



ENCS5150 - Advanced Computer Systems Laboratory

Scenario: Student Portal App with Login

Create an app that simulates a student portal with login functionality.

Part 1: Main Activity

Create Login component in the Main Activity:

1. UI Component

- Two EditTexts: Username and Password
- Button: "Login"

2. Hardcoded User Storage

```
// Store these users in arrays
String[] usernames = {"student1", "student2", "admin"};
String[] passwords = {"pass123", "pass456", "admin123"};
String[] Roles = {"student", "student", "systemAdmin"};
```

3. Login Logic

- Check if the entered credentials match any array pair
- If a match is found:
 - Start MainActivity using an explicit Intent
 - Pass the **username and role as extras (View Code hints below)**
- If no match:
 - Show Toast: "Invalid credentials"
 - Clear password field

Part 2: Student Activity - Student Dashboard

After successful login, show the student Activity with:

1. Contact Professor Button

- Opens email to: professor@birzeit.edu
- Subject: "Question from [student name]"
- Body: "Dear Professor,\n\n[Leave space for question]\n\nBest regards,\n[student name]"

2. Emergency Alert System

- Button: "Send Emergency Alert"
- Creates a notification:
 - Title: "Emergency - [student name]"
 - Body: "Student needs immediate assistance on campus."

3. Campus Navigation

- Spinner with 3 options: "Library", "Cafeteria", "IT Department"
- Button: "Get Directions"
- Opens Google Maps with location based on spinner selection:
 - Library: geo:31.9038,35.2034
 - Cafeteria: geo:31.9048,35.2044
 - IT Dept: geo:31.9058,35.2054

4. Schedule Meeting Toast

- Button shows Toast.
- Format: "Meeting scheduled in 1 hour"
- Only show button to System Admin (pass the role as an intent extra)

Code Hints:

// Passing extras to MainActivity

```
Intent intent = new Intent(LoginActivity.this, MainActivity.class);
intent.putExtra("username", "string1");
intent.putExtra("role", "string2");
startActivity(intent);
```

// Getting extras in MainActivity

```
String username = getIntent().getStringExtra("username");
String role = getIntent().getStringExtra("role");
```

```
//set Visibility  
scheduleMeetingButton.setVisibility(View.VISIBLE);  
scheduleMeetingButton.setVisibility(View.GONE);
```

What to Hand-in:

1. Project.zip file (Size in KB)

From Android Studio: File → Export to zip file