E-learning

MINI PROJECT – I

SYNOPSIS

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Acknowledgement

It gives us a great sense of pleasure to present the synopsis of the B.Tech mini project undertaken during B.Tech III Year. This project is going to be an acknowledgement to the inspiration, drive and technical assistance will be contributed to it by many individuals. We owe special debt of gratitude to Ms. Ruchi Talwar, Technical Trainer , for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towards a constructive goal and for his constant support and guidance to our work.

His sincerity, thoroughness and perseverance has been a constant source of inspiration for us. We believe that he will shower us with all his extensively experienced ideas and insightful comments at different stages of the project & also taught us about the latest industry-oriented technologies. We also do not like miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and co-operation.

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ABSTRACT

Today game industry produces many different kinds of multimedia controllers that allow player to manage game process and naturally interact with media: joysticks, keyboards, remote controllers, VR helmets etc. This project aims to show the new possibilities of using analogue random number generator, so-called gambling die used in non-gambling tabletop games. Nowadays, all the digital tabletop games use digital random generator to simulate the die. We suggest to use that technique too that will make the game process more interactive. It assumed to use different method for generating different numbers every player gets full compatibility with random numbers manufacturers including custom - dice. The implications of these results and directions for future research we give a small prototype related to pattern recognition algorithm of a dice throwing game in this project. A full technical description of method and technology that was used during the implementation is also presented.

Contents

INTRODUCTION

The aim of the Dice Throwing Game is to simulate a simple game for 2 players, where they take turn to each roll a dice twice, and score points according to the results of the dice rolls. The winner is the one who accumulates a pre-defined maximum score first. Your program will display a menu which allows the user of the program to select various options to simulate the various operations. Results of all the operations will be printed on the screen as plain text only (e.g., “Sachin rolled 5 + 3, and scored 8 points”).

SOFTWARE AND HARDWARE REQUIREMENTS

- JDK16.0.2
- IntelliJ 2021.1.3
- Visual Studio Code
- Ethernet Adapter
- Window 11
- Web Technologies: HTML, CSS, Javascript

PROJECT DESCRIPTION

The purpose of this project is that we will write a program that simulates a rather simplistic Dice Throwing Game. This section specifies the required functionality of the program. Only a text interface is required for this program; however, more marks will be gained for a program that is easy/intuitive to use, with clear information/error messages to the user.

The project is divided into 3 modules – Game, Player and Dice. The roles of the modules are as follows:

- **Game :**

  The user selects from various options available. The user **t**akes an option on a given menu. Each options have their multiple working. Users will be able to register themselves in the game as players. Only two players will be allowed in the Game. Players views their scores, which player is leading and which player wins the game. Player can also know more about the rules related to the game in the help section.

- **Player :**

  Creating player name for the game**,** scores will reside in the draft area and it is saved by system. Show the results of the players while playing the rounds in the Game and also give a text response which player is in the leading position.

- **Dice:**

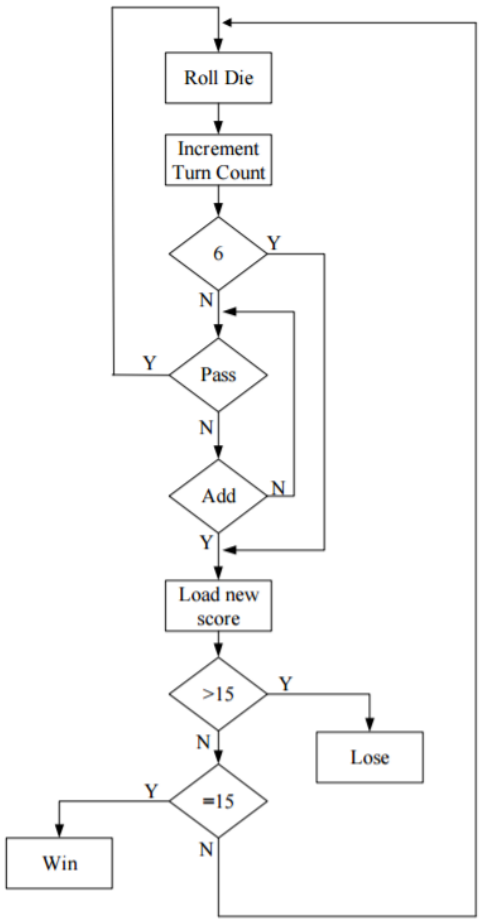
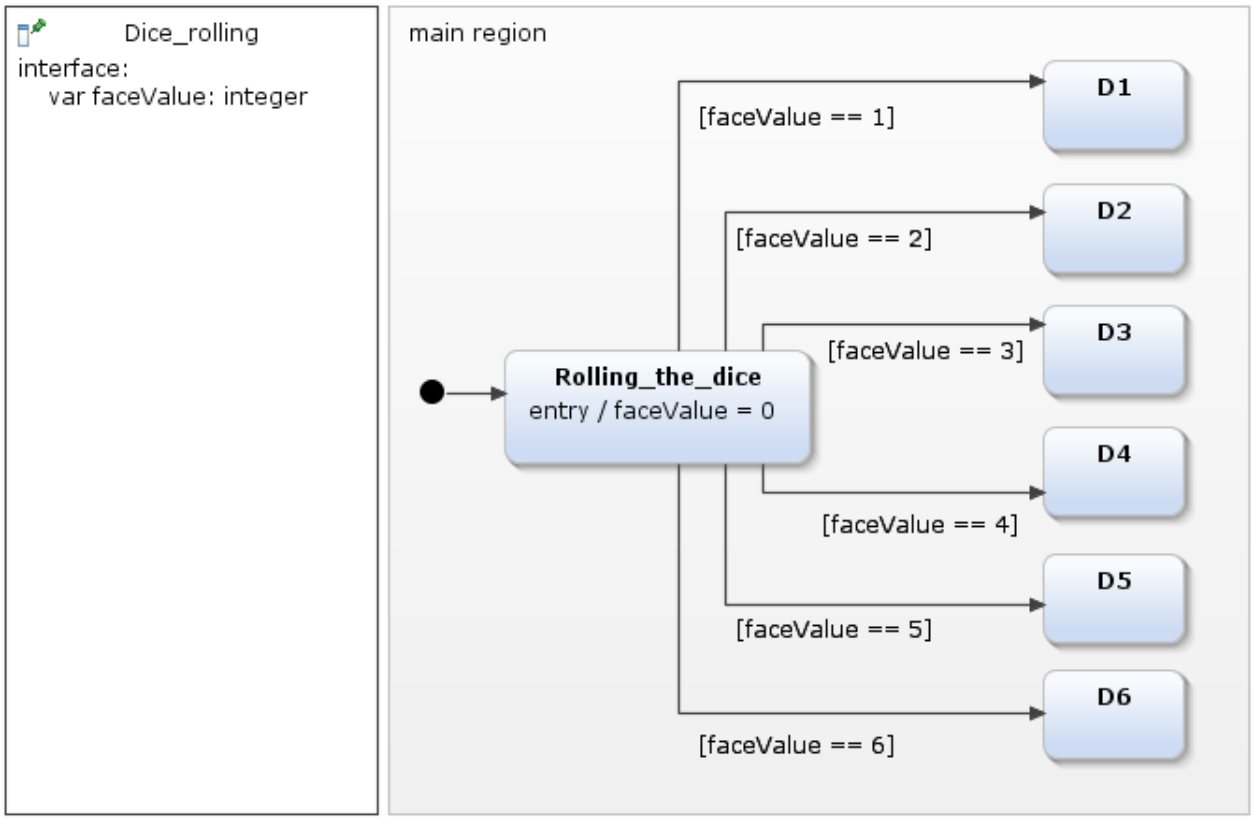


Figure 2. Flowchart for die game

The “dice rolls” are simulated by the program, using some random number generator. The program will update each player's current score accordingly. The program will only handle two players. It will keep track of the current score of the players until one, or both, reaches the pre-defined maximum score, agreed upon at the start of the game.

WORKING



The Dice Throwing Game begins with a welcome message followed by a menu with the following options :-

Option (1) asks the 2 players to enter their names. A player's name must not be blank (or consists of only spaces and nothing else), but may contain spaces between the characters. If this option is chosen again after the players have already been set up, 2 "new" players are set up (i.e., with 2 new names, and both their starting scores set to 0). Note that the new

players replace the previous players – there are only ever two players at any one time.

After the names are set up, the game asks for a maximum score. The default maximum score should be set to 200 points. Each player's initial score is set to 0.

Option (2) simulates the "dice roll" operations for both players. When this option is chosen, the computer generates 4 random numbers between 16 (i.e., simulating a 6-sided dice), representing 2 dice rolls for each player. It then updates both players' scores accordingly. The scoring rules for each "round" are as follows :

if the 2 dice rolls have the same value (i.e., 1&1, 2&2, …, 6x6), the player scores 2 times the sum of that value (e.g., 1&1 scores 4 points, 2&2 scores 8 points, etc) if the 2 dice rolls have different values, the player simply scores the sum of that value (e.g., 1&4 scores 5 points, 5&2 scores 7 points, etc) if both players reach a score which is more than the pre-defined maximum, the game's result is a Draw. note that both players can reach over that score at the same time, since for each round, 2 dice rolls are performed for each player, before a winner is decided

a player is considered a winner if he accumulates a score which is more than the pre-defined maximum, and the other player has not reached that score

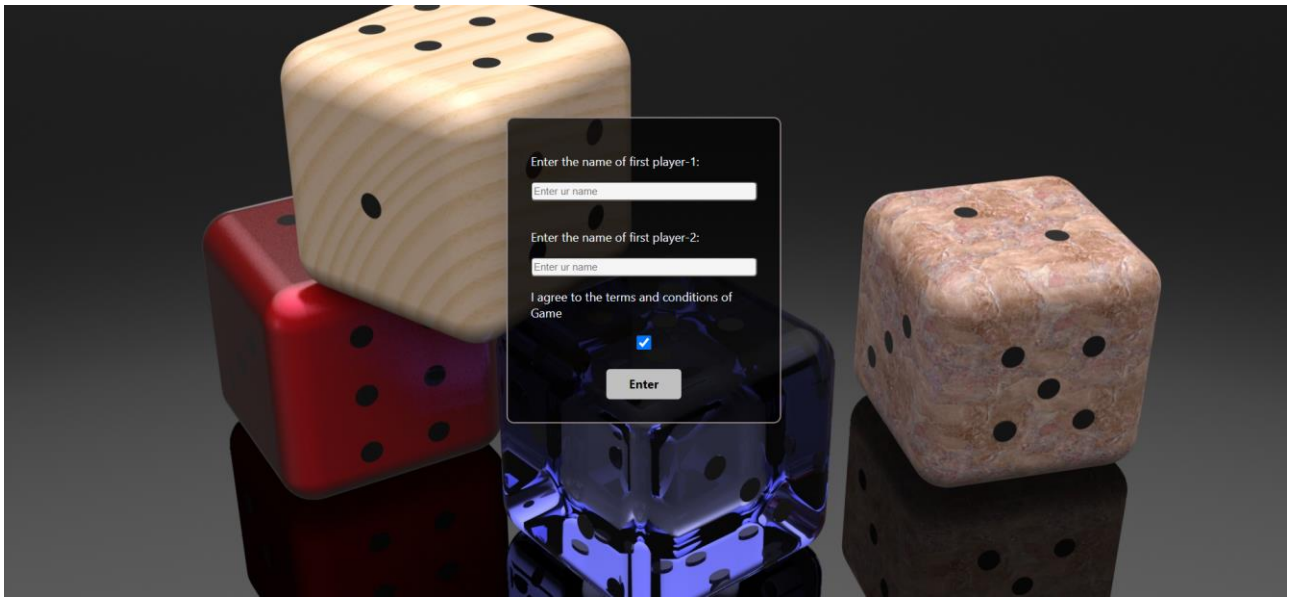
Option (3) shows the players current scores, including who is leading the game.

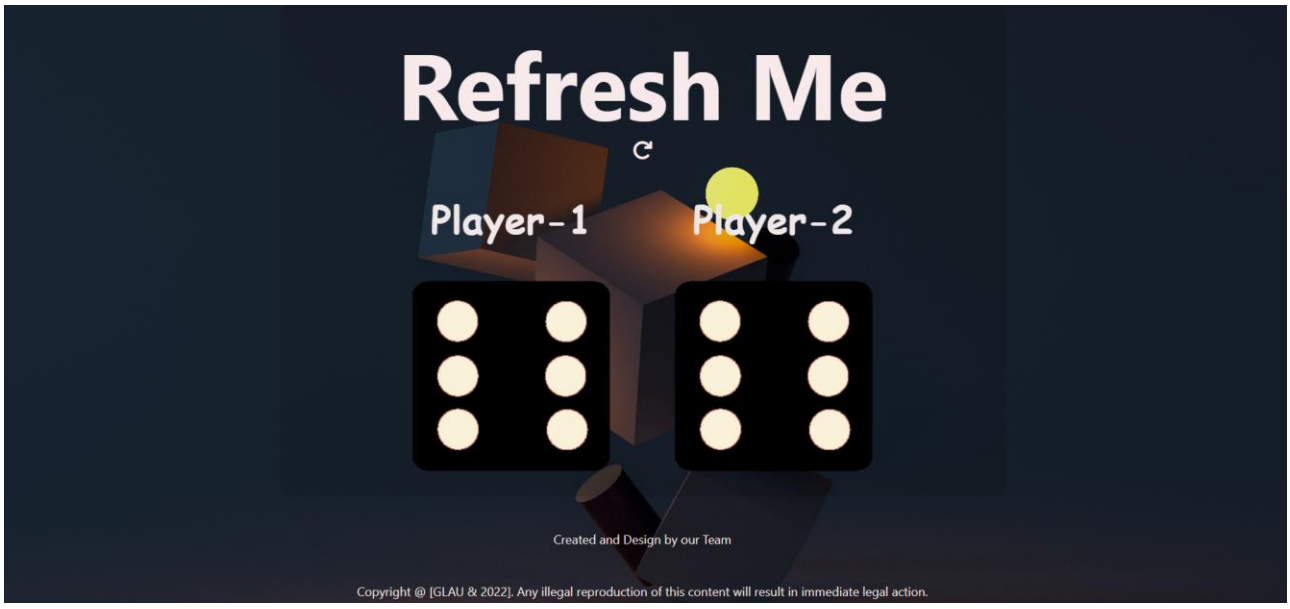
Option (4) displays some brief instructions regarding how to play the game.

Option (5) exits the whole program. All player statistics should be cleared.

```
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.1.3\lib\idea_rt.jar=64841:C:\Program Files\JetBrains\In
Welcome to the Dice and Roll game!

(1) Start a new game
(2) Play one round
(3) Who is leading now?
(4) Display game help
(5) Exit game
Choose an option:
1
Please enter player one name: John
Please enter player two name: Sarh
Please enter the maximum score required to win: 20

(1) Start a new game
(2) Play one round
(3) Who is leading now?
(4) Display game help
(5) Exit game
Choose an option:
2
John rolled 6 and 3, and scored 9 points, for a total of 9 points
Sarh rolled 1 and 2, and scored 3 points, for a total of 3 points
```

```
(1) Start a new game
(2) Play one round
(3) Who is leading now?
(4) Display game help
(5) Exit game
Choose an option:
2
John rolled 2 and 4, and scored 6 points, for a total of 15 points
Sarh rolled 5 and 1, and scored 6 points, for a total of 9 points

(1) Start a new game
(2) Play one round
(3) Who is leading now?
(4) Display game help
(5) Exit game
Choose an option:
2
John rolled 5 and 3, and scored 8 points, for a total of 23 points
Sarh rolled 2 and 2, and scored 8 points(BONUS DOUBLE POINTS), for a total of 17 points
John won
Game ended.

Process finished with exit code 0
```


Enter the name of first player-1:
Enter ur name
Enter the name of first player-2:
Enter ur name
I agree to the terms and conditions of Game
Enter


Refresh Me
Player-1
Player-2
Created and Design by our Team
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IMPLEMENTATION

Java is a popular programming language and works on different platforms. Real-time implementation is a fully-functional prototype of game application. Currently it allows to simulate the dice and represents the result of unloading algorithm. Application consists software implementation of the application for the visualization of algorithm data.

REFERENCES;

Websites:

- www.codereview.stackexchange.com
- www.google.com
- www.github.com
- www.stackoverflow.com

Faculty Guidelines:

Ms. Ruchi Talwar (Technical Trainer in GLA University)

GitHub Repository link:

https://github.com/ashvtosh/Mini-Project-I