Assignment-2

S.S.SANDEEP

Improvised Guesser Game:

There are 3 improvised features in this game. They are

- **RANGE:** We can control the range of the numbers that are being used in this game. I have used a range of (0-99).

- **BRIBING THE UMPIRE:** If any player is willing to bribe the umpire, he can directly win the game. For this feature, I have created individual methods for players. If anyone is willing to bribe the umpire, We have to give the player's number as input. Particular player's method will be called and declared as a winner directly. If no one wants to bribe the umpire we can give the input as zero or any other integer, it will move to next functionality.

- **Deciding the Maximum number of winners:** If No one wants to Bribe, Then we can decide the max number of winners. Let us take a case where we have decided that there should be a Maximum of 2 winners. If all the three people have guessed it correctly, the 2 Players who guessed it first will be declared as winner. If only one player has guessed it correctly, There will be no issue and the player will be declared as a winner

Code:

```
package Assignment2;

import java.util.Scanner;


class Guesser
{
	int GuesserNum;
	public int GuesserNumber() {
	Scanner sc=new Scanner(System.in);
	System.out.println("Enter the guessers number");
	GuesserNum=sc.nextInt();
	if(GuesserNum>=100) {
		System.out.println("Please enter value less than 100");
		GuesserNum=sc.nextInt();
	}
	return GuesserNum;
	}
}

class Player{
	int PlayerNum;
	public int PlayerNumber(){
		Scanner sc=new Scanner(System.in);
		PlayerNum=sc.nextInt();
		if(PlayerNum>=100) {
			System.out.println("Please enter value less than 100");
```

```
                PlayerNum=sc.nextInt();
            }
            return PlayerNum;

      }
}

class umpire{
      int NumFromGuesser;
      int NumFromPlayer1;
      int NumFromPlayer2;
      int NumFromPlayer3;
      void collectFromGuesser(){
            Guesser g=new Guesser();
            NumFromGuesser=g.GuesserNumber();
            }

      void collectFromPlayer(){
            Player p1=new Player();
            Player p2=new Player();
            Player p3=new Player();
            System.out.println("Enter the player1's Guessed number");
            NumFromPlayer1=p1.PlayerNumber();
            System.out.println("Enter the player2's Guessed number");
            NumFromPlayer2=p2.PlayerNumber();
            System.out.println("Enter the player3's Guessed number");
            NumFromPlayer3=p3.PlayerNumber();
      }

      void compare() {
            System.out.println("Please enter maximum number of winners in the range 1 to
3");
            Scanner sc=new Scanner(System.in);
            int a=sc.nextInt();
            switch(a){
                  case 1:{
                        if(NumFromGuesser==NumFromPlayer1)
                              System.out.println("Player1 guessed it
correctly(Irresepective of other player's guessing as there is only 1 winner) ");

                        else if(NumFromGuesser==NumFromPlayer1)
                              System.out.println("Player2 guessed it
correctly(Irresepective of player3's guessing as there is only 1 winner)");

                        else {
                              System.out.println("Player3 guessed it correctly");
                        }
                        break;
                  }


                  case 2:{
                        if(NumFromGuesser==NumFromPlayer1) {
```

```
                        if(NumFromGuesser==NumFromPlayer2)
                              System.out.println("Player1 and Player2 Guessed it
correctly (Irrespective of player3's guessing as there are only 2 winners)");

                        else if(NumFromGuesser==NumFromPlayer3)
                              System.out.println("Player1 and Player3 Guessed it
correctly");

                        else {
                              System.out.println("Player1 Guessed it correctly");
                              }


                  }
                  else if(NumFromGuesser==NumFromPlayer2) {
                        if(NumFromGuesser==NumFromPlayer3)
                              System.out.println("Player2 and Player3 Guessed it
correctly");

                        else {
                              System.out.println("Player1 Guessed it correctly");
                        }
                  }

                  else if(NumFromGuesser==NumFromPlayer3)
                        System.out.println("Player3 Guessed it correctly");

                  else {
                        System.out.println("No one Guessed it correctly");

                  }
                  break;

            }
            case 3:{
                  if(NumFromGuesser==NumFromPlayer1)
                  {
                        if(NumFromGuesser==NumFromPlayer2 &&
NumFromGuesser==NumFromPlayer3 ) {
                              System.out.println("Everyone guessed it correct");
                        }
                        else if(NumFromGuesser==NumFromPlayer2)
                              System.out.println("Player1 and Player2 Guessed it
correctly");


                        else if(NumFromGuesser==NumFromPlayer3)
                              System.out.println("Player1 and Player3 Guessed it
correctly");

                        else {
                              System.out.println("Player 1 Guessed it correctly");
                        }
```

Assignment-2

S.S.SANDEEP

```
                        }
                        else if(NumFromGuesser==NumFromPlayer2) {
                              if(NumFromGuesser==NumFromPlayer3)
                                    System.out.println("Player2 and Player3 Guessed it
correctly");

                              else {
                                    System.out.println("Player2 Guessed it correctly");
                              }

                        }
                        else if(NumFromGuesser==NumFromPlayer3)
                              System.out.println("Player3 Guessed it correctly");

                        else {
                              System.out.println("No one have Guessed it correctly");
                        }
                        break;
                  }
                  case default:{
                        System.out.println("Please enter a valid no.of winners");

                  }


            }
      }
      void BribedPlayer1() {
            System.out.println("Player 1 Guessed it correctly");
      }

      void BribedPlayer2() {
            System.out.println("Player 2 Guessed it correctly");
      }

      void BribedPlayer3() {
            System.out.println("Player 3 Guessed it correctly");
      }
}

public class GuesserGame {

      public static void main(String[] args) {
            umpire u=new umpire();
            u.collectFromGuesser();
            u.collectFromPlayer();
            System.out.println("Do Any one of the players wanna win directly...This is
your one time oppurtunity,Bribe the umpire to win the game.");
            System.out.println("Enter the player's number who is willing to bribe ,If no
one wants to bribe enter 0 ");
            Scanner sc=new Scanner(System.in);
             int s=sc.nextInt();
            switch(s){
```

Assignment-2

S.S.SANDEEP

```
                case 1:{
                      u.BribedPlayer1();
                      break;
                      }
                case 2:{
                      u.BribedPlayer2();
                      break;
                }
                case 3:{
                      u.BribedPlayer3();
                      break;
                }
                case default:{
                      u.compare();

                }

          }



     }

}
```

Output:

```
<terminated> GuesserGame (1) [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (06-Aug-2022, 3:34:21 pm – 3:34:49 pm) [pid: 10336]
Enter the guessers number
26
Enter the player1's Guessed number
120
Please enter value less than 100
26
Enter the player2's Guessed number
95
Enter the player3's Guessed number
26
Do Any one of the players wanna win directly...This is your one time oppurtunity,Bribe the umpire to win the game.
Enter the player's number who is willing to bribe ,If no one wants to bribe enter 0
0
Please enter maximum number of winners in the range 1 to 3
2
Player1 and Player3 Guessed it correctly
```

Assignment-2

S.S.SANDEEP

Improvised Cases:

1)Range: Here the range is(0-99).Hence if we give a input greater than the range, It will ask the user to give the input to the value again.

```
GuesserGame (1) [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (06-Aug-2022, 2:35:42 pm) [pid: 6484]
Enter the guessers number
120
Please enter value less than 100
5
Enter the player1's Guessed number
156
Please enter value less than 100
20
Enter the player2's Guessed number
658
Please enter value less than 100
32
Enter the player3's Guessed number
569
Please enter value less than 100
12
```

2)**Bribed umpire**: If no one has guessed the answer correctly, then output should be like "No one have Guessed it correctly". But as the player 2 bribed the umpire, He is declared as winner

```
<terminated> GuesserGame (1) [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (06-Aug-2022, 3:25:55 pm – 3:26:17 pm) [pid: 6136]
Enter the guessers number
65
Enter the player1's Guessed number
128
Please enter value less than 100
25
Enter the player2's Guessed number
98
Enter the player3's Guessed number
76
Do Any one of the players wanna win directly...This is your one time oppurtunity,Bribe the umpire to win the game.
Enter the player's number who is willing to bribe ,If no one wants to bribe enter 0
2
Player 2 Guessed it correctly
```

Even if one of the player1 guessed it correctly and player3 bribed the umpire, Player3 will be declared as a winner.

```
<terminated> GuesserGame (1) [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (06-Aug-2022, 3:56:45 pm – 3:57:03 pm) [pid: 10272]
Enter the guessers number
58
Enter the player1's Guessed number
58
Enter the player2's Guessed number
65
Enter the player3's Guessed number
26
Do Any one of the players wanna win directly...This is your one time oppurtunity,Bribe the umpire to win the game.
Enter the player's number who is willing to bribe ,If no one wants to bribe enter 0
3
Player 3 Guessed it correctly
```

Assignment-2

S.S.SANDEEP

3) **Deciding The Maximum Number Of Winners:** If All the 3 players have Guessed it correctly and we have decide there should be only one winner, The first who have guessed it will be the winner.

```
<terminated> GuesserGame (1) [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (06-Aug-2022, 3:29:04 pm – 3:29:16 pm) [pid: 4456]
Enter the guessers number
65
Enter the player1's Guessed number
65
Enter the player2's Guessed number
65
Enter the player3's Guessed number
65
Do Any one of the players wanna win directly...This is your one time oppurtunity,Bribe the umpire to win the game.
Enter the player's number who is willing to bribe ,If no one wants to bribe enter 0
0
Please enter maximum number of winners in the range 1 to 3
1
Player1 guessed it correctly(Irresepective of other player's guessing as there is only 1 winner)
```

Although if we have declared the maximum winners as 3 but if only a player guessed it correctly, He will be the only winner.

```
<terminated> GuesserGame (1) [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (06-Aug-2022, 3:31:13 pm – 3:31:34 pm) [pid: 5668]
Enter the guessers number
25
Enter the player1's Guessed number
65
Enter the player2's Guessed number
25
Enter the player3's Guessed number
86
Do Any one of the players wanna win directly...This is your one time oppurtunity,Bribe the umpire to win the game.
Enter the player's number who is willing to bribe ,If no one wants to bribe enter 0
0
Please enter maximum number of winners in the range 1 to 3
3
Player2 Guessed it correctly
```