

Experiment 1.2

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Subject: Mobile Application Development

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1. Aim: To design an android application to display Hello World

2. Objective:

Android Studio is the official IDE (Integrated Development Environment) for

Android app development and it is based on JetBrains' IntelliJ IDEA software.

System Requirements:

- Microsoft Windows 7/8/10 (32-bit or 64-bit)
- 4 GB RAM minimum, 8 GB RAM recommended (plus 1 GB for the Android Emulator)
- 2 GB of available disk space minimum, 4 GB recommended (500 MB for IDE plus 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution

3. Steps:

1. First step is to create a simple Android Application using Android studio.
2. You can start your application development by calling start a new androidstudio project.

In a new installation, the frame should ask Application name, package information and location

of the project.

3. Configure the Hello World Project Details We'll finish creating the project by configuring some details about its name, location, and the API version it
4. Change the name of the application. Change the default Project location to your preferred directory or just leave it as the default location.
5. The next level of installation should contain selecting the activity to mobile, it specifies the default layout for Applications.
6. Code the java and XML files as below.
7. Run the app on an emulator or a physical device.

Main XML File Code:

```
<?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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Main Java File Code:

```
package com.example.helloworld import  
  
androidx.appcompat.app.AppCompatActivity import  
  
android.os.Bundle  
  
class MainActivity : AppCompatActivity() {  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        setContentView(R.layout.activity_main)  
    }  
}
```

Manifest File Code:

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools">  
  
    <application  
        android:allowBackup="true"  
        android:dataExtractionRules="@xml/data_extraction_rules"  
        android:fullBackupContent="@xml/backup_rules"  
        android:icon="@mipmap/ic_launcher"  
        android:label="@string/app_name"  
        android:supportsRtl="true"  
        android:theme="@style/Theme.HelloWorld"  
        tools:targetApi="31">  
        <activity  
            android:name=".MainActivity"  
            android:exported="true">  
            <intent-filter>  
                <action android:name="android.intent.action.MAIN" />  
  
                <category android:name="android.intent.category.LAUNCHER" />  
            </intent-filter>  
        </activity>  
    </application>  
  
</manifest>
```

Output:

