

**[ 2CEIT5PE18: MOBILE APPLICATION DEVELOPMENT ]**

# Practical: 5

**AIM-Create an Android Application that includes  
Login and Registration screens using Jetpack  
Compose.**

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### Practical-5

#### **MainActivity.kt**

```
package com.bytemap.mad_23012011026_practical4

package com.bytemap.mad_23012011026_practical5

import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.activity.enableEdgeToEdge
import androidx.compose.foundation.layout.fillMaxSize
import androidx.compose.foundation.layout.padding
import androidx.compose.material3.Scaffold
import androidx.compose.runtime.Composable
import androidx.compose.ui.Modifier
import
com.bytemap.mad_23012011026_practical5.ui.theme.Practical5Theme

class MainActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContent {
            Practical5Theme {
                AppNavigation(context = this)
            }
        }
    }
}
```

#### **AppNavigation.kt**

```
package com.bytemap.mad_23012011026_practical5

import android.content.Context
import androidx.compose.runtime.Composable
import androidx.navigation.compose.NavHost
import androidx.navigation.compose.composable
import androidx.navigation.compose.rememberNavController
import
com.bytemap.mad_23012011026_practical5.screen.components.LoginScreen
import
```

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```
com.bytemap.mad_23012011026_practical5.screen.components.RegisterUI

@Composable
fun AppNavigation(context: Context) {
    val navController = rememberNavController()

    NavHost(
        navController = navController,
        startDestination = "login"
    ) {
        composable("login")
            { LoginScreen(context, navController) }
        composable("register")
            { RegisterUI(navController) }
    }
}
```

### FormFields.kt

```
package com.bytemap.mad_23012011026_practical5.screen.components
```

```
import androidx.compose.foundation.layout.Row
import androidx.compose.foundation.layout.fillMaxWidth
import androidx.compose.foundation.layout.padding
import androidx.compose.foundation.text.KeyboardOptions
import androidx.compose.material3.LocalTextStyle
import androidx.compose.material3.OutlinedTextField
import androidx.compose.material3.Text
import androidx.compose.runtime.Composable
import androidx.compose.ui.Modifier
import androidx.compose.ui.text.input.KeyboardType
import androidx.compose.ui.text.input.PasswordVisualTransformation
import androidx.compose.ui.text.input.VisualTransformation
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import
com.bytemap.mad_23012011026_practical5.ui.theme.Practical5Theme

@Composable
```

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```
fun FormField(label : String, textState : String,
             onTextChange : (String) -> Unit,
             isPasswordField: Boolean = false,
             isNumber: Boolean = false) {
    Row(modifier = Modifier.fillMaxWidth().padding(10.dp))
        { if (!isNumber) {
            OutlinedTextField( val
                ue = textState,
                onValueChange = onTextChange,
                modifier = Modifier.padding(start = 16.dp),
                textStyle = LocalTextStyle.current.copy(fontSize =
20.sp),
                visualTransformation = if (isPasswordField)
                    PasswordVisualTransformation() else VisualTransformation.None,
                label = { Text("Enter $label") },
                placeholder = { Text(text = "Enter $label") },
            )
        } else {
            NumericUpDownTextField( lab
                el = label,
                value = textState,Modifier.padding(start =
16.dp).weight(2f),
                onTextChange = onTextChange
            )
        }
    }
}

@Composable
fun NumericUpDownTextField(label: String,
                         value: String,
                         modifier: Modifier,
                         onTextChange: (String) -> Unit) {
    OutlinedTextField( val
        ue = value,
        onValueChange = { newText ->
            if (newText.all { it.isDigit() })
                { onTextChange(newText)
            }
        },
        modifier = modifier,
```

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```
label = { Text("Enter $label") },
textStyle = LocalTextStyle.current.copy(fontSize = 18.sp),
placeholder = { Text(text = "Enter $label") },
keyboardOptions      =      KeyboardOptions(keyboardType      =
KeyboardType.Number),
visualTransformation = VisualTransformation.None
)
}
}

@Preview(showBackground = true)
@Composable
fun GreetingPreview()
{
    Practical5Theme {
        FormField(
            label = "Name",
            textState = "Pratham",
            onTextChange = {}
        )
    }
}
```

### LoginScreen.kt

```
package com.bytemap.mad_23012011026_practical5.screen.components

import android.content.Context
import androidx.compose.foundation.Image
import androidx.compose.foundation.layout.Box
import androidx.compose.foundation.layout.Column
import androidx.compose.foundation.layout.Row
import androidx.compose.foundation.layout.Spacer
import androidx.compose.foundation.layout.fillMaxSize
import androidx.compose.foundation.layout.fillMaxWidth
import androidx.compose.foundation.layout.height
import androidx.compose.foundation.layout.padding
import androidx.compose.foundation.layout.width
import androidx.compose.material3.Button
import androidx.compose.material3.Card
import androidx.compose.material3.CardDefaults
import androidx.compose.material3.MaterialTheme
import androidx.compose.material3.Scaffold
import androidx.compose.material3.Text
```

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```
import androidx.compose.material3.TextButton
import androidx.compose.runtime.Composable
import androidx.compose.runtime.getValue
import androidx.compose.runtime.mutableStateOf
import androidx.compose.runtime.remember
import androidx.compose.runtime.setValue
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.layout.ContentScale
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.navigation.NavController
import com.bytemap.mad_23012011026_practical5.R
import com.bytemap.mad_23012011026_practical5.ui.theme.Pink80

@Composable
fun LoginScreen(context: Context, navController: NavController)
    { Scaffold (modifier = Modifier.fillMaxSize()){
        innerPadding ->
        Box(modifier =
Modifier.fillMaxSize().padding(innerPadding)){ LoginUI(
            navController = navController)
        }
    }
}

@Composable
fun LoginUI(navController: NavController?= null)
    { var email by remember { mutableStateOf("") }
    var password by remember { mutableStateOf("") }
    Column(modifier = Modifier
        .fillMaxSize()
        .padding(20.dp)) {
        Spacer(modifier = Modifier.height(20.dp))
        Image(
            painter = painterResource(R.drawable.guni_pink_logo),
            contentDescription = "Guni Pink Logo",
            =
```

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```
        modifier = Modifier
            .height(130.dp)
            .align(Alignment.CenterHorizontally),
        contentScale = ContentScale.Fit
    )
Card(
    elevation = CardDefaults.cardElevation(defaultElevation
= 20.dp),
    shape = MaterialTheme.shapes.medium,
    modifier = Modifier.fillMaxWidth()
) {
    Column(modifier = Modifier
        .fillMaxWidth()
        .padding(20.dp))
{
    FormField(
        label = "Email", textState = email,
        onTextChange = { email = it })
    FormField(
        label = "Password", textState = password,
        onTextChange = { password = it },
    isPasswordField = true
    )
    Text(
        text = "Forgot Password?",
        fontSize = 18.sp,
        modifier = Modifier
            .padding(bottom = 50.dp)
            .align(Alignment.End)
    )
    Button(onClick = {

    }, modifier = Modifier
        .fillMaxWidth()
        .align(Alignment.CenterHorizontally))
    {
        Text("Login", fontSize = 18.sp)
    }
}
}
```

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```
Spacer(modifier = Modifier.height(50.dp))
Row(
    modifier = Modifier.align(Alignment.CenterHorizontally),
    verticalAlignment = Alignment.CenterVertically
) {
    Text(text = "Don't have an account?", fontSize = 16.sp)
    Spacer(modifier = Modifier.width(5.dp))
    TextButton(onClick = {
        navController?.navigate("register")
    }) {
        Text("SIGN UP", color = Pink80, fontSize = 18.sp,
fontWeight = FontWeight.Bold)
    }
}
}
```

### RegisterScreen.kt

```
package com.bytemap.mad_23012011026_practical5.screen.components
```

```
import androidx.compose.foundation.Image
import androidx.compose.foundation.layout.Column
import androidx.compose.foundation.layout.Row
import androidx.compose.foundation.layout.Spacer
import androidx.compose.foundation.layout.fillMaxSize
import androidx.compose.foundation.layout.fillMaxWidth
import androidx.compose.foundation.layout.height
import androidx.compose.foundation.layout.padding
import androidx.compose.foundation.layout.width
import androidx.compose.material3.Button
import androidx.compose.material3.Card
import androidx.compose.material3.CardDefaults
import androidx.compose.material3.MaterialTheme
import androidx.compose.material3.Text
import androidx.compose.material3.TextButton
import androidx.compose.runtime.Composable
import androidx.compose.runtime.getValue
import androidx.compose.runtime.mutableStateOf
import androidx.compose.runtime.remember
import androidx.compose.runtime.setValue
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
```

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```
import androidx.compose.ui.layout.ContentScale
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.tooling.preview.Preview
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.navigation.NavController
import com.bytemap.mad_23012011026_practical5.R
import com.bytemap.mad_23012011026_practical5.ui.theme.Pink80

@Composable
fun RegisterUI(navController: NavController? = null)
    { var name by remember { mutableStateOf("") }
        var phoneNumber by remember { mutableStateOf("") }
        var city by remember { mutableStateOf("") }
        var email by remember { mutableStateOf("") }
        var password by remember { mutableStateOf("") }
        var confirmPassword by remember { mutableStateOf("") }

    Column(modifier = Modifier
        .fillMaxSize()
        .padding(20.dp)) {
        Spacer(modifier = Modifier.height(10.dp))
        Image(
            painter = painterResource(R.drawable.guni_pink_logo),
            contentDescription = "Guni Pink Logo",
            modifier = Modifier
                .height(130.dp)
                .align(Alignment.CenterHorizontally),
            contentScale = ContentScale.Fit
        )
        Card(
            elevation = CardDefaults.cardElevation(defaultElevation
= 20.dp),
            shape = MaterialTheme.shapes.medium,
            modifier = Modifier.fillMaxWidth()
        ) {
            Column(modifier = Modifier
                .fillMaxWidth()
                .padding(20.dp))
        }
    }
```

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---

```
        TextFormField(
            label = "Name", textState = name,
            onTextChange = { name = it })
        TextFormField(
            label = "Phone Number", textState = phoneNumber,
            onTextChange = { phoneNumber = it })
    )
    TextFormField(
        label = "City", textState = city,
        onTextChange = { city = it })
)
TextField(
    label = "email", textState = email,
    onTextChange = { email = it })
)
TextField(
    label = "Password", textState = password,
    onTextChange = { password = it })
)
TextField(
    label = "Confirm Password", textState =
confirmPassword,
    onTextChange = { confirmPassword = it })
)

Button(onClick = {
}, modifier = Modifier
    .fillMaxWidth()
    .align(Alignment.CenterHorizontally))
{
    Text("Register", fontSize = 18.sp)
}
}
}
Spacer(modifier = Modifier.height(20.dp))
Row(
    modifier = Modifier.align(Alignment.CenterHorizontally),
    verticalAlignment = Alignment.CenterVertically
) {
    Text(text = "Do you have an account?", fontSize = 16.sp)
```

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```
Spacer(modifier = Modifier.width(5.dp))
TextButton(onClick = {
    navController?.navigate("login")
}) {
    Text("LOGIN", color = Pink80, fontSize = 18.sp,
fontWeight = FontWeight.Bold)
}
}

@Composable
@Preview(showBackground = true)
fun RegisterActivityPreview() {
    RegisterUI()
}
```

### Output:

