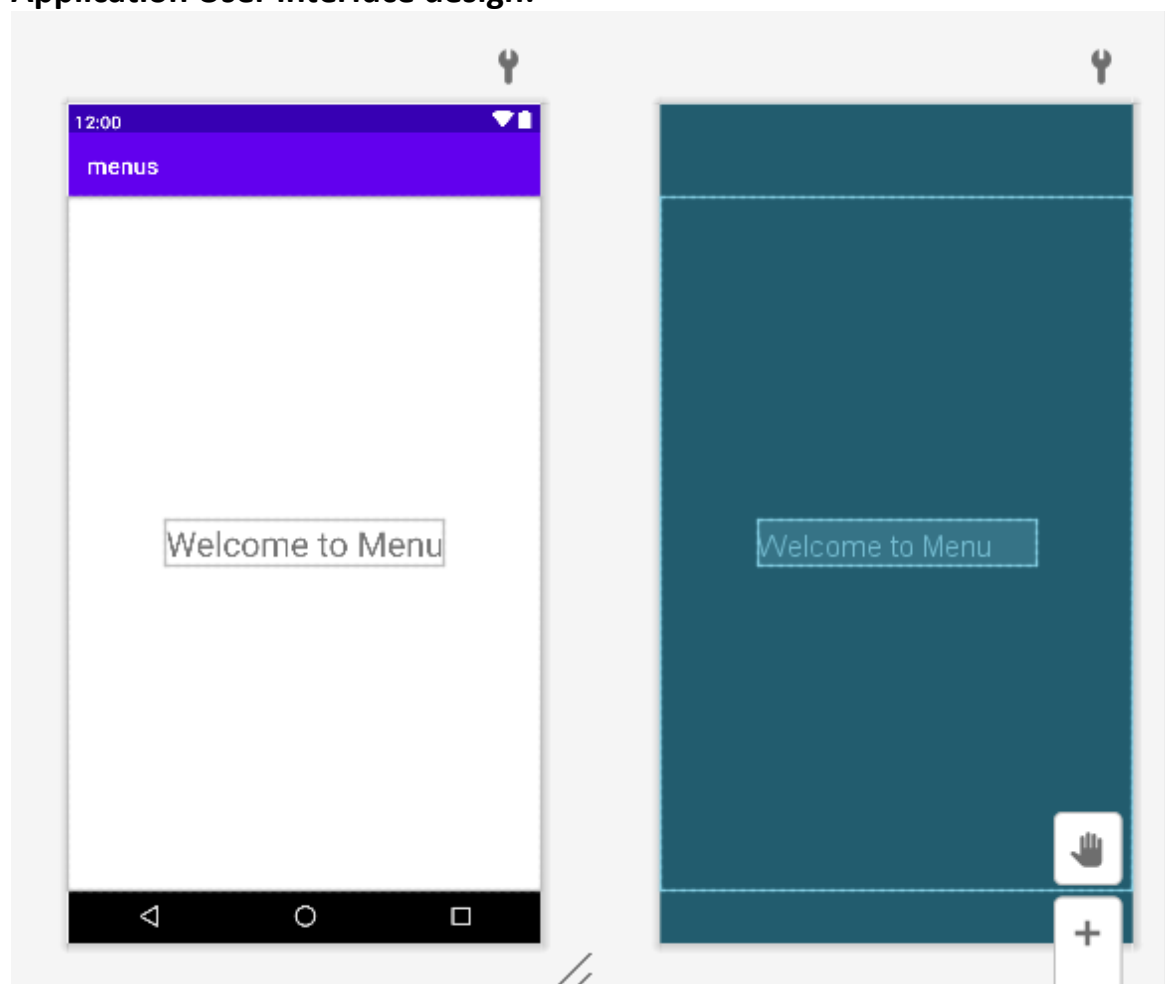Date:
Lab Session No.: 09

Aim:

Develop an android application to implement user interface by using Android Menus.

Software's /IDE Tools:
Android Development Kit / Android Studio

Application User interface design:

Application Programming Interface:

API / PACKAGES	CLASSES / INTERFACES	METHODS	DESCRIPTION
import androidx. appcompat.app.Ap pCompat Activity;	AppCompatActi vity	protected void onCreate(Bundle savedInstanceState)	onCreate(Bundle) is where you initialize your activity. When Activity is started and application is not loaded, then both onCreate() methods will be called.
import android.w idget.Edit Text;	EditText	getText()	Determines the minimum type that getText() will return. If set, specifies that this TextView has a textual input method and should automatically capitalize what the user types.

Code/Implementation:
// Develop an android application that converts text to speech.

// Project Name : ShareMyApp
/*

       Lab Session No.   : 09
       Author   : T.Avinash
       Date   :
       Roll Number   : 198W1A05C0
       Description   : Menuapp
       Softwares required   : Android Studio
       Topics Covered   : Options menu ,context menu
*/

MainActivity.java

```
package com.eswar.menus;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.view.menu.MenuBuilder;

import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
```

```java
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    @SuppressLint("RestrictedAPI")
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater=getMenuInflater();
        inflater.inflate(R.menu.menu_options,menu);
        MenuBuilder mn=(MenuBuilder) menu;
        mn.setOptionalIconsVisible(true);
        return true;
    }


    @Override
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        Toast.makeText(this, "Select Item: "+item.getTitle(),
Toast.LENGTH_SHORT).show();
        switch (item.getItemId())
        {
            case R.id.upload:
                Toast.makeText(this, "File Uploaded "+item.getTitle(),
Toast.LENGTH_SHORT).show();
                return true;
            case R.id.download:
                Toast.makeText(this, "File downloaded "+item.getTitle(),
Toast.LENGTH_SHORT).show();
                return true;
            case R.id.share:
                Toast.makeText(this, "File shared "+item.getTitle(),
Toast.LENGTH_SHORT).show();
                return true;
            case R.id.exit:
                System.exit(0);
            case R.id.settings:
                Toast.makeText(this, "Clicked on settings "+item.getTitle(),
Toast.LENGTH_SHORT).show();
                return true;
            default:
                return super.onOptionsItemSelected(item);
        }

    }
}
```
Activity_main.xml:

```xml
<?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"
```

```xml
        tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome to Menu"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

menu_options.xml

```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/share"
        android:icon="@drawable/ic_share"
        android:title="Share"/>
    <item
        android:id="@+id/upload"
        android:icon="@drawable/ic_upload"
        android:title="Upload"/>
    <item
        android:id="@+id/download"
        android:icon="@drawable/ic_download"
        android:title="Download"/>
    <item
        android:id="@+id/settings"
        android:icon="@drawable/ic_settings"
        android:title="Settings"/>
    <item
        android:id="@+id/exit"
        android:icon="@drawable/ic_exit"
        android:title="Exit"/>
</menu>
```

ic_download.xml

```xml
<vector xmlns:android="http://schemas.android.com/apk/res/android"
        android:width="24dp"
        android:height="24dp"
        android:viewportWidth="24"
        android:viewportHeight="24">
    <path
        android:pathData="M17.6,11.48 L19.44,8.3a0.63,0.63 0,0 0,-1.09 -
0.63l-1.88,3.24a11.43,11.43 0,0 0,-8.94 0L5.65,7.67a0.63,0.63 0,0 0,-1.09
0.63L6.4,11.48A10.81,10.81 0,0 0,1 20L23,20A10.81,10.81 0,0 0,17.6
11.48ZM7,17.25A1.25,1.25 0,0 1,1,8.25 16,1.25 1.25,0 0,1
7,17.25ZM17,17.25A1.25,1.25 0,0 1,1,18.25 16,1.25 1.25,0 0,1 17,17.25Z"
```

```
            android:fillColor="#FF000000"/>
</vector>
```

ic_exit.xml

```
<vector android:height="24dp" android:tint="#FF4545"
    android:viewportHeight="24" android:viewportWidth="24"
    android:width="24dp"
xmlns:android="http://schemas.android.com/apk/res/android">
    <path android:fillColor="@android:color/white"
android:pathData="M10.09,15.59L11.5,17l5,-5 -5 -
1.41,1.41L12.67,11H3v2h9.67l-2.58,2.59zM19,3H5c-1.11,0 -2,0.9 -
2,2v4h2V5h14v14H5v-4H3v4c0,1.1 0.89,2 2,2h14c1.1,0 2,-0.9 2,-2V5c0,-1.1 -
0.9,-2 -2,-2z"/>
</vector>
```
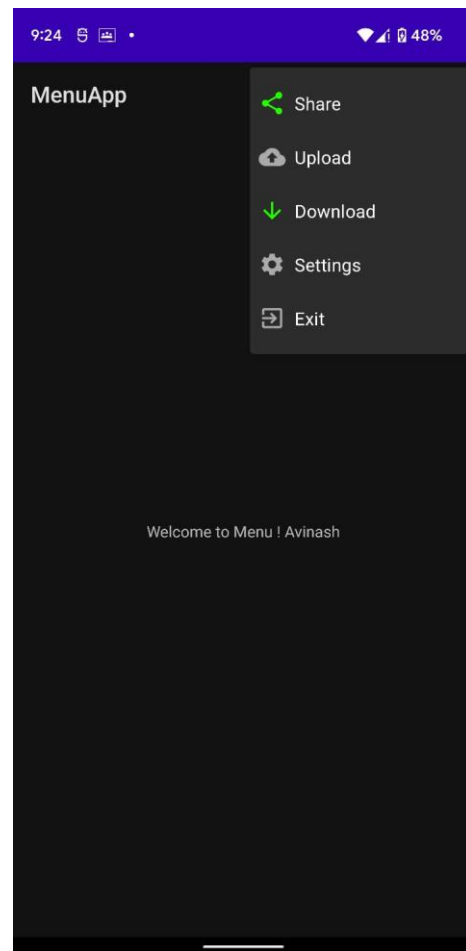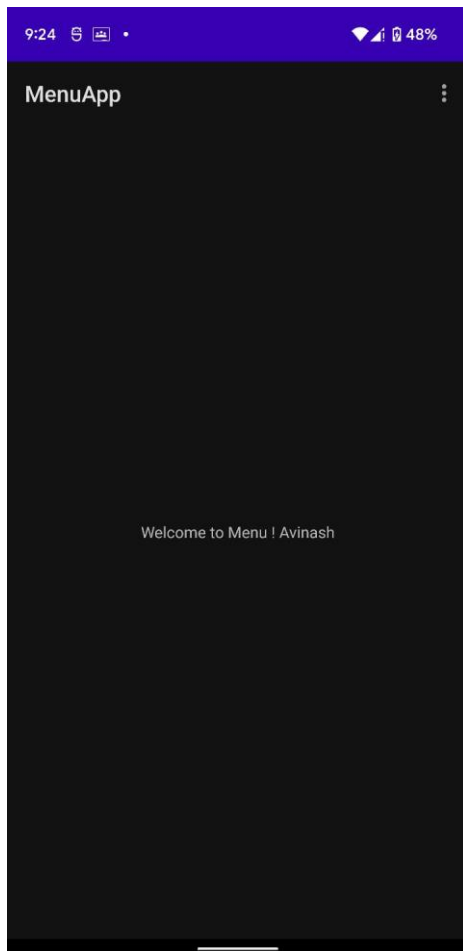
ic_settings.xml

```
<vector android:height="24dp" android:tint="#FF4545"
    android:viewportHeight="24" android:viewportWidth="24"
    android:width="24dp"
xmlns:android="http://schemas.android.com/apk/res/android">
    <path android:fillColor="@android:color/white"
android:pathData="M19.14,12.94c0.04,-0.3 0.06,-0.61 0.06,-0.94c0,-0.32 -
0.02,-0.64 -0.07,-0.94l2.03,-1.58c0.18,-0.14 0.23,-0.41 0.12,-0.61l-1.92,-
3.32c-0.12,-0.22 -0.37,-0.29 -0.59,-0.22l-2.39,0.96c-0.5,-0.38 -1.03,-0.7 -
1.62,-0.94L14.4,2.81c-0.04,-0.24 -0.24,-0.41 -0.48,-0.41h-3.84c-0.24,0 -
0.43,0.17 -0.47,0.41L9.25,5.35C8.66,5.59 8.12,5.92 7.63,6.29L5.24,5.33c-
0.22,-0.08 -0.47,0 -0.59,0.22L2.74,8.87C2.62,9.08 2.66,9.34
2.86,9.48l2.03,1.58C4.84,11.36 4.8,11.69 4.8,12s0.02,0.64 0.07,0.94l-
2.03,1.58c-0.18,0.14 -0.23,0.41 -0.12,0.61l1.92,3.32c0.12,0.22 0.37,0.29
0.59,0.22l2.39,-0.96c0.5,0.38 1.03,0.7 1.62,0.94l0.36,2.54c0.05,0.24
0.24,0.41 0.48,0.41h3.84c0.24,0 0.44,-0.17 0.47,-0.41l0.36,-2.54c0.59,-0.24
1.13,-0.56 1.62,-0.94l2.39,0.96c0.22,0.08 0.47,0 0.59,-0.22l1.92,-3.32c0.12,-
0.22 0.07,-0.47 -0.12,-0.61L19.14,12.94zM12,15.6c-1.98,0 -3.6,-1.62 -3.6,-
3.6s1.62,-3.6 3.6,-3.6s3.6,1.62 3.6,3.6S13.98,15.6 12,15.6z"/>
</vector>
```

ic_share.xml

```
<vector android:height="24dp" android:tint="#FF4545"
    android:viewportHeight="24" android:viewportWidth="24"
    android:width="24dp"
xmlns:android="http://schemas.android.com/apk/res/android">
    <path android:fillColor="@android:color/white"
android:pathData="M18,16.08c-0.76,0 -1.44,0.3 -1.96,0.77L8.91,12.7c0.05,-0.23
0.09,-0.46 0.09,-0.7s-0.04,-0.47 -0.09,-0.7l7.05,-4.11c0.54,0.5 1.25,0.81
2.04,0.81 1.66,0 3,-1.34 3,-3s-1.34,-3 -3,-3 -3,1.34 -3,3c0,0.24 0.04,0.47
0.09,0.7L8.04,9.81C7.5,9.31 6.79,9 6,9c-1.66,0 -3,1.34 -3,3s1.34,3 3,3c0.79,0
1.5,-0.31 2.04,-0.81l7.12,4.16c-0.05,0.21 -0.08,0.43 -0.08,0.65 0,1.61
1.31,2.92 2.92,2.92 1.61,0 2.92,-1.31 2.92,-2.92s-1.31,-2.92 -2.92,-2.92z"/>
</vector>
```

ic_upload.xml
```

```
<vector android:height="24dp" android:tint="#FF4545"
    android:viewportHeight="24" android:viewportWidth="24"
    android:width="24dp"
xmlns:android="http://schemas.android.com/apk/res/android">
    <path android:fillColor="@android:color/white"
android:pathData="M19.35,10.04C18.67,6.59 15.64,4 12,4 9.11,4 6.6,5.64
5.35,8.04 2.34,8.36 0,10.91 0,14c0,3.31 2.69,6 6,6h13c2.76,0 5,-2.24 5,-5 0,-
2.64 -2.05,-4.78 -4.65,-4.96zM14,13v4h-4v-4H7l5,-5 5,5h-3z"/>
</vector>
```

Output:

Result:

Demonstration of the Menus app is done successfully.