

CENG322 Assignment 1

Die Game

You are expected to implement a die game. The game rules are stated below.

Main Rules

- There will be 4 players in the game.
 - 1 user
 - 3 computers
- The game will last until a player reaches 20 points or ended by user (y/n selection).

Game Rules

- Each user will roll 3 dice in a round.
- Points given to the combinations of these 3 dice:
 - 1-1-1 → -10 points
 - 6-6-6 → 10 points
 - X-Y-Y → X points (if Y>3)
-X points (if Y<4)
 - 1-2-3 → -3 points
 - 4-5-6 → 3 points
 - X-X-X → 5 points (excluding 1-1-1 and 6-6-6)
 - Other combinations → 0 points

Note: Order of the numbers does not matter.

Coding Rules

- Ask user for username.
- Ask user to confirm to start the game.
- Display rolled dice for each player at each round.
- Ask user to roll the dice or quit the game at each round.
- Display points table after each round.
- Display the final results table at the end of the game (for reaching 20 or quitting by selection).

Important Notes

- Your code will be compiled using GCC on Linux. Indicate C version (e.g. C99) you used in the first line of your code as a comment. It can be written as follows:
 - `// This code compiled with C99`
- You should submit your assignments through CMS until the due date. Your homework should be named as CENG322_hw1_studentID.zip
 - e.g. CENG322_hw1_123456789.zip) in the following structure.
- You can create 1 or more source code files but do not forget to include the necessary header file for linking them.
 - If you send 2 or more .c files with no .h file (header file that does not work) the assignment will be evaluated as 0. So, make sure that your source code and header files work before submitting.
- Cheating will not be tolerated and will be evaluated as 0.
- Late submissions will not be allowed.
- Possible Grade reductions
 - Lack of Comment usage
 - Missing Controls
 - Unused/Dead Codes
 - Naming Conventions

Example Output (Check out the note at the end)

Please enter username: *OperatingSystems*

User registered as "OperatingSystems"

Type "start" to begin the game: *start*

1st Round

Player1 rolled: 3-4-4

Player1 gained 3 points.

Player2 rolled: 4-5-6

Player2 gained 3 points.

Player3 rolled: 3-5-3

Player3 lost 5 points.

Roll the dice(y/n)?: *y* " **y = yes, roll the dice. n = no, end the game** "

OperatingSystems rolled: 3-4-2

OperatingSystems gained 0 points.

Points Table after 1st round:

1-Player1 3 points

2-Player2 3 points

3-OperatingSysytems 0 points

4-Player3 -5 points

2nd Round

Player 1...

.

.

7th Round

Player1 rolled: 5-4-2

Player1 gained 0 points.

Player2 rolled: 1-1-1

Player2 lost 10 points.

Player3 rolled: 5-5-2

Player3 gained 2 points.

Roll the dice(y/n)?: **y**

OperatingSystems rolled: 6-4-4

OperatingSystems gained 6 points.

OperatingSystems reached 20 points.

Congratulations! Operating Systems have won the game.

Final Results Table:

1-OperatingSystems 23 points. Winner

2-Player3 17 points.

3-Player1 12 points.

4-Player2 5 points.

Note: The characters/strings with **red color are user inputs.**