



## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**Course: CSE 489**

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**Project Title:** Online TicTacToe game

**Project Features:**

By the end of this course, implemented features:

- a) Login System (User authentication, Google Authentication, User Profile, User photo)
- b) Invitation (User can invite, User can join with invitation code)
- c) Online Game (Find and play with online player)
- d) Personal Game Records
- e) Leaderboard

Screenshots:

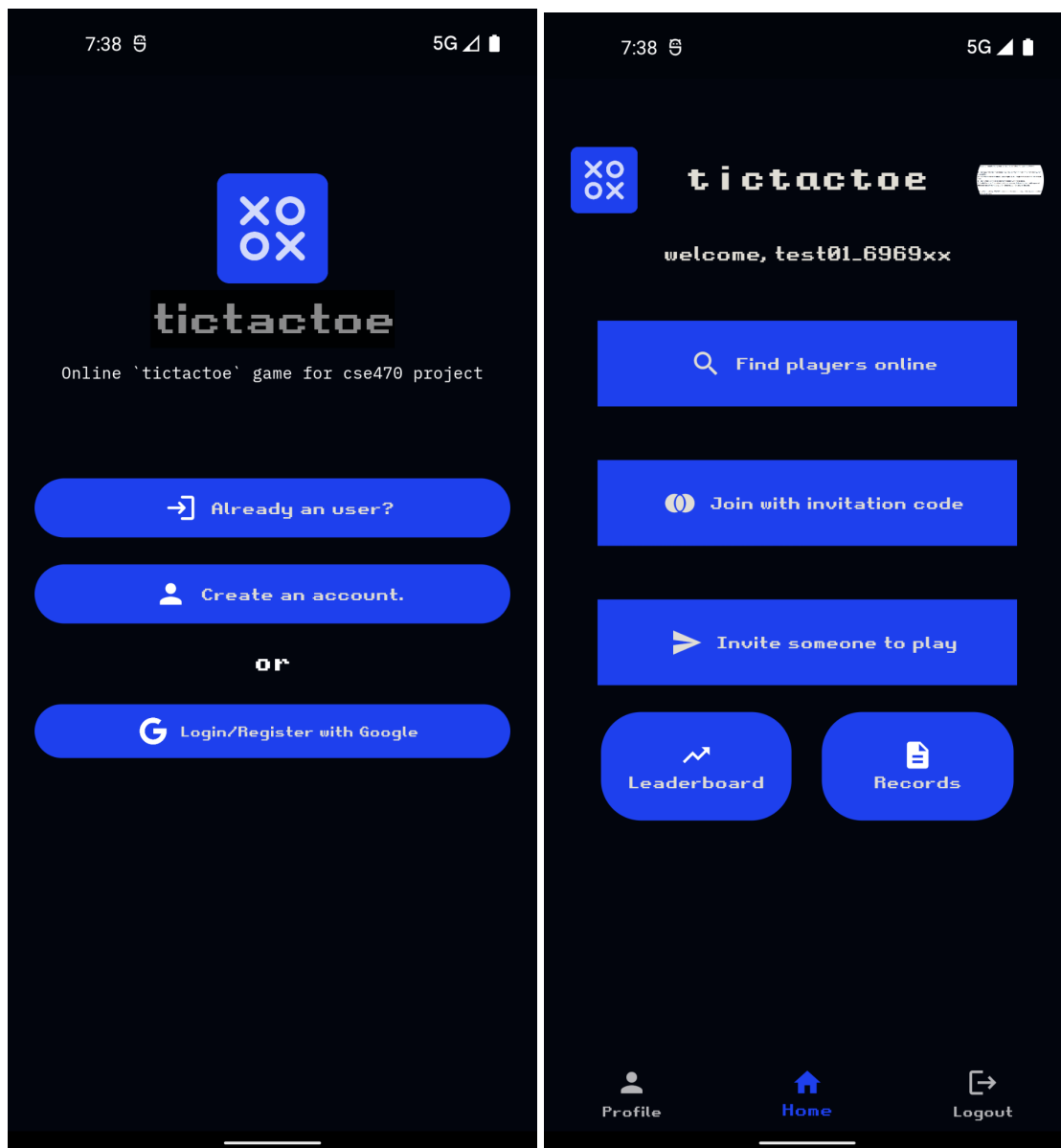


Figure 1 & Figure 2: Login/Authentication Page, Logged In User Home Page

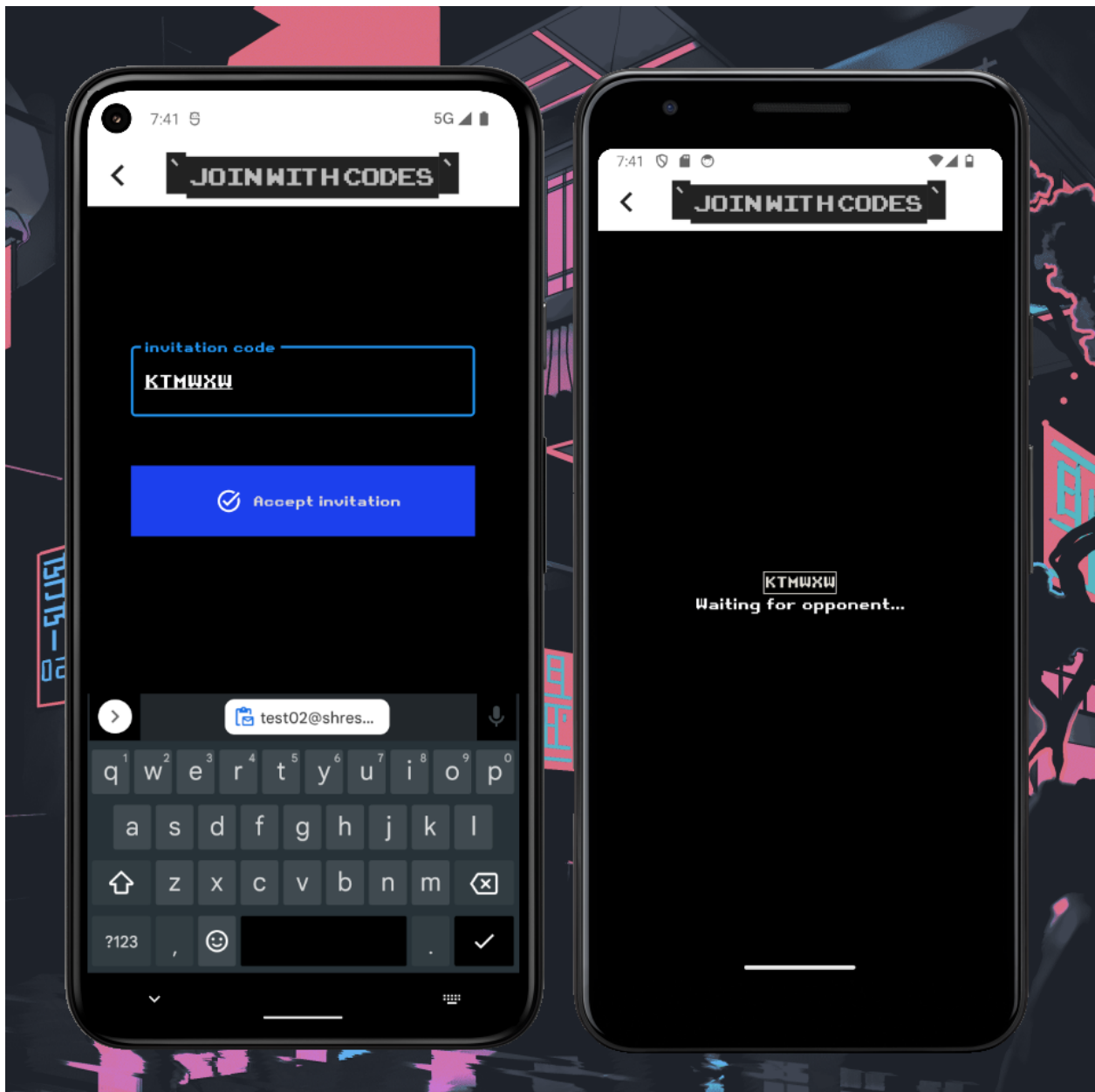


Figure 3: Players Inviting and Joining with invitation code

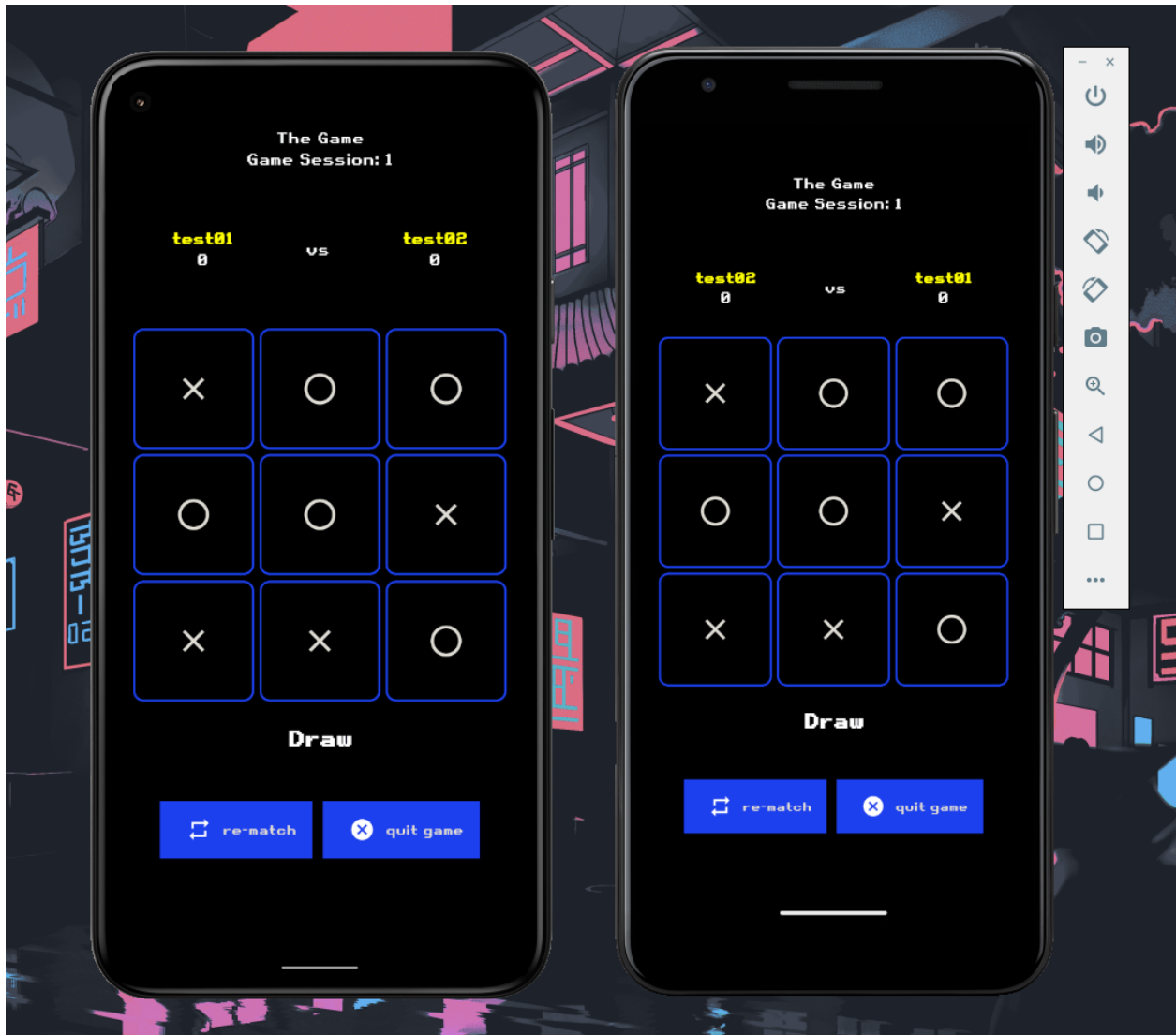


Figure 04: Players playing the game

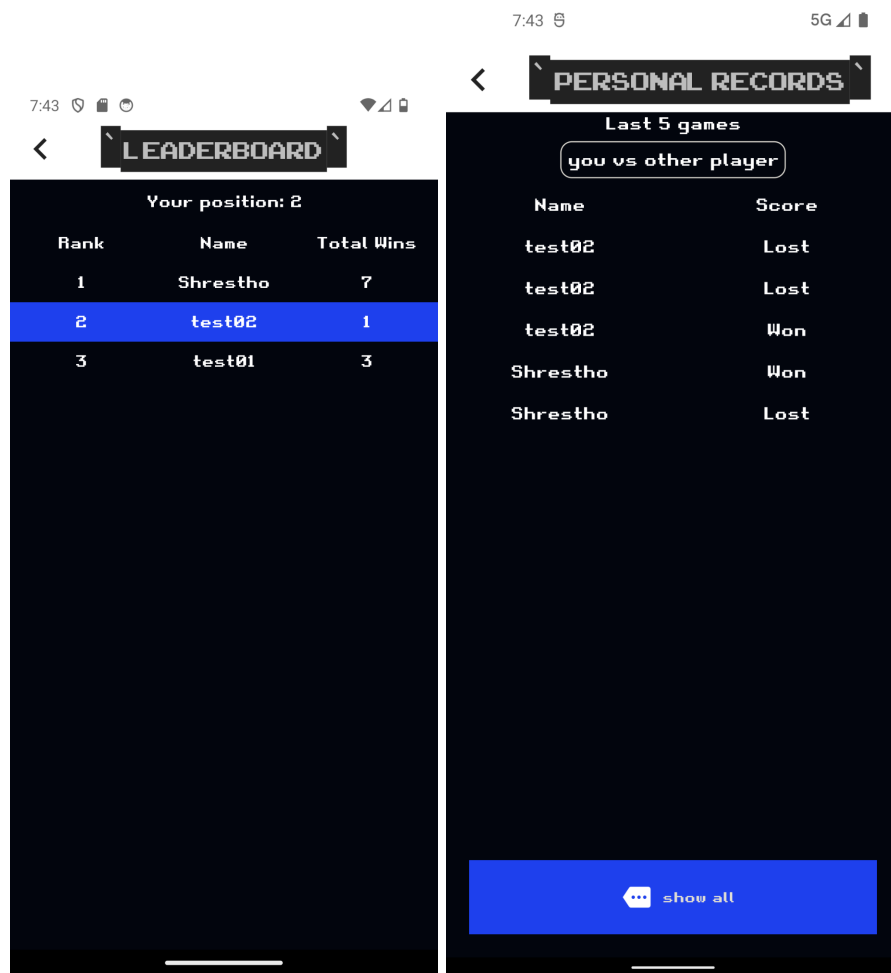


Figure 05 & Figure 06: Leaderboard and Personal Game Record

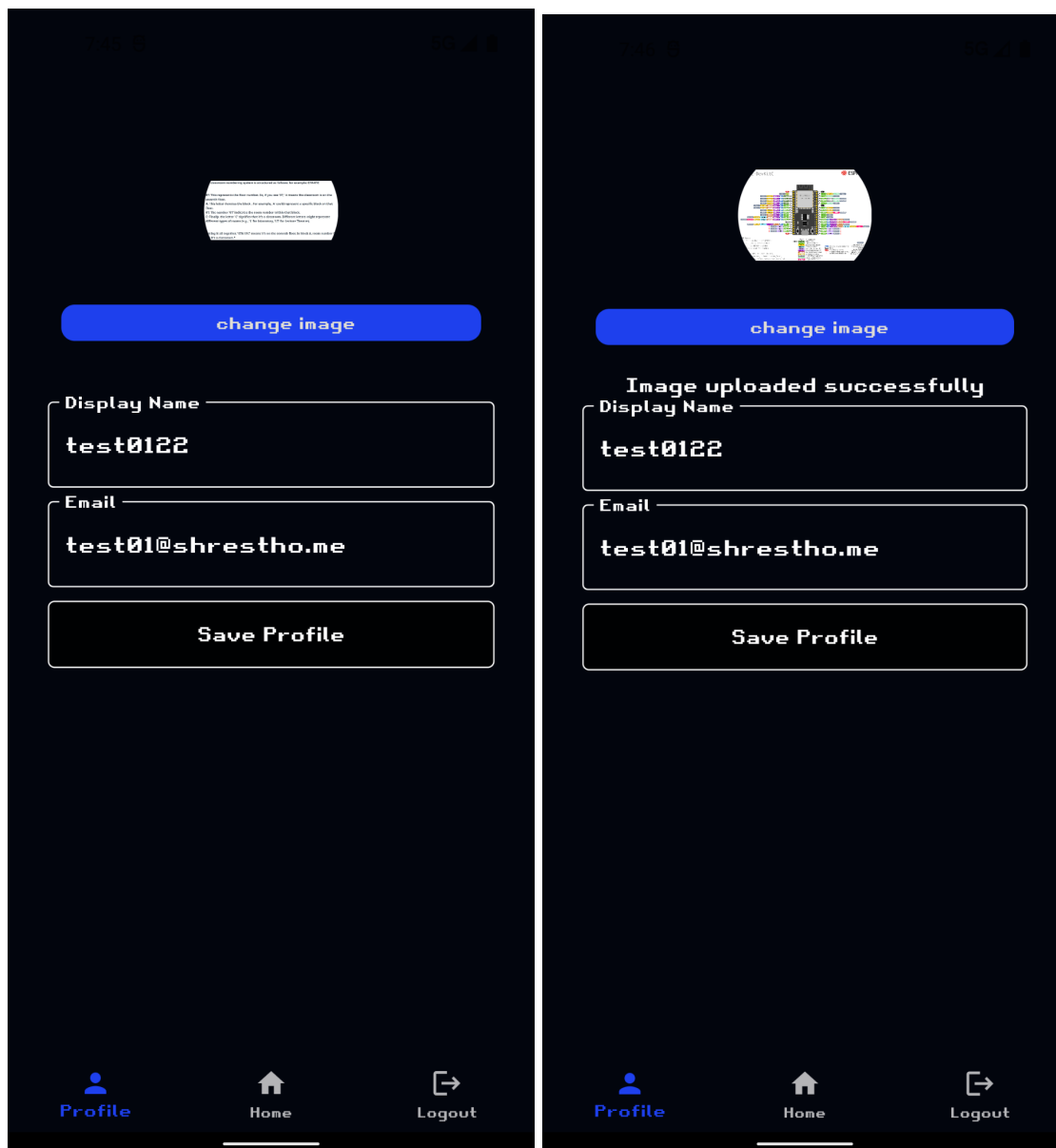


Figure 07 & Figure 08: User profile and edit options

### **Online Resources used:**

#### **a) Reference:**

- Flutter <https://flutter.dev/>
- Flutter packages
- Youtube (User Authentication) : [link1](#), [link2](#).

#### **b) Stackoverflow or github links:**

- <https://stackoverflow.com/questions/49471063/how-to-run-code-after-some-delay-in-flutter>
- <https://stackoverflow.com/questions/68368834/flutter-firebase-firestore-append-data-with-unique-id>
- <https://stackoverflow.com/questions/67699909/how-to-create-a-default-empty-function-in-dart>
- <https://stackoverflow.com/questions/75057467/how-do-i-correctly-model-data-from-firebase-realtime-database-in-flutter>
- <https://stackoverflow.com/questions/74212654/flutter-initialize-firebase-and-check-if-internet-connection-but-not-in-the-r>
- <https://stackoverflow.com/questions/64854035/how-to-add-user-profile-picture-in-flutter-using-firebase-auth>
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### **Future Enhancements:**

Following enhancement can be added to the current system which will improve the system.

- a) Cloud functions to remove orphaned data.
- b) Players chat feature while playing the game.
- c) Taking More user specific data (such as user birthday to wish them on their birthday)
- d) Word filtration (it will be helpful to don't let users to add bad words as their names)