Android development with Kotlin

Week 2

Siddhesh Patil

20BCE2011

```kotlin
package com.example.vit_20bce2011week2

import android.app.DatePickerDialog
import android.content.Context
import android.os.Bundle
import android.telephony.SmsManager
import android.widget.DatePicker
import android.widget.Toast
import androidx.activity.ComponentActivity
import androidx.activity.compose.rememberLauncherForActivityResult
import androidx.activity.compose.setContent
import androidx.activity.result.contract.ActivityResultContracts
import androidx.compose.foundation.BorderStroke
import androidx.compose.foundation.Image
import androidx.compose.foundation.background
import androidx.compose.foundation.border
import androidx.compose.foundation.layout.*
import androidx.compose.foundation.lazy.LazyColumn
import androidx.compose.foundation.lazy.items
import androidx.compose.foundation.selection.selectable
import androidx.compose.foundation.shape.RoundedCornerShape
import androidx.compose.foundation.text.KeyboardOptions
import androidx.compose.material.*
import androidx.compose.material.icons.Icons
import androidx.compose.material.icons.outlined.Email
import androidx.compose.material.icons.outlined.LocationOn
import androidx.compose.material.icons.outlined.Person
import androidx.compose.material.icons.outlined.Phone
import androidx.compose.material3.AlertDialog
import androidx.compose.material3.Button
import androidx.compose.material3.ButtonDefaults
import androidx.compose.material3.DropdownMenuItem
import androidx.compose.material3.ExperimentalMaterial3Api
import androidx.compose.material3.ExposedDropdownMenuBox
import androidx.compose.material3.ExposedDropdownMenuDefaults
import androidx.compose.material3.Icon
import androidx.compose.material3.MaterialTheme
import androidx.compose.material3.RadioButton
import androidx.compose.material3.Scaffold
import androidx.compose.material3.Surface
import androidx.compose.material3.Text
import androidx.compose.material3.TextField
import androidx.compose.material3.TextFieldDefaults
import androidx.compose.material3.TopAppBar
import androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.platform.LocalContext
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.font.FontWeight
import androidx.compose.ui.text.input.KeyboardType
import androidx.compose.ui.text.input.TextFieldValue
import androidx.compose.ui.text.style.TextAlign
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp
import androidx.navigation.NavController
import androidx.navigation.compose.NavHost
import androidx.navigation.compose.composable
import androidx.navigation.compose.rememberNavController
import java.util.*
class MainActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            Surface(
                modifier = Modifier.fillMaxSize(),
                color = MaterialTheme.colorScheme.background
            ) {
                val getpermission = rememberLauncherForActivityResult(
                    ActivityResultContracts.RequestPermission()
                ) { isGranted ->
                    if (isGranted) {
                        //permission accepted Do Something
                    } else {
                        // Permission not accepted show message
                    }
                }
                SideEffect {
                    getpermission.launch(android.Manifest.permission.SEND_SMS)
                }
                App(applicationContext)
            }
        }
    }
}
@Composable
fun App(context: Context)
{
    val navController = rememberNavController()
    NavHost(
        navController = navController,
        startDestination = "home"
    ) {
        composable("home") {
            HomePage(navController = navController)
        }
        composable("submit/{name}/{email}/{mobile}/{gen}/{blg}/{location}") {
                backStackEntry ->
            val name = backStackEntry.arguments?.getString("name")
            val email = backStackEntry.arguments?.getString("email")
            val phone = backStackEntry.arguments?.getString("mobile")
            val gender = backStackEntry.arguments?.getString("gen")
            val bloodgrp = backStackEntry.arguments?.getString("blg")
            val loc = backStackEntry.arguments?.getString("location")


NextPage(context,name=name,email=email,mobile=phone,gen=gender,blg=bloodgrp,locatio
                    n=loc)
        }
    }
}
@OptIn(ExperimentalMaterial3Api::class)
@Composable
fun HomePage(navController: NavController)
{
    Scaffold(
        topBar = { TopBar("Registration") },
        content = {pad -> FormFill(pad,navController) },
    )
}
@OptIn(ExperimentalMaterial3Api::class)
@Composable
```

```
fun TopBar(abc:String?) {
    TopAppBar(
        title = {
            Row(
                verticalAlignment = Alignment.CenterVertically,
                horizontalArrangement = Arrangement.Center,
                modifier = Modifier
                    .fillMaxSize()
                    .fillMaxWidth()
                    .padding(end = 20.dp)
                    .background(color = Color.White)
            ) {
                Text(
                    ""+abc,
                    color = Color.Red,
                    textAlign = TextAlign.Center,
                    fontSize = 25.sp,
                    fontWeight = FontWeight.Bold
                )
            }
        }
    )
}
@OptIn(ExperimentalMaterial3Api::class)
@Composable
fun FormFill(h: PaddingValues,navController: NavController) {
    Column(
        modifier = Modifier
            .fillMaxWidth()
            .fillMaxSize()
            .background(color = Color.White)
            .padding(25.dp),
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.SpaceEvenly
    )
    {
        val name = remember { mutableStateOf(TextFieldValue("")) }
        val email = remember { mutableStateOf(TextFieldValue("")) }
        val mobile = remember { mutableStateOf(TextFieldValue("")) }
        var gen by remember { mutableStateOf("") }
        var blg by remember { mutableStateOf("") }
        val location = remember { mutableStateOf(TextFieldValue("")) }
        val mYear: Int
        val mMonth: Int
        val mDay: Int
        val mCalendar = android.icu.util.Calendar.getInstance()
        mYear = mCalendar.get(android.icu.util.Calendar.YEAR)
        mMonth = mCalendar.get(android.icu.util.Calendar.MONTH)
        mDay = mCalendar.get(android.icu.util.Calendar.DAY_OF_MONTH)
        val dobdate = remember { mutableStateOf("") }
        val lastdate = remember { mutableStateOf("") }
        val mContext = LocalContext.current
        val dob = DatePickerDialog(
            mContext,
            { _: DatePicker, mYear: Int, mMonth: Int, mDayOfMonth: Int ->
                dobdate.value = "$mDayOfMonth/${mMonth + 1}/$mYear"
            }, mYear, mMonth, mDay
        )
        val lastime = DatePickerDialog(
            mContext,
            { _: DatePicker, mYear: Int, mMonth: Int, mDayOfMonth: Int ->
                lastdate.value = "$mDayOfMonth/${mMonth + 1}/$mYear"
            }, mYear, mMonth, mDay
        )
        Image(
            painterResource(id = R.drawable.bloodbank),
            contentDescription = "logo",
```

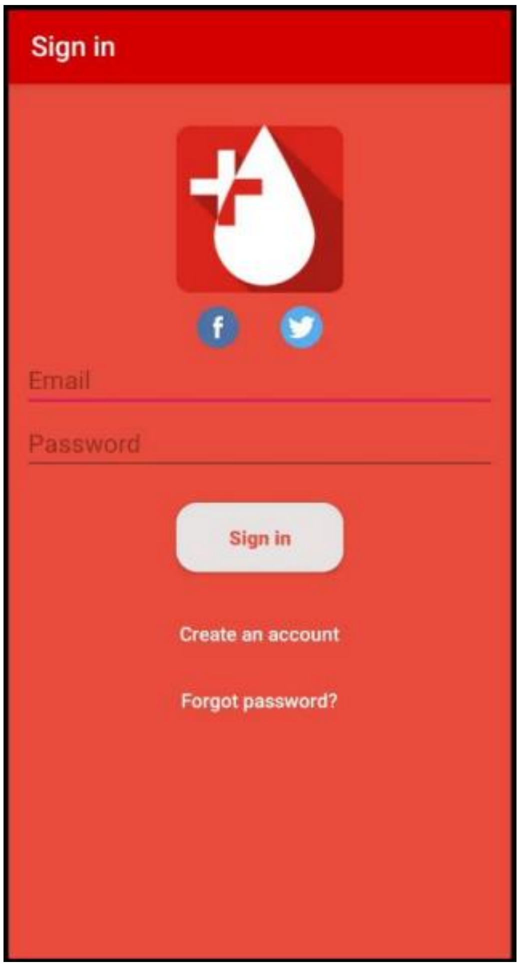
```kotlin
            modifier = Modifier
                .size(width = 90.dp, height = 90.dp)
                .padding(top = 30.dp)
        )
        Text(
            "Every Blood Donor is a Hero",
            color = Color.Red,
            textAlign = TextAlign.Center,
            fontWeight = FontWeight.Bold,
            fontSize = 10.sp
        )
        TextField(
            value = name.value,
            onValueChange = {
                name.value = it
            },
            colors = TextFieldDefaults.textFieldColors(containerColor = Color.White),
            label = { Text("Enter Full Name") },
            modifier = Modifier.fillMaxWidth().border(BorderStroke(2.dp, Color.Black)),
            leadingIcon = { Icon(Icons.Outlined.Person, contentDescription = null) }
        )
        TextField(
            value = email.value,
            onValueChange = {
                email.value = it
            },
            colors = TextFieldDefaults.textFieldColors(containerColor = Color.White),
            label = { Text("Enter Email ID") },
            modifier = Modifier.fillMaxWidth().border(BorderStroke(2.dp, Color.Black)),
            keyboardOptions = KeyboardOptions(keyboardType = KeyboardType.Email),
            leadingIcon = { Icon(Icons.Outlined.Email, contentDescription = null) }
        )
        TextField(
            value = mobile.value,
            onValueChange = {
                mobile.value = it
            },
            colors = TextFieldDefaults.textFieldColors(containerColor = Color.White),
            label = { Text("Enter Mobile Number") },
            modifier = Modifier.fillMaxWidth().border(BorderStroke(2.dp, Color.Black)),
            keyboardOptions = KeyboardOptions(keyboardType = KeyboardType.Phone),
            leadingIcon = { Icon(Icons.Outlined.Phone, contentDescription = null) }
        )
        TextField(
            value = location.value,
            onValueChange = {
                location.value = it
            },
            colors = TextFieldDefaults.textFieldColors(containerColor = Color.White),
            label = { Text("Enter Location / City") },
            modifier = Modifier.fillMaxWidth().border(BorderStroke(2.dp, Color.Black)),
            shape = RoundedCornerShape(5.dp),
            leadingIcon = { Icon(Icons.Outlined.LocationOn, contentDescription = null)
}

        )
        blg = bloodGroup()
        Text(
            "Select the Gender",
            color = Color.Black,
            fontWeight = FontWeight.Bold,
            fontSize = 16.sp
        )
        gen = gender()
        Button(
            onClick = { dob.show() },
            modifier = Modifier.fillMaxWidth(),
            colors = ButtonDefaults.buttonColors(Color(0xFFFC2141)),
            shape = RoundedCornerShape(5.dp),
        )
        {
            Text(
                text = "DoB "+ dobdate.value,
                color = Color.White,
                textAlign = TextAlign.Center,
                fontWeight = FontWeight.Bold
            )
        }
        Button(
            onClick = { lastime.show() },
            modifier = Modifier.fillMaxWidth(),
            colors = ButtonDefaults.buttonColors(Color(0xFFFC2141)),
            shape = RoundedCornerShape(5.dp)
        )
        {
            Text(
                text = "Last Blood Donation Date "+ lastdate.value,
                color = Color.White,
                textAlign = TextAlign.Center,
                fontWeight = FontWeight.Bold
            )
        }
        Button(
            onClick = {


navController.navigate("submit/${name.value.text}/${email.value.text}/${mobile.value.te
xt}/
                    ${gen}/${blg}/${location.value.text}")
            },
            modifier = Modifier.fillMaxWidth(),
            colors = ButtonDefaults.buttonColors(Color(0xFF634A4D)),
            shape = RoundedCornerShape(5.dp)
        )
        {
            Text(
                text = "Submit Registration Details",
                color = Color.White,
                textAlign = TextAlign.Center,
                fontWeight = FontWeight.Bold
            )
        }
    }
}
@Composable
fun gender():String {
    val radioOptions = listOf("Male", "Female", "Other")
    val (selectedOption, onOptionSelected) = remember { mutableStateOf(radioOptions[2])
}
    Column {
        Row {
            radioOptions.forEach { text ->
                Row(
                    Modifier.selectable(selected = (text == selectedOption),
                        onClick = { onOptionSelected(text) }
                    )
                ) {
                    RadioButton(
                        selected = (text == selectedOption),
                        onClick = {
                            onOptionSelected(text)
                        },
                    )
                    Text(
                        text = text,
```

```kotlin
                        modifier = Modifier.padding(top = 15.dp)
                    )
                }
            }
        }
    }
    return selectedOption
}
@OptIn(ExperimentalMaterial3Api::class)
@Composable
fun bloodGroup():String {
    var isexpanded by remember { mutableStateOf(false) }
    var bloodgrp by remember { mutableStateOf("") }
    val bloodgroups = listOf("A+", "A-", "B+", "B-", "AB+", "AB-","O+","O-")
    ExposedDropdownMenuBox(expanded = isexpanded,
        onExpandedChange = { isexpanded = it })
    {
        TextField(
            value = bloodgrp,
            onValueChange = {},
            readOnly = true,
            trailingIcon = { ExposedDropdownMenuDefaults.TrailingIcon(expanded =
isexpanded)
            },
            colors = ExposedDropdownMenuDefaults.textFieldColors(containerColor =
            Color.White),
            modifier = Modifier.fillMaxWidth()
                .menuAnchor()
                .border(BorderStroke(2.dp, Color.Black)),
            placeholder = { Text(text = "Select Blood Group") },
        )
        ExposedDropdownMenu(
            expanded = isexpanded,
            onDismissRequest = { isexpanded = false },
            modifier = Modifier.background(color = Color.White)
        )
        {
            bloodgroups.forEach { bloodgroups ->
                DropdownMenuItem(
                    text = { Text(text = bloodgroups) },
                    onClick = {
                        bloodgrp = bloodgroups
                        isexpanded = false
                    })
            }
        }
    }
    return bloodgrp
}
@Composable
@OptIn(ExperimentalMaterial3Api::class)
fun NextPage(context: Context,name:String?, email:String?, mobile:String?, gen:String?,
             blg:String?, location:String?)
{
    Scaffold(
        topBar = { TopBar("Confirm Details") },
        content = {pad ->
NextPageContent(pad,context,name,email,mobile,gen,blg,location) },
    )
}
@OptIn(ExperimentalMaterial3Api::class)
@Composable
fun NextPageContent(paddingvalues:PaddingValues, context: Context, name:String?,
                    email:String?, mobile:String?, gen:String?, blg:String?,
location:String?) {
    TopAppBar(
        title = {
            Row(
                verticalAlignment = Alignment.CenterVertically,
                horizontalArrangement = Arrangement.Center,
                modifier = Modifier
                    .fillMaxSize()
                    .fillMaxWidth()
                    .padding(end = 20.dp)
                    .background(color = Color.White)
            ) {
                Text(
                    "",
                    color = Color.Red,
                    textAlign = TextAlign.Center,
                    fontSize = 25.sp,
                    fontWeight = FontWeight.Bold
                )
            }
        }
    )
    Column(
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Top,
        modifier = Modifier
            .fillMaxSize()
            .fillMaxWidth()
            .background(color = Color.White)
            .padding(20.dp)
    ) {
        val details = listOf("Name", "Email", "Mobile", "Gender", "Blood Group",
"Location")
        val params = listOf(name, email, mobile, gen, blg, location)
        val openDialog = remember { mutableStateOf(false) }
        Spacer(modifier = Modifier.padding(top = 40.dp))
        LazyColumn(modifier = Modifier.padding(5.dp))
        {
            items(params) { paramval ->
                (
                        Button(
                            onClick = {},
                            modifier = Modifier
                                .width(300.dp)
                                .height(50.dp),
                            colors = ButtonDefaults.buttonColors(Color(0xFFFC2141)),
                            shape = RoundedCornerShape(10),
                        )
                        {
                            Text(
                                text = "" + details[params.indexOf(paramval)] + ": " +
paramval,

                                fontWeight = FontWeight.Bold,
                                fontSize = 17.sp
                            )
                        })
                Spacer(modifier = Modifier.padding(20.dp))
            }
            item {
                Button(
                    onClick = { openDialog.value = true },
                    modifier = Modifier
                        .width(300.dp)
                        .height(50.dp),
                    colors = ButtonDefaults.buttonColors(Color(0xFF634A4D)),
                    shape = RoundedCornerShape(10),
                ) {
                    Text(text = "Confirm the Above Details")
                }
                if (openDialog.value) {
                    AlertDialog(
                        onDismissRequest = { openDialog.value = false },
                        title = { Text(text = "Alert") },
                        text = { Text("Want to send confirmation message to this Number
?") },
                        dismissButton = {
                            Button(
                                onClick = {
                                    openDialog.value = false
                                    try {
                                        val smsManager: SmsManager =
SmsManager.getDefault()
                                        smsManager.sendTextMessage(
                                            "+91" + mobile,
                                            null,
                                            "Thanks for Your Information - BloodBank
Application",
                                            null,
                                            null
                                        )
                                        Toast.makeText(context, "Message Sent",
Toast.LENGTH_LONG)
                                            .show()
                                    } catch (e: Exception) {
                                        Toast.makeText(
                                            context,
                                            "Error: " + e.message,
                                            Toast.LENGTH_LONG
                                        ).show()
                                    }
                                },
                                modifier = Modifier
                                    .width(100.dp)
                                    .height(45.dp),
                                colors =
ButtonDefaults.buttonColors(Color(0xFF268D2A)),
                                shape = RoundedCornerShape(10)
                            )
                            {
                                Text("Yes")
                            }
                        },
                        confirmButton = {
                            Button(
                                onClick = { openDialog.value = false },
                                modifier = Modifier
                                    .width(100.dp)
                                    .height(45.dp),
                                colors =
ButtonDefaults.buttonColors(Color(0xFF268D2A)),
                                shape = RoundedCornerShape(10)
                            )
                            {
                                Text("Cancel")
                            }
                        })
                }
            }
        }
    }
}
```


Sign in
Email
Password
Sign in
Create an account
Forgot password?