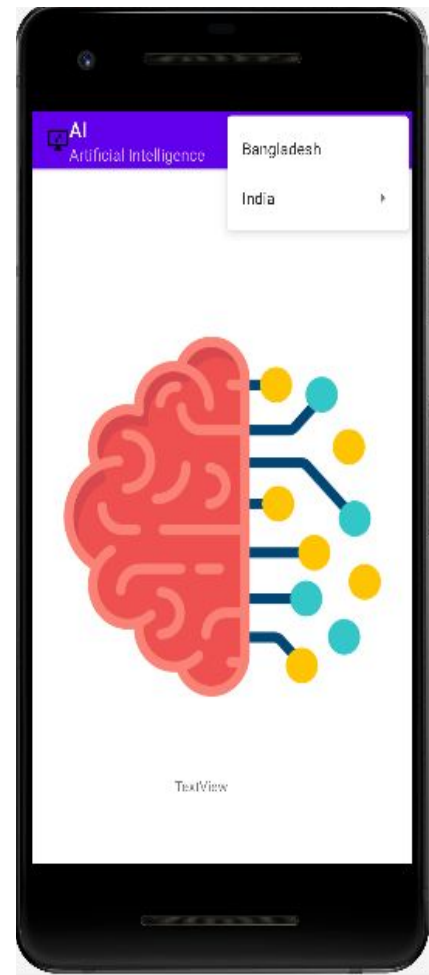
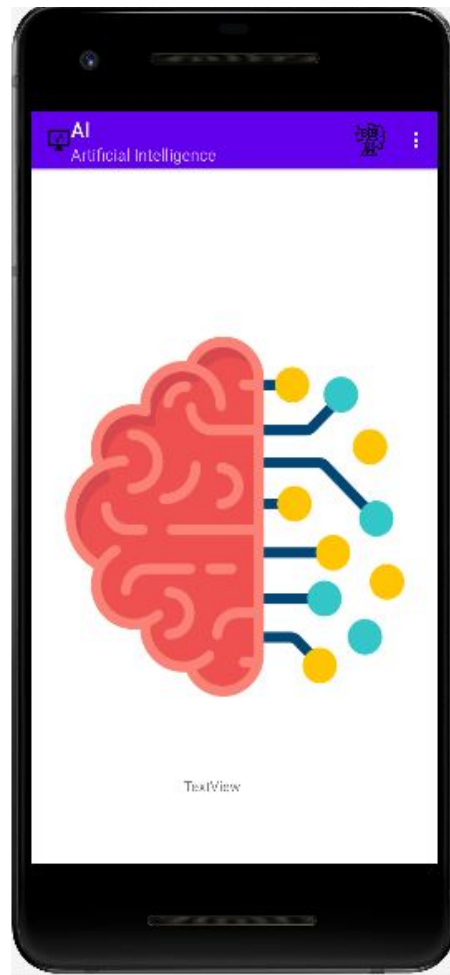


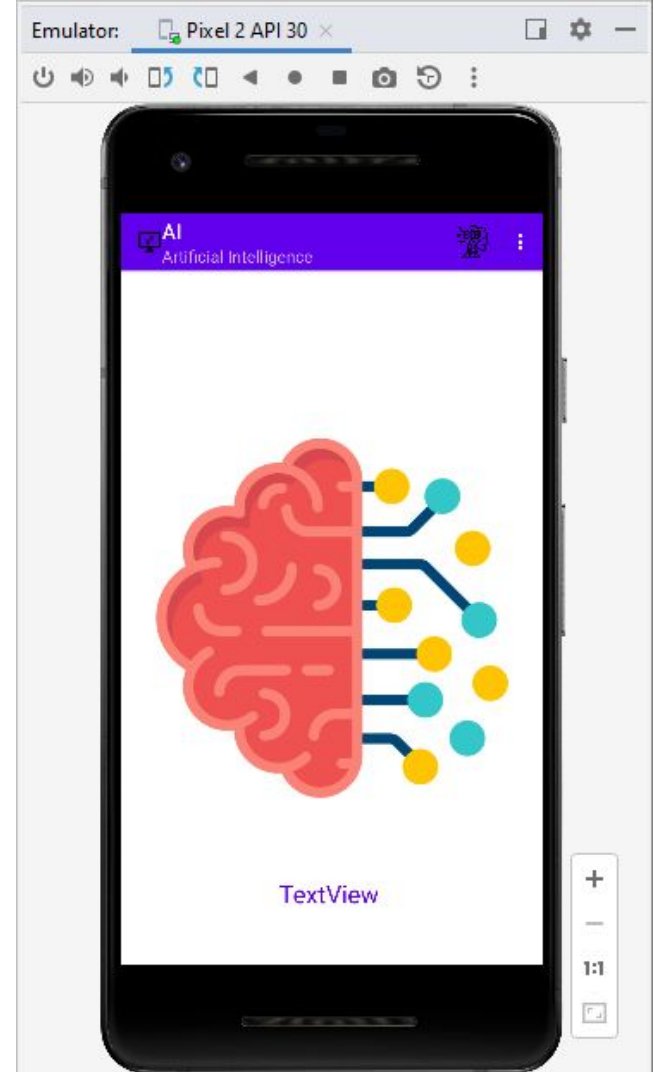
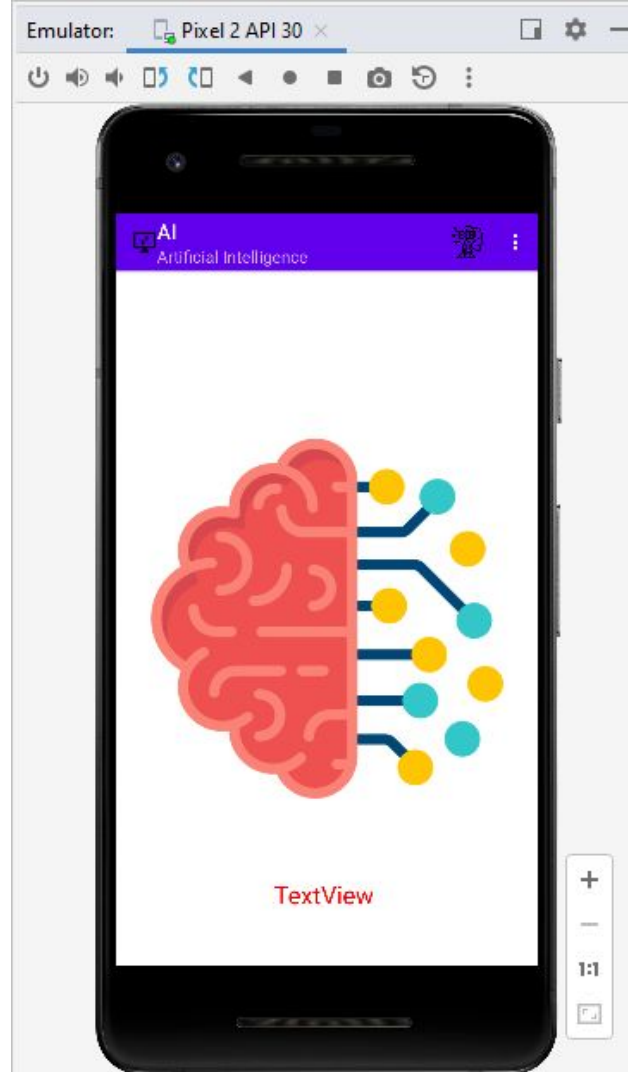
Mobile application using Menus and Action bar

Experiment - 4

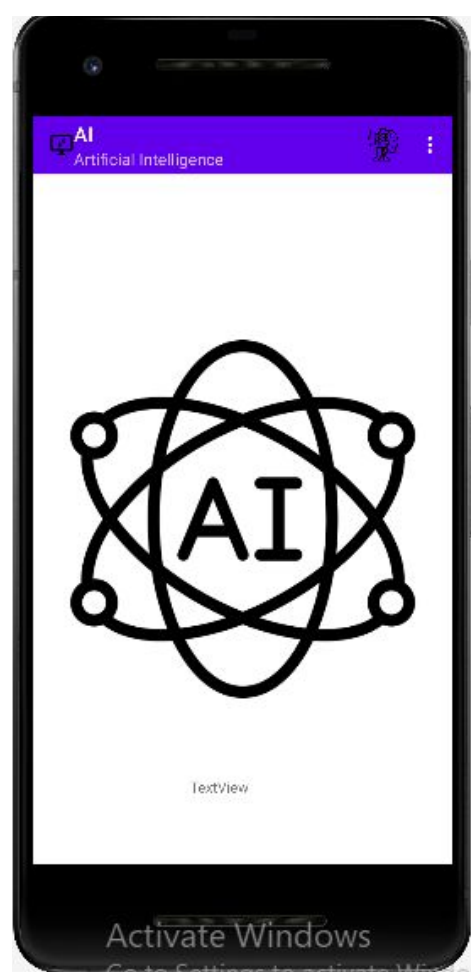
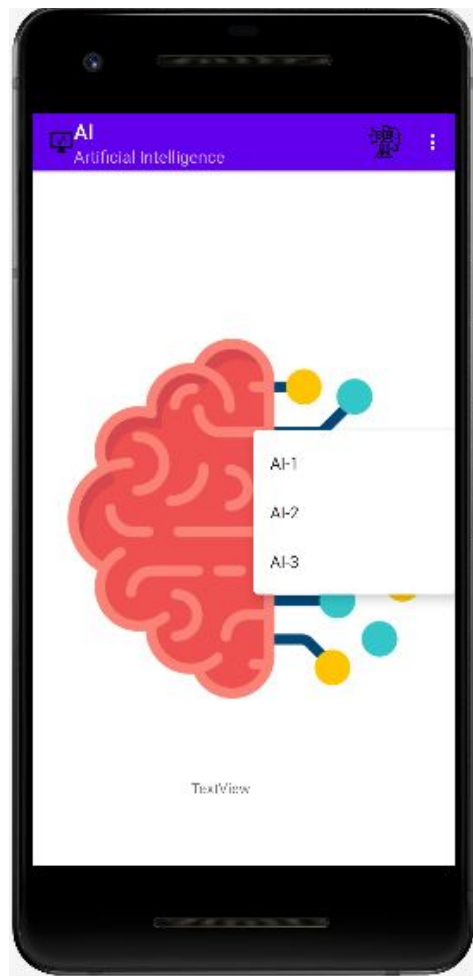
Options Menu



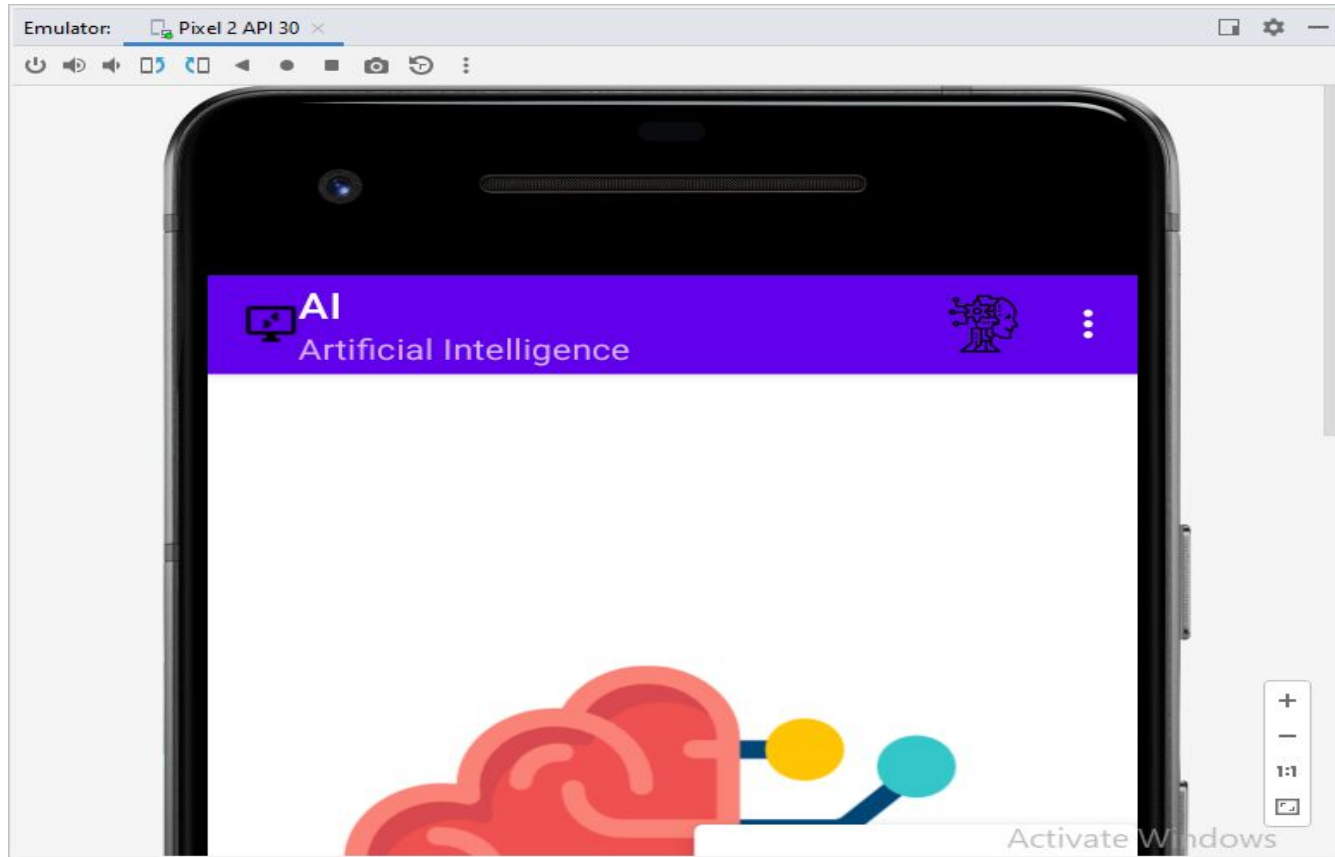
Popup Menu



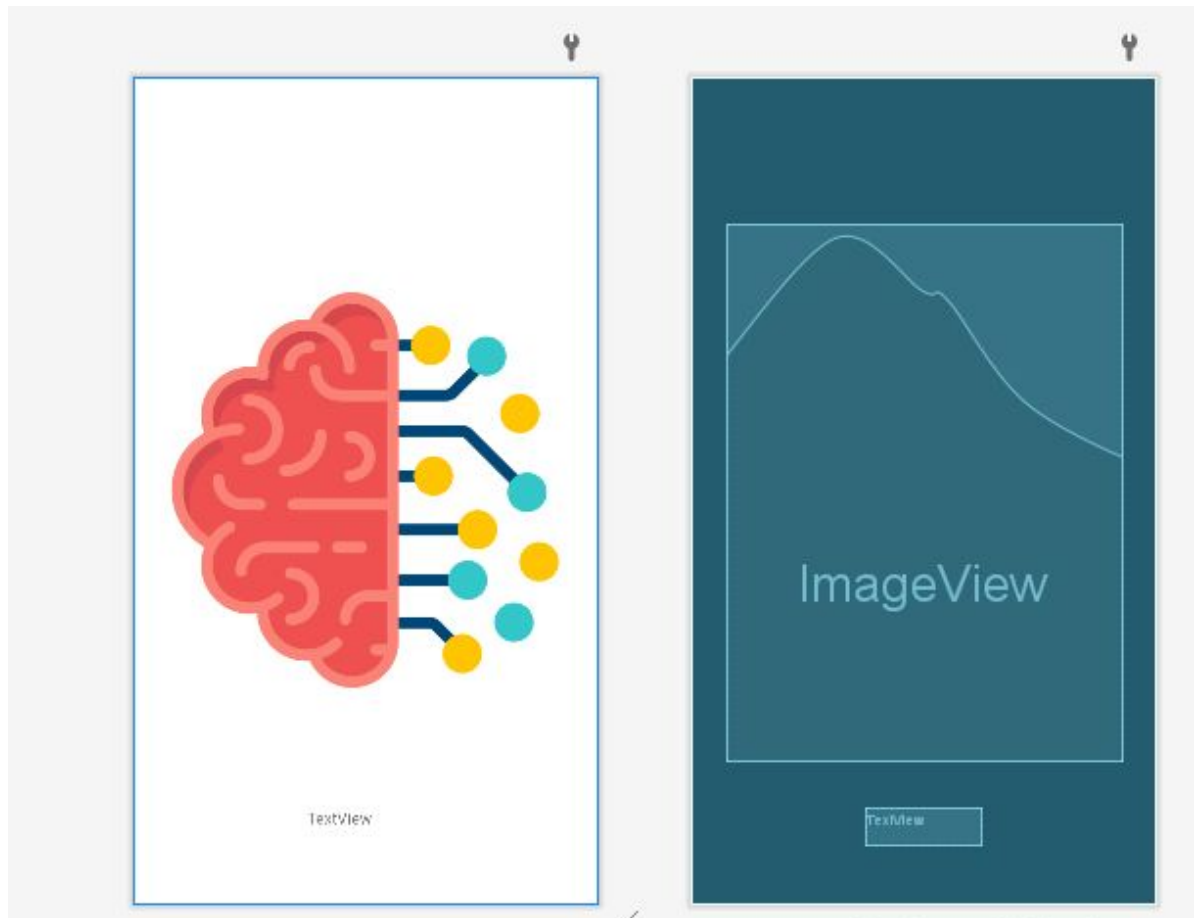
Context Menu



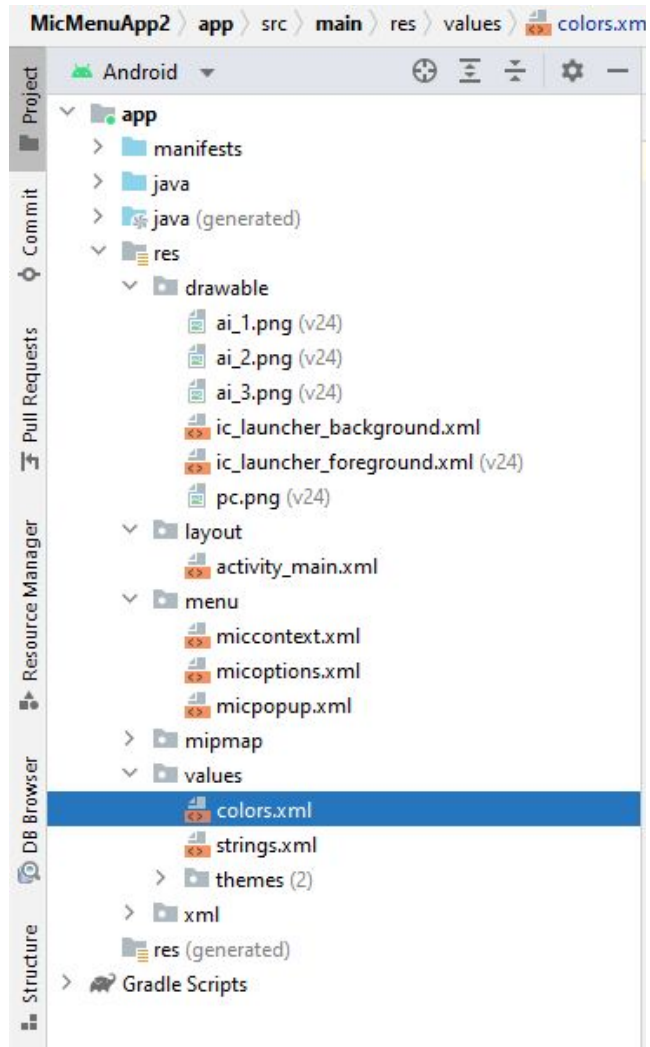
Action bar



Activity Design



App project structure



Main Activity

```
public class MainActivity extends AppCompatActivity {  
    ImageView imgv;  
    TextView txtv;  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        ActionBar ab=getSupportActionBar();  
        ab.setTitle("AI");  
        ab.setSubtitle("Artificial Intelligence");  
        ab.setIcon(R.drawable.pc);  
        ab.setDisplayUseLogoEnabled(true);  
        ab.setDisplayHomeAsUpEnabled(true);  
  
        imgv=findViewById(R.id.imageView);  
        registerForContextMenu(imgv);  
    }  
}
```



```
public void txtv_click(View v)
{
    Toast.makeText( context: this, text: "popup", Toast.LENGTH_SHORT).show();
    txtv=findViewById(R.id.textView);
    PopupMenu ppm=new PopupMenu( context: this,txtv);
    MenuInflater mi=getMenuInflater();
    mi.inflate(R.menu.micpopup,ppm.getMenu());
    ppm.show();
    ppm.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {
        @Override
        public boolean onMenuItemClick(MenuItem menuItem) {
            switch (menuItem.getItemId())
            {
                case R.id.s:txtv.setTextSize(10);|
                    break;
                case R.id.l:txtv.setTextSize(24);
                    break;
                case R.id.b:txtv.setTextColor(getResources().getColor(R.color.purple_500));
                    break;
                case R.id.r:txtv.setTextColor(getResources().getColor(R.color.red));
                    break;
                default:
            }
            return false;
        }
    });
}
```

@Override

```
public void onCreateContextMenu(ContextMenu menu, View v, ContextMenu.ContextMenuInfo menuInfo)
{
    MenuInflater mi=getMenuInflater();
    mi.inflate(R.menu.miccontext,menu);
    super.onCreateContextMenu(menu, v, menuInfo);
}
```

@Override

```
public boolean onContextItemSelected(@NonNull MenuItem item)
{
    Toast.makeText( context: this, text: "context", Toast.LENGTH_SHORT).show();
    switch (item.getItemId())
    {
        case R.id.ai1:imgv.setImageResource(R.drawable.ai_1);
            break;
        case R.id.ai2:imgv.setImageResource(R.drawable.ai_2);
            break;
        case R.id.ai3:imgv.setImageResource(R.drawable.ai_3);
            break;
        default:imgv.setImageResource(R.drawable.ai_3);
    }
    return super.onContextItemSelected(item);
}
```

```
@Override
```

```
public boolean onCreateOptionsMenu(Menu menu)
```

```
{
```

```
    MenuInflater mi=getMenuInflater();
```

```
    mi.inflate(R.menu.micoptions,menu);
```

```
    return super.onCreateOptionsMenu(menu);
```

```
}
```

```
@Override
```

```
public boolean onOptionsItemSelected(@NonNull MenuItem item)
```

```
{
```

```
    Toast.makeText( context: this,item.getTitle() , Toast.LENGTH_SHORT).show();
```

```
    return super.onOptionsItemSelected(item);
```

```
}
```

```
}
```

micpopup.xml

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<menu xmlns:app="http://schemas.android.com/apk/res-auto"  
      xmlns:android="http://schemas.android.com/apk/res/android">
```

```
    <item android:title="small" android:id="@+id/s"/>
```

```
    <item android:title="large" android:id="@+id/l"/>
```

```
    <item android:title="blue" android:id="@+id/b"/>
```

```
    <item android:title="red" android:id="@+id/r"/>
```

```
</menu>
```

micoptions.xml

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

    <item android:title="Pakistan" android:id="@+id/pak" app:showAsAction="ifRoom" android:icon="@drawable/ai_1"/>
    <item android:title="Bangladesh" android:id="@+id/bg"></item>
    <item android:title="India" android:id="@+id/ind">
        <menu>
            <item android:title="Mumbai" android:id="@+id/mm" />
            <item android:title="Kolkata" android:id="@+id/kol"></item>
        </menu>
    </item>

</menu>
```

miccontext.xml

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

    <item android:title="AI-1" android:id="@+id/ai1"/>
    <item android:title="AI-2" android:id="@+id/ai2"/>
    <item android:title="AI-3" android:id="@+id/ai3"/>
</menu>
```