang digunakan sebagai media pembelajaran antara guru dan siswa untuk memudahkan proses pembelajaran di berbagai jenjang Pendidikan. Sistem ini dibangun untuk memberikan kemudahan bagi guru maupun siswa saat guru tidak dapat masuk kelas maka dapat diganti dengan pembelajaran di *e - learning*, serta dimanfaatkan untuk meningkatkan kegiatan belajar mengajar siswa.

2.1 Langkah Login Aplikasi



Gambar 12 – Login

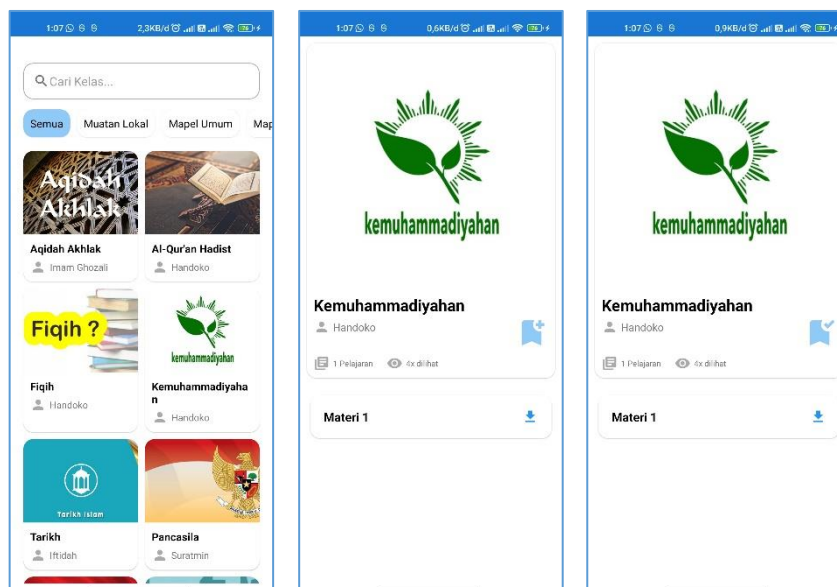
Halaman ini digunakan untuk melakukan proses login, dalam hal ini sudah mempunyai akun yang didapatkan dari admin, dengan memasukkan informasi email dan password.

2.2 Langkah Halaman Home



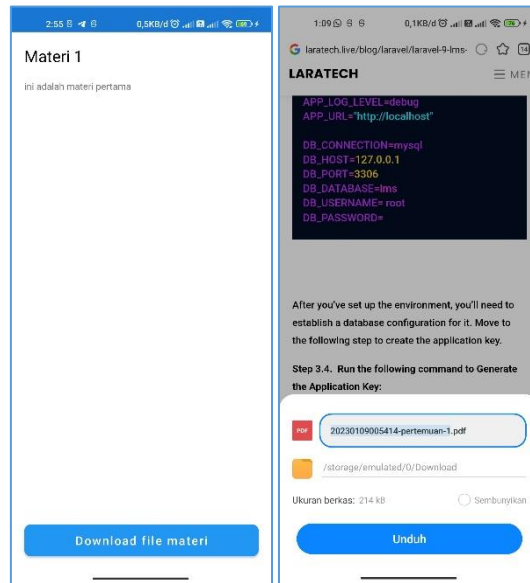
Gambar 13 – Halaman Home

Halaman ini terdapat beberapa fitur, apabila belum menambahkan course, maka klik search course, kemudian akan tampil halaman search course, klik salah satu course kemudian add to my course. Selain itu jika sudah menambahkan course, apabila ada tugas maka akan muncul pada cardview tugas pada halaman home.



Gambar 14 Langkah add course

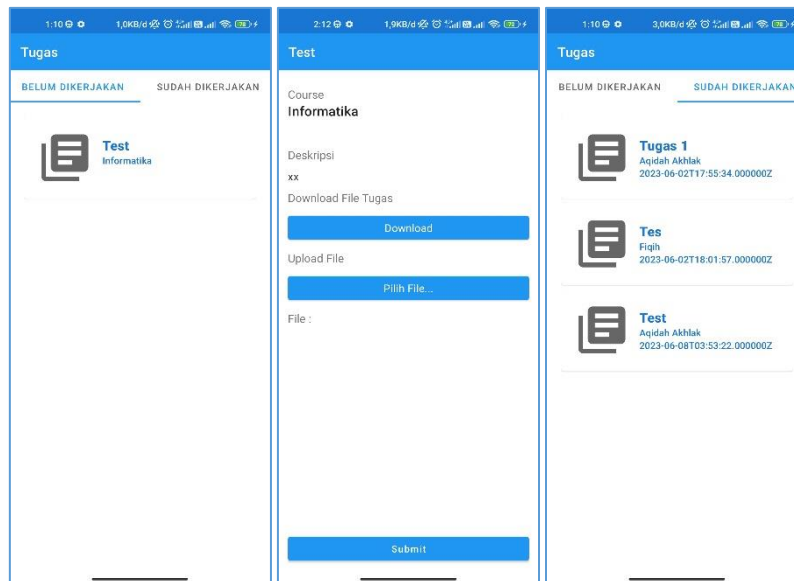
2.3 Langkah download materi



Gambar 15 – Langkah download materi

Halaman ini merupakan halaman detail course yang mana siswa dapat melakukan unduh materi tersebut pada button download.

2.4 Langkah Tugas



Gambar 16 Langkah Tugas

Halaman ini merupakan halaman tugas, yang mana menampilkan list view tugas yang belum dikerjakan maupun sudah dikerjakan, kemudian apabila user klik tugas yang belum dikerjakan maka muncul halaman upload tugas serta unduh file tugas yang diberikan. Kemudian jika user sudah upload tugas maka tugas yg di upload akan masuk ke list view tugas sudah dikumpulkan.

SURAT PENGALIHAN HAK CIPTA

Yang bertanda tangan di bawah ini :

N a m a : Argenta Maulana Isnan
Alamat : Kejambon Kidul RT02/RW14, Sindumartani, Ngemplak, Sleman, Yogyakarta

N a m a : Agus Suhendar,S.T.,M.Eng.
Alamat : Degan II, 082/041, Banjararum, Kalibawang, Kulon Progo, Yogyakarta 55672

Adalah **Pihak I** selaku pencipta, dengan ini menyerahkan karya ciptaan saya kepada :

N a m a : Universitas Teknologi Yogyakarta
Alamat : Jl. Siliwangi (Ringroad Utara), Jombor, Sleman, D.I.Yogyakarta, 55285

Adalah **Pihak II** selaku Pemegang Hak Cipta berupa Program Komputer yang berjudul Aplikasi Perancangan Manajemen Sistem Aplikasi Learning Berbasis Android untuk didaftarkan di Direktorat Hak Cipta dan Desain Industri, Direktorat Jenderal Kekayaan Intelektual, Kementerian Hukum dan Hak Asasi Manusia Republik Indonesia.

Demikianlah surat pengalihan hak ini kami buat, agar dapat dipergunakan sebagaimana mestinya.

Yogyakarta, 14 Juni 2023

Pemegang Hak Cipta
Rektor UTY

Dr. Bambang Moertono S, MM., Akt, CA.

Pencipta



Argenta Maulana Isnan
Agus Suhendar,S.T.,M.Eng.

SURAT PERNYATAAN

Yang bertanda tangan di bawah ini, pemegang hak cipta:

N a m a : 1. Argenta Maulana Isnan
Kewarganegaraan : Indonesia
Alamat : Kejambon Kidul RT02/RW14, Sindumartani, Ngemplak, Sleman, Yogyakarta
Kode Pos : 55584

N a m a : 2. Agus Suhendar, S.T., M.Eng.
Kewarganegaraan : Indonesia
Alamat : Degan II, 082/041, Banjararum, Kalibawang, Kulon Progo, Yogyakarta, DIY
Kode Pos : 55672

Dengan ini menyatakan bahwa:

1. Karya Cipta yang saya mohonkan:

Berupa : Program Komputer

Berjudul :

- Tidak meniru dan tidak sama secara esensial dengan Karya Cipta milik pihak lain atau obyek kekayaan intelektual lainnya sebagaimana dimaksud dalam Pasal 68 ayat (2);
 - Bukan merupakan Ekspresi Budaya Tradisional sebagaimana dimaksud dalam Pasal 38;
 - Bukan merupakan Ciptaan yang tidak diketahui penciptanya sebagaimana dimaksud dalam Pasal 39;
 - Bukan merupakan hasil karya yang tidak dilindungi Hak Cipta sebagaimana dimaksud dalam Pasal 41 dan 42;
 - Bukan merupakan Ciptaan seni lukis yang berupa logo atau tanda pembeda yang digunakan sebagai merek dalam perdagangan barang/jasa atau digunakan sebagai lambang organisasi, badan usaha, atau badan hukum sebagaimana dimaksud dalam Pasal 65 dan;
 - Bukan merupakan Ciptaan yang melanggar norma agama, norma susila, ketertiban umum, pertahanan dan keamanan negara atau melanggar peraturan perundang-undangan sebagaimana dimaksud dalam Pasal 74 ayat (1) huruf d Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta.
2. Sebagai pemohon mempunyai kewajiban untuk menyimpan asli contoh ciptaan yang dimohonkan dan harus memberikan apabila dibutuhkan untuk kepentingan penyelesaian sengketa perdata maupun pidana sesuai dengan ketentuan perundang-undangan.
3. Karya Cipta yang saya mohonkan pada Angka 1 tersebut di atas tidak pernah dan tidak sedang dalam sengketa pidana dan/atau perdata di Pengadilan.
4. Dalam hal ketentuan sebagaimana dimaksud dalam Angka 1 dan Angka 3 tersebut di atas saya / kami langgar, maka saya / kami bersedia secara sukarela bahwa:
- a. permohonan karya cipta yang saya ajukan dianggap ditarik kembali; atau
 - b. Karya Cipta yang telah terdaftar dalam Daftar Umum Ciptaan Direktorat Hak Cipta, Direktorat Jenderal Hak Kekayaan Intelektual, Kementerian Hukum Dan Hak Asasi Manusia R.I dihapuskan sesuai dengan ketentuan perundang-undangan yang berlaku.
 - c. Dalam hal kepemilikan Hak Cipta yang dimohonkan secara elektronik sedang dalam berperkara dan/atau sedang dalam gugatan di Pengadilan maka status kepemilikan surat pencatatan elektronik tersebut ditanggguhkan menunggu putusan Pengadilan yang berkekuatan hukum tetap.

Demikian Surat pernyataan ini saya/kami buat dengan sebenarnya dan untuk dipergunakan sebagaimana mestinya.

Yogyakarta, 14 Juni 2023



1. Argenta Maulana Isnan
2. Agus Suhendar, S.T., M.Eng

Pemegang Hak Cipta*

* Semua pemegang hak cipta agar menandatangani di atas materai.