DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING
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Experiment 3.2

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Branch: BE-CSE **Section: 20BCS DM-704 "A"**

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Subject Name: MAD Lab **Subject Code: 20CSP-356**

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1. **Aim**:
   To design an android application using menus and action bar

2. **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
   - Java JDK5 or later version
   - Java Runtime Environment (JRE) 6 Android Studio

The menu is a part of the User Interface (UI) component, used to handle some common functionality around the app. To utilize the menu, you should define it in a separate XML file and use that file in your app based on your requirements. You can also use menu APIs to represent user actions and other options in your app activities.

DIFFERENT TYPES OF MENUS

Android provides three types of menus. They are as follows:

OPTION MENU

This type of menu is a primary collection of menu items in an app and is useful for actions that have a global impact on the searching app. The Option Menu can be used for settings, searching, deleting items, sharing, etc.

CONTEXT MENU

This type of menu is a floating menu that only appears when a user presses for a long time on an element and is useful for elements that affect the selected content or context frame.

POPUP MENU

Using Popup Menu we can display a list of items in a vertical list which presents the view that invokes the menu. Popup Menu is useful since it can provide an overflow of actions which are related to any specific content.

3. Code:

1. MainActivity.java

```
package com.example.exp_9;

import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.view.Menu;
import android.widget.Toast;
import com.google.android.material.snackbar.Snackbar;
import com.google.android.material.navigation.NavigationView;

import androidx.navigation.NavController;
import androidx.navigation.Navigation;
import androidx.navigation.ui.AppBarConfiguration;
import androidx.navigation.ui.NavigationUI;
import androidx.drawerlayout.widget.DrawerLayout;
import androidx.appcompat.app.AppCompatActivity;

import com.example.exp_9.databinding.ActivityMainBinding;

public class MainActivity extends AppCompatActivity {

    private AppBarConfiguration mAppBarConfiguration;
    private ActivityMainBinding binding;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        binding = ActivityMainBinding.inflate(getLayoutInflater());
        setContentView(binding.getRoot());
```

```
        setSupportActionBar(binding.appBarMain.toolbar);

        DrawerLayout drawer = binding.drawerLayout;
        NavigationView navigationView = binding.navView;

        mAppBarConfiguration = new AppBarConfiguration.Builder(
                R.id.nav_home, R.id.nav_gallery, R.id.nav_slideshow)
                .setOpenableLayout(drawer)
                .build();

    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.main, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item)
    {
        Toast.makeText(this, "Selected Item: " + item.getTitle(), Toast.LENGTH_SHORT)
                .show();

        return false;
    }
    @Override
    public boolean onSupportNavigateUp() {
        NavController navController = Navigation.findNavController(this, R.id.nav_host_fragment_content_main);
        return NavigationUI.navigateUp(navController, mAppBarConfiguration)
                || super.onSupportNavigateUp();
    }
}
```

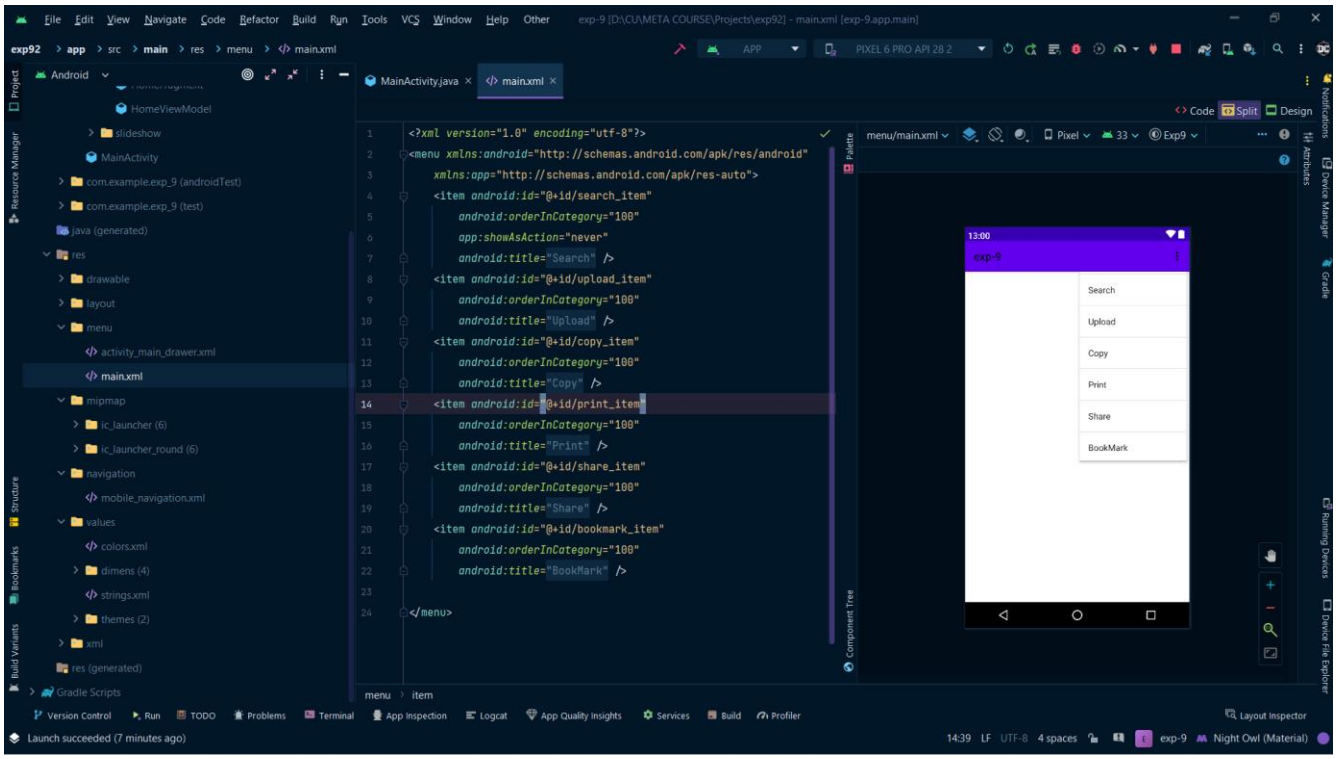
2. main.xml

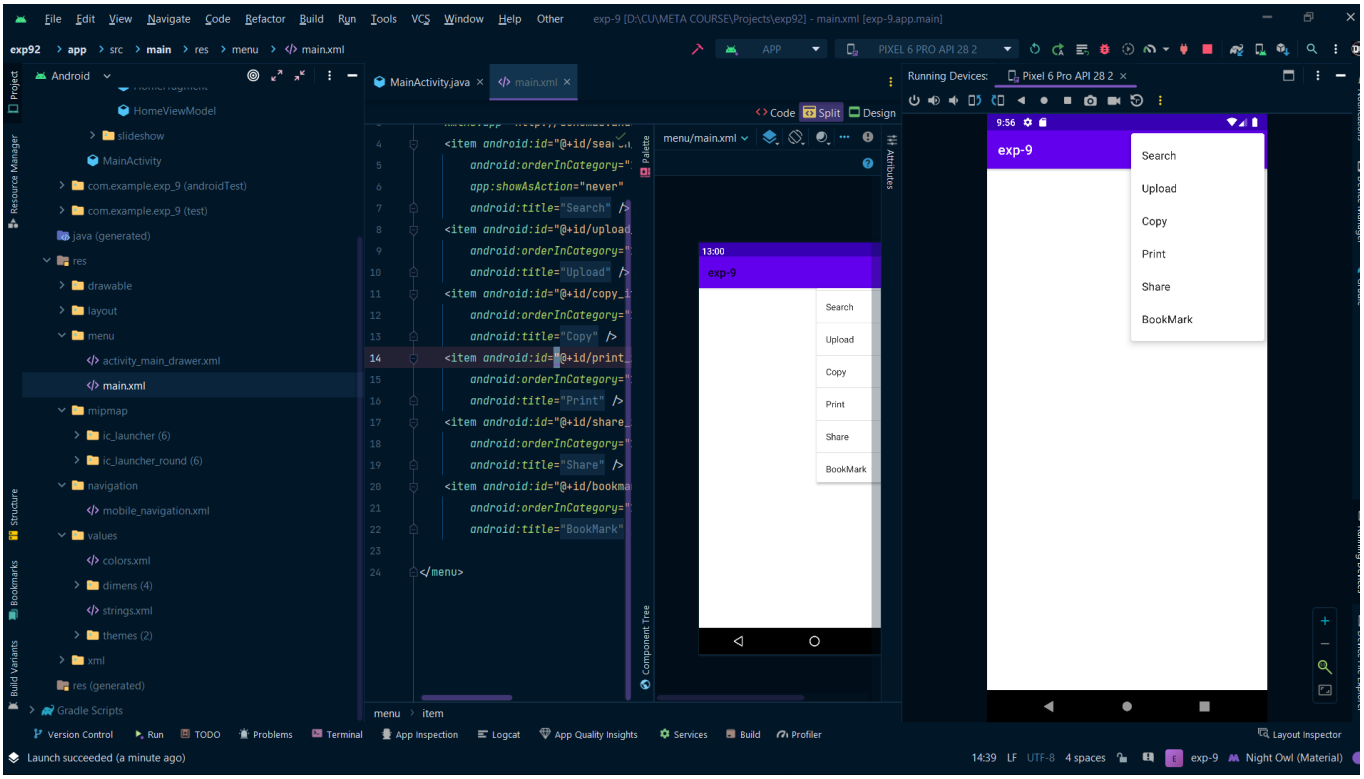
```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto">
    <item android:id="@+id/search_item"
        android:orderInCategory="100"
        app:showAsAction="never"
        android:title="@string/search" />
    <item android:id="@+id/upload_item"
        android:orderInCategory="100"
        android:title="@string/upload" />
```

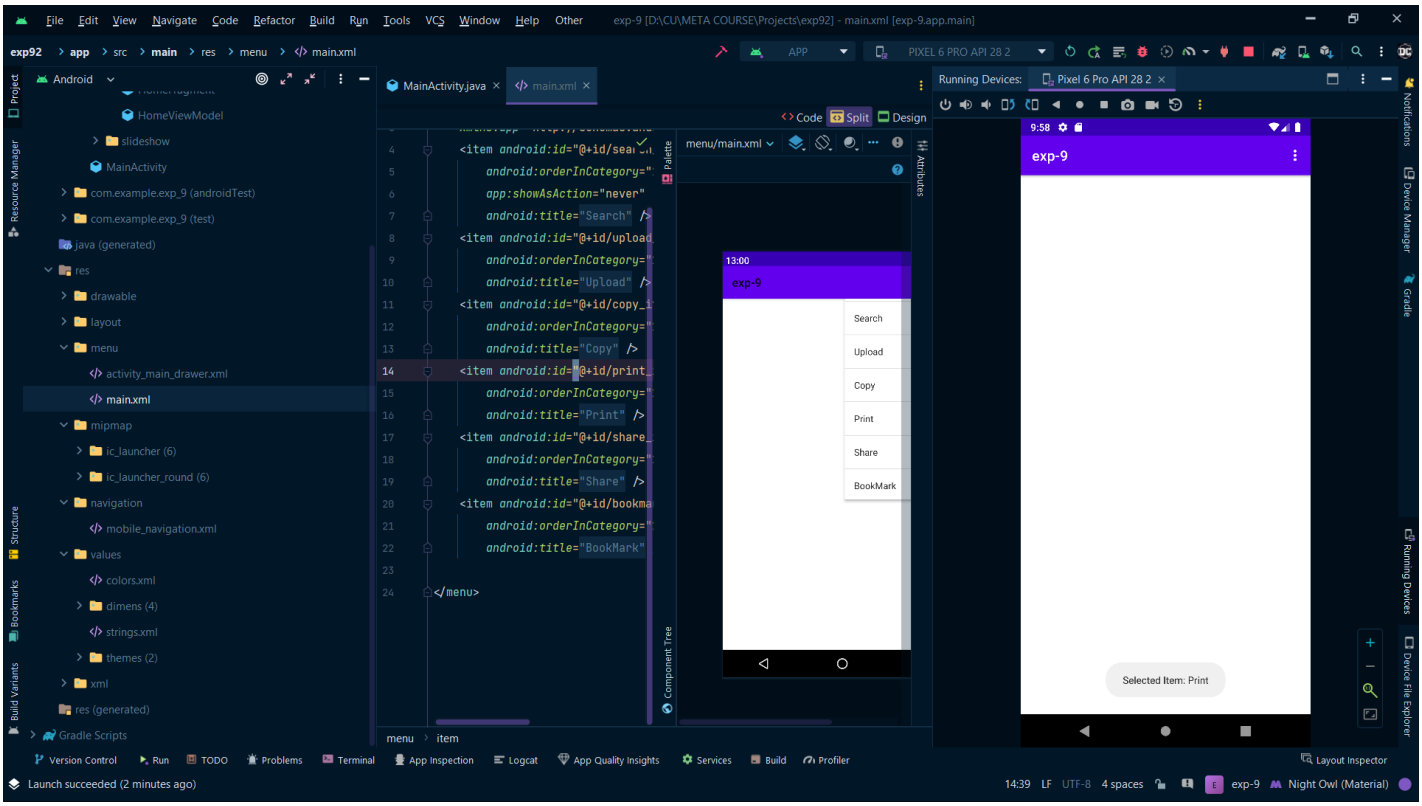
```
    <item android:id="@+id/copy_item"
        android:orderInCategory="100"
        android:title="@string/copy" />
    <item android:id="@+id/print_item"
        android:orderInCategory="100"
        android:title="@string/print" />
    <item android:id="@+id/share_item"
        android:orderInCategory="100"
        android:title="@string/share" />
    <item android:id="@+id/bookmark_item"
        android:orderInCategory="100"
        android:title="@string/bookmark" />

</menu>
```

4. OUTPUT:




exp-9
Search
Upload
Copy
Print
Share
BookMark
Launch succeeded (a minute ago)


exp-9
Search
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Selected Item: Print
Launch succeeded (2 minutes ago)

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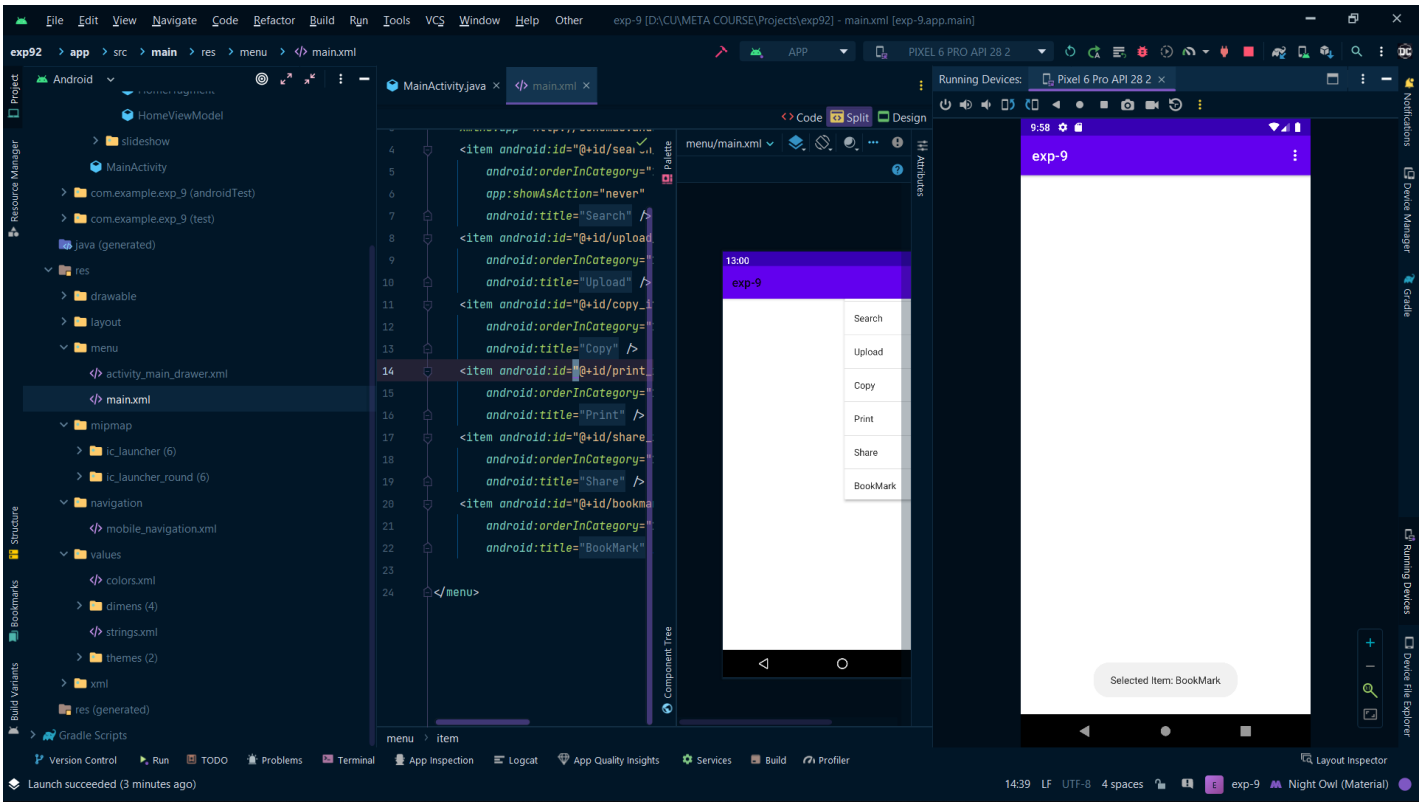
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