

ANDROID APP DEVELOPMENT – 1

LOGIN PAGE

- MainActivity.kt

```
1      package main.example.myassignment
2
3      import android.os.Bundle
4      import androidx.activity.ComponentActivity
5      import androidx.activity.compose.setContent
6      import androidx.compose.foundation.layout.Arrangement
7      import androidx.compose.foundation.layout.Column
8      import androidx.compose.foundation.layout.fillMaxSize
9      import androidx.compose.foundation.layout.padding
10     import androidx.compose.material3.Button
11     import androidx.compose.material3.ExperimentalMaterial3Api
12     import androidx.compose.material3.MaterialTheme
13     import androidx.compose.material3.Surface
14     import androidx.compose.material3.Text
15     import androidx.compose.material3.TextField
16     import androidx.compose.runtime.Composable
17     import androidx.compose.runtime.getValue
18     import androidx.compose.runtime.mutableStateOf
19     import androidx.compose.runtime.remember
20     import androidx.compose.ui.Alignment
21     import androidx.compose.ui.Modifier
22     import androidx.compose.ui.text.input.PasswordVisualTransformation
23     import androidx.compose.ui.tooling.preview.Preview
24     import androidx.compose.ui.unit.dp
25     import main.example.myassignment.ui.theme.MyAssignmentTheme
```

```
27     class MainActivity : ComponentActivity() {
28         override fun onCreate(savedInstanceState: Bundle?) {
29             super.onCreate(savedInstanceState)
30             setContent {
31                 LoginPage()
32             }
33         }
34     }
35
36     @OptIn(ExperimentalMaterial3Api::class)
37     @Composable
38     fun LoginPage() {
39         Column(
40             modifier = Modifier.fillMaxSize(),
41             horizontalAlignment = Alignment.CenterHorizontally,
42             verticalArrangement = Arrangement.Center
43         ) {
44             val usernameState = remember { mutableStateOf("") }
45             val passwordState = remember { mutableStateOf("") }
46
47             TextField(
48                 value = usernameState.value,
49                 onValueChange = { it -> usernameState.value = it },
50                 label = { Text(text = "Username") },
51                 modifier = Modifier.padding(16.dp)
52             )
```

```

54         TextField(
55             value = passwordState.value,
56             onChange = { it -> passwordState.value = it },
57             label = { Text(text = "Password") },
58             visualTransformation = PasswordVisualTransformation(),
59             modifier = Modifier.padding(16.dp)
60         )
61
62         Button(
63             modifier = Modifier.padding(16.dp),
64             onClick = { /* TODO: Perform login action here */ }
65         ) {
66             Text(text = "Login")
67         }
68     }
69 }
70
71 @Preview
72 @Composable
73 fun LoginPagePreview() {
74     LoginPage()
75 }

```

- Color.kt

```

1     package main.example.myassignment.ui.theme
2
3     import androidx.compose.ui.graphics.Color
4
5     val Purple80 = Color(0xFFD0BCFF)
6     val PurpleGrey80 = Color(0xFFCCC2DC)
7     val Pink80 = Color(0xFFE8B8C8)
8
9     val Purple40 = Color(0xFF6650a4)
10    val PurpleGrey40 = Color(0xFF625b71)
11    val Pink40 = Color(0xFF7D5260)

```

- Theme.kt

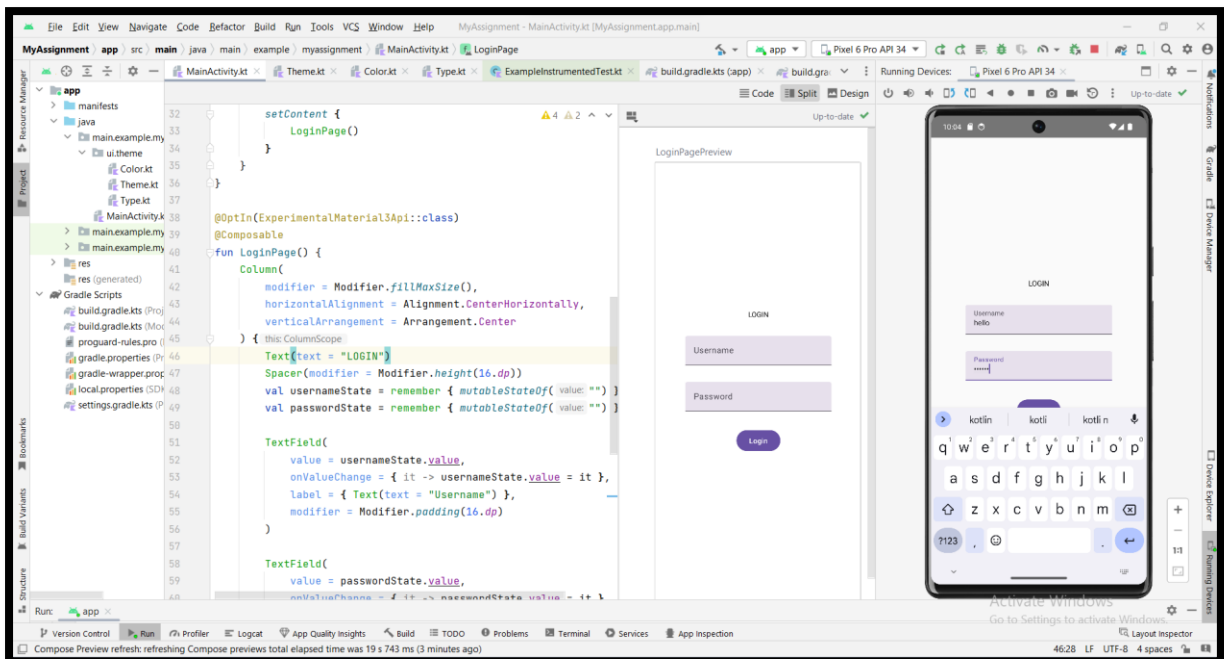
```
1     package main.example.myassignment.ui.theme
2
3     import android.app.Activity
4     import android.os.Build
5     import androidx.compose.foundation.isSystemInDarkTheme
6     import androidx.compose.material3.MaterialTheme
7     import androidx.compose.material3.darkColorScheme
8     import androidx.compose.material3.dynamicDarkColorScheme
9     import androidx.compose.material3.dynamicLightColorScheme
10    import androidx.compose.material3.lightColorScheme
11    import androidx.compose.runtime.Composable
12    import androidx.compose.runtime.SideEffect
13    import androidx.compose.ui.graphics.toArgb
14    import androidx.compose.ui.platform.LocalContext
15    import androidx.compose.ui.platform.LocalView
16    import androidx.core.view.WindowCompat
17
18    private val DarkColorScheme = darkColorScheme(
19        primary = Purple80,
20        secondary = PurpleGrey80,
21        tertiary = Pink80
22    )
23
24    private val LightColorScheme = lightColorScheme(
25        primary = Purple40,
26        secondary = PurpleGrey40,
27        tertiary = Pink40
```

```
40     @Composable
41     fun MyAssignmentTheme(
42         darkTheme: Boolean = isSystemInDarkTheme(),
43         // Dynamic color is available on Android 12+
44         dynamicColor: Boolean = true,
45         content: @Composable () -> Unit
46     ) {
47         val colorScheme = when {
48             dynamicColor && Build.VERSION.SDK_INT >= Build.VERSION_CODES.S -> {
49                 val context = LocalContext.current
50                 if (darkTheme) dynamicDarkColorScheme(context) else dynamicLightColorScheme(context)
51             }
52
53             darkTheme -> DarkColorScheme
54             else -> LightColorScheme
55         }
56         val view = LocalView.current
57         if (!view.isInEditMode) {
58             SideEffect {
59                 val window = (view.context as Activity).window
60                 window.statusBarColor = colorScheme.primary.toArgb()
61                 WindowCompat.getInsetsController(window, view).isAppearanceLightStatusBars = darkTheme
62             }
63         }
64
65         MaterialTheme(
66             colorScheme = colorScheme,
67             typography = Typography,
68             content = content
69         )
70     }
```

- Type.kt

```
1 package main.example.myassignment.ui.theme
2
3 import androidx.compose.material3.Typography
4 import androidx.compose.ui.text.TextStyle
5 import androidx.compose.ui.text.font.FontFamily
6 import androidx.compose.ui.text.font.FontWeight
7 import androidx.compose.ui.unit.sp
8
9 // Set of Material typography styles to start with
10 val Typography = Typography(
11     bodyLarge = TextStyle(
12         fontFamily = FontFamily.Default,
13         fontWeight = FontWeight.Normal,
14         fontSize = 16.sp,
15         lineHeight = 24.sp,
16         letterSpacing = 0.5.sp
17     )
18 )
```

- Output



DONE BY:

NARASIMHAN H (21BCE1617)

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