

# NUMBER GAMES

Rishikesh Vishwakarma - 19

Dhanashree Wadaye - 20

Shantanu Wanivadekar - 21

Department of Electronics and

Telecommunication

St. Francis Institute of

Technology



# Content

- ❖ Introduction
- ❖ Problem Statement
- ❖ Flow of the project
- ❖ Screenshot of output
- ❖ Problems faced during the execution of project
- ❖ Contribution of each member



# Introduction

In number games the user starts with 5000 coins, which he can spend on games and get rewards after winning them. There are 3 games in number games. Namely:

- 1.Highlow
- 2.Guess
- 3.Gamble

- 1.Highlow

In highlow computer chooses a random number between 1-100, which is hidden from the user. The user is then given a random hint. The user then has to deduce if the hidden number is higher, lower, or equal to hint. If you guess correctly, you win double the coins you put in to play



## 2. Guess

In guess, the computer selects a random number between 1-20 and the user has to guess the number using only 4 guesses and 2 hints. The hints state if your last guess is higher or lower than the answer. If you guess correctly, you win double the coins you put in to play the game.

## 3. Gamble

In gamble, the user and the computer both roll two dice. If your total of the two rolled dice is more than the total of computer's rolled dices then you win double the coins you put in to play the game.

This game is purely based on user input!



# Problem Statement

Write a program on the number-based games with its own currency and reward system.



# Flow of the project

There are three class and one interface in this project

Classes:

- 1.Main
- 2.Pages
- 3.Accounts
- 4.Methods
- 5.Highlow
- 6.Guess
- 7.Gamble

Interface:

Games



We will discuss the flow of the project according to the classes starting of with:

❖ Pages

In this project we decided to display the project in the form of pages. This class is then divided into three methods.

- 1.mainpage()
- 2.playpage()
3. Instructionpage()

If the user selects to go to play then he is ent to playpage() after clearing the screen. In playpage() the user has the choice to play any of the 3 games or to go back t main menu. Again, the choice is controlled by the user input in the form of numbers.



If the user instead opts to go to Instruction then after clearing the screen the `instructionpage()` method is run. In this the user has the choice to read the instructions of any of the 3 games or go to menu. The choice is again controlled by the user input in form of numbers.

## 2. Methods

Methods only stores one method i.e. `clearScreen()`, `clearScreen` clears the console so that we can display the next page or game on the screen. Pages inherits Methods, so Methods is the superclass of pages

## 3.Accounts

In accounts we store usercoins in the form of `int` and name of the user in form of `String`. Whenever the user wagers money the usercoins are subtracted and when user wins money the rewards are added via the methods of `sub()`, `add()`. Also, getters for usercoins and name are there and setters for name.





#### 4.Interface Games

Interface Games is the blueprint of all 3 games, it consists of only two methods i.e. play() and instructions().

#### 5.Highlow, Guess, Gamble

Highlow,Guess,Gamble all extend Pages and implement Games and all have same two methods i.e.play() and instructions(). In play() , we first write the game code and the addition and the subtraction of coins wherever necessary, after the game code we put choices to play again or to go to playpage() again to select which game to play.

In instructions(), we display the instructions when asked in instruction page and after reading the user returns to instructionpage() after user input.

#### 6.Main

Main extends Pages. In main, we create objects for Highlow, Guess, Gamble, Account and rin mainpage()



# Screenshot of output

```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

Number Games
1---> Play
2---> Instructions
3---> Exit
Input: |

Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

Name: GroupJ4                               Coins: 5000
GroupJ4, select the Number Game you want to play!
1---> Highlow
2---> Guess
3---> Gamble
4---> Back to Main Page
Input: |

Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

HIGHLOW
Hello GroupJ4Enter your wager: 2000

Your hint is: 51
1---> LOWER
2---> JACKPOT
3---> HIGHER

1
You won 4000 coins!!
Hidden Number was: 33

1---> Play again?
2---> Back to Game Selection Menu?
Input: |
```



```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

Name: GroupJ4                      Coins: 7000

Welcome to Guess

GroupJ4, Enter your Wager: 2000
Enter your guess 1: 10
Do you want to take a guess(g) or a hint(h): g
Enter your guess 2: 12
Do you want to take a guess(g) or a hint(h): h
Your guess (12) is lower than answer.
Do you want to take a guess(g) or a hint(h): g
Enter your guess 3: 17
Do you want to take a guess(g) or a hint(h): h
Your guess (17) is higher than answer.
You're out of Hints!!
Do you want to take a guess(g) or a hint(h): g
Enter your guess 4: 15
You're out of Hints!!
Bad luck, you're out of guesses!
The answer was 14

1---> Play again?
2---> Back to Game Selection Menu?

Input: |
```

```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

Name: GroupJ4                      Coins: 5000

Welcome to Gamble

Enter the amount to gamble: 2000
You threw your dice and Rolled..... 1
CPU threw its dice and Rolled..... 0
Congratulations you won 4000 coins

1---> Play again?
2---> Back to Game Selection Menu?

Input: |
```

```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

Instructions

1---> Highlow
2---> Guess
3---> Gamble

4---> Back to Main Page

Input: |
```



```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

HIGHLOW

In this game I choose a secret number between 1 to 100.
You have to guess if the number is
HIGHER, LOWER or the SAME i.e JACKPOT
If you guess correctly then you win 2xcoins you wagered

1---> Instructions Menu

Input: |
```

```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

Guess

In this game your have 4 GUESSES and 2 HINTS
to guess a number between 1-20
Game is over if you run out of guesses.
If you win then you earn 2xcoins you wagered

1---> Instruction Page

Input: |
```

```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings.
Open Settings

Gamble

In this game you and the computer both roll 2 dices.
If you roll more than computer you win.
If you win, you get 2xcoins you wagered.

1---> Instruction Page

Input: |
```



## Problems faced during execution

1. There was an error in keeping the track of coin balance due to use of more than one object of Accounts class. This was solved by adding Accounts as a parameter to every method which was displayed on terminal.
2. There were errors in the logic of the Games and were not playing as meant to be. This was fixed by re - writing some lines.
3. Eclipse console does not allow clearing the console. So to clear console whenever needed. We had to run the program through Windows terminal to execute it.



# Contribution

- Rishikesh Vishwakarma - game code
- Dhanashree Wadaye - game code and presentation ppt.
- Shantanu Wanivadekar - game code, UI code and report

