



**COMSATS University Islamabad,
Vehari Campus**

Lab - Assignment no: 02
(Updated Group Project)

Title:

NumberGuessingGame

Submitted to:

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Subject:

Programming fundamental

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Section:

B(Software Engineering)

Deparment of Computer Science
(Software Engineering)

Functionalities

Functionality	Description
User Registration	User enters name, username, and password. Data is saved in a CSV file.
Username Validation	Username must be at least 4 characters and contain both letters and numbers.
Password Validation	Password must be at least 6 characters and contain both letters and numbers.
Duplicate Username Check	Checks if the username already exists in the CSV file.
Login System	Allows user to log in with username and password. Validates credentials.
Guest Mode	One-time guest access to play the game without creating an account.
Play Game	Number guessing logic: find numbers from 1 to 5 hidden in boxes.
Restart Game Option	Option to play again after a round.
Delete Account Option	Option to permanently delete account from the CSV file
Logout Option	Option to log out without deleting account.

Class Diagram

NumberGuessingGame	
<ul style="list-style-type: none">• - input: Scanner• - username: String• - password: String• - firstName: String• - lastName: String• - isLoggedIn: boolean• - guestPlayed: boolean• - DATA_FILE: String	
<ul style="list-style-type: none">+ main(String[] args): void+ showLoginMenu(): void+ handleGuestMode(): void+ createAccount(): void+ getPersonalInfo(): void+ getUsername(): String+ getPassword(): String+ login(): void+ createDataFileIfNotExists(): void+ isEmptyFile(): boolean+ saveUserData(): void	<ul style="list-style-type: none">+ isUsernameExists(String): boolean+ deleteAccount(): void+ validateCredentials(String, String): boolean+ playGame(): void+ tryToFindNumber(): void+ showInstructions(): void+ displayBoxes(): void+ getValidInput(int): int+ generateRandomBoxes(): int[]+ handleGameEnd(): void+ askRetry(): boolean+ validateUsername(String): boolean+ validatePassword(String): boolean

Flow Chart

