



**COMSATS University Islamabad,
Vehari Campus**

Lab - Assignment no: 02
(Group Project)

Title:

NumberGuessingGame

Submitted to:

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Subject:

Programming fundamental

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Section:

B(Software Engineering)

**Department of Computer Science
(Software Engineering)**

Functionalities

Functionality	Description
User Registration	Allows users to create a new account with first name, last name, username, and password.
Username Validation	Ensures username is at least 4 characters long and both letters and numbers.
Password Validation	Ensures password is at least 6 characters long and contains both letters and numbers.
Duplicate Username Check	Prevents account creation with a username that already exists.
Login System	Authenticates existing users by verifying credentials.
User Data Storage	Stores account credentials and personal info using HashMaps.
Play Game (Placeholder)	Reserved for main game logic. Can be customized.
Restart Game Option	Allows user to restart the game after playing.
Delete Account Option	Deletes the current user's account and resets the system.
Logout Option	Logs the user out without deleting the account.

Class Diagram

NumberGuessingGame
<ul style="list-style-type: none">• input:Scanner• username: string• password: string• firstName: string• lastName: string• first Game: boolean• loggedIn: boolean• accounts: map<string,string>• userDetails: map<string,string[]>
<ul style="list-style-type: none">• main(args: string[]): void• isValidUsername(username: string): boolean• isValidPassword(password: String): boolean• createAccount(): void• login():boolean• playGame():void• askRetry(): int

Flow Chart

