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Building User Screen Flows

Activity 2.01 – creating a login form with a standard Activity

Solution

Perform the following steps to solve the problem:

1. Create a new Android Studio project with an empty activity.
2. Add three `MutableState` properties for a username, a password, and an error message below the `MainActivity` class header:

```
private var username by mutableStateOf("")
private var password by mutableStateOf("")
private var message by mutableStateOf("")
```

3. Create a form with username and password `TextField` Composables and a login button:

```
Scaffold(
    modifier = Modifier.fillMaxSize()
) { innerPadding ->
    Box(
        Modifier
            .fillMaxSize()
            .padding(innerPadding),
        contentAlignment = Alignment.Center
    ) {
        Column(
            modifier = Modifier
                .fillMaxSize()
                .padding(16.dp),
            verticalArrangement = Arrangement.Top
        ) {
            TextField(
                value = username,
                onValueChange = { username = it },
                label = { Text("Username") },
                modifier = Modifier.fillMaxWidth()
            )
            Spacer(modifier = Modifier.height(8.dp))
            TextField(
                value = password,
                onValueChange = { password = it },
                label = { Text("Password") },
                modifier = Modifier.fillMaxWidth()
            )
            Spacer(modifier = Modifier.height(16.dp))
            Button(
                onClick = {},
                modifier = Modifier.fillMaxWidth()
            ) {
                Text("Login")
            }

            Spacer(modifier = Modifier.height(8.dp))
            Text(
                text = message,
                modifier = Modifier.padding(16.dp)
            )
        }
    }
}
```

4. Add two constants called `USERNAME_KEY` and `PASSWORD_KEY` above the `MainActivity` class header to send the username and password as `Extra` keys in a `Bundle`:

```
const val USERNAME_KEY = "USERNAME_KEY"
const val PASSWORD_KEY = "PASSWORD_KEY"
```

5. Create a new empty Activity called `LoginActivity` (you can do this by selecting **File** | **New** | **Activity** | **Gallery** | **Empty Activity**) and create two properties called `username` and `password` to retrieve the `USERNAME_KEY` and `PASSWORD_KEY` values in `onCreate`:

```
val username = intent.getStringExtra(USERNAME_KEY)
val password = intent.getStringExtra(PASSWORD_KEY)
```

6. Add a `ClickListener` to the login button in `MainActivity` to validate that the form fields are filled in correctly and start `LoginActivity`, sending the username and password:

```
onClick = {
    if (
        username.isNotEmpty() &&
        password.isNotEmpty()) {
        val intent = Intent(
            this@MainActivity,
            LoginActivity::class.java
        ).apply {
            putExtra(USERNAME_KEY, username)
            putExtra(PASSWORD_KEY, password)
        }
        startActivity(intent)
    } else {
        message = "Please fill in all fields."
    }
},
```

7. In `LoginActivity`, check the submitted username and password fields against the hard-coded values and display a welcome message with the username if the check is successful and an error message if not:

```
Scaffold(
    modifier = Modifier
        .fillMaxSize()
) { innerPadding ->
    val message = if (
        username == "username" &&
        password == "password"
    ) {
        "Welcome, $username!"
    } else {
        "Login failed. Please try again."
    }

    Box(
        Modifier
            .fillMaxSize()
            .padding(innerPadding),
        contentAlignment = Alignment.Center
    ) {
        Text(
            text = message,
            modifier = Modifier.padding(16.dp)
        )
    }
}
```