

1 Objective of Project-

To create a program in which user will be given 5000 points to start and will be able to play a variety of games.

2 Function Description-

[F(1)] **welcome_screen**: This function shows the welcome screen i.e. LUCK TEST made by using pattern '—'.

[F(2)] **game_Rules**: This function shows overall rules of all 3 games.

[F(3)] **game1_Rules**: This function shows rules of 1st game i.e.- Casino.

[F(4)] **game2_Rules**: This function shows rules of 2nd game i.e.- Guess Game.

[F(5)] **game3_Rules**: This function shows rules of 3rd game i.e.- Roulette.

[F(6)] **gamePlay**: This gamePlay function consists all three games in which user will play a game of his/her choice and can quit game at any moment.

[F(7)] **newgame**: This function is to check multiple possibilities either to quit the game as per user's choice either is to quit the game if balance is equal to 0 or to continue the game if balance is greater than 0.

[F(8)] **Casino_game**: This function is to play our 1st game - Casino which consists of multiple if/else conditions i.e. is being called in gamePlay function.

[F(9)] **Guess_game**: This function is to play our 2nd game - Guess Game which consists of multiple if/else conditions i.e. is being called in gamePlay function.

[F(10)] **Roulette_game**: This function is to play our 3rd game - Roulette which consists of multiple if/else conditions i.e. is being called in gamePlay function.

[F(11)] **main**: It is to run the program. It initializes the program.


```

// Rules

System.out.println("\n=====
System.out.println("\t\t\tGame_Rules");
System.out.println("\n=====");
System.out.println("\n1. You Currently have 5000 points in your game account.");
System.out.println("\n2. You have to bet some amount in each game and you gain or lose");
System.out.println("\n3. If point balance in your account becomes zero, then it is game over");
System.out.println("\n4. If point balance is greater than 10000, you win");
System.out.println("\n=====
}

/* explaining game1 rules */

public static void game1_Rules() {

    // Rules

    System.out.println("\n=====
    System.out.println("\t\t\tgame1_Rules");
    System.out.println("\n=====");
    System.out.println("\n1. Computer will generate 3 random numbers.");
    System.out.println("\n2. Either all numbers are same, or all divisible by 2");
    System.out.println("\n3. If any of 2nd point occurs your balance amount gets 5 times");
    System.out.println("\n4. If none conditions occurs in 2nd point occurs, then loose betted amount");
    System.out.println("\n=====
}

/* explaining game2 rules */

public static void game2_Rules() {

    // Rules

    System.out.println("\n=====
    System.out.println("\t\t\tgame2_Rules");
    System.out.println("\n=====");
    System.out.println("\n1. You have to guess any number between 1-50.");
    System.out.println("\n2. If you guess the exact number, your points will be 5 times");
    System.out.println("\n3. If guessed number is range of 5 less or 5 more points will be 2 times");
    System.out.println("\n4. If guessed the number is range of 10 less or 10 more, points will same");
    System.out.println("\n5. If none of above points occurs, then you loose all betted amount");
    System.out.println("\n=====
}

/* explaining game3 rules */

public static void game3_Rules() {

    // Rules

    System.out.println("\n=====
    System.out.println("\t\t\tgame3_Rules");
    System.out.println("\n=====");
    System.out.println("\n1. You enter on how many numbers you wanna bet in range [1-50].");
    System.out.println("\n2. Then you enter all the numbers on which you wanna bet");
    System.out.println("\n3. If any number match, then betted amount number gets multiplied by 50");

    System.out.println("\n4. If none of points occurs, then you loose all your betted amount");
    System.out.println("\n=====
}

/*
 * This gamePlay function contains all three games.
 * User will play a game of his/her choice.
 * User can quit game at any moment.
 */

public static void gamePlay(String player_name) throws InterruptedException {

```

```

Scanner s = new Scanner(System.in);

/* while loop is true inside so that user can play game again and again */
while (true) {

    /* Asking user for his choice of game. */

    System.out.println("Which_of_these_games_do_you_like_to_play_-_\n");
    System.out.println("1._[7.7.7]_Casino_: _Vegas_Slot_game_");
    System.out.println("2._Guess_The_Number_Between_[1_-50]_");
    System.out.println("3._Roulette_: _Bet_On_Your_Numbers\n");
    System.out.println("Press_[1]_,_[2]_,_[3]");

    int game_no; // which game
    int bet_points; // betting amount in points
    int check; // user want to continue or leave the game

    game_no = s.nextInt();

    /* Game no. 1 Casino */

    if (game_no == 1) {

        game1_Rules(); // function call game1 rules
        Thread.sleep(300); // sleep for 3 seconds

        System.out.println("BET_Your_points");
        bet_points = s.nextInt(); // input betted points

        /* Function call Casino game having bet points as parameters */

        Casino_game(bet_points);

        System.out.println();

        /* Ask user to continue game or leave */

        System.out.println("[ Press_1 ]_->_If_You_Like_To_Try_Another_game");
        System.out.println("[ Press_2 ]_->_To_QUIT");

        check = s.nextInt(); // input 1 or 2: continue or leave

        /* call function newgame to find all possibilities */

        newgame(check, player_name);

        if (check == 2) {
            break; // out of loop for its own choice
        }
        if (balance <= 0) {
            break; // out of loop because of 0 balance
        }
    }

    /* Game no. 2 Guess game */

    if (game_no == 2) {

        game2_Rules(); // function call game2 rules
        Thread.sleep(300); // sleep for 3 seconds

        System.out.println("BET_Your_points");
        bet_points = s.nextInt(); // input betted points

        /* Function call Guess game having bet points as parameters */

        Guess_game(bet_points);

        /* Ask user to continue game or leave */

        System.out.println();
        System.out.println("[ Press_1 ]_->_If_You_Like_To_Try_Another_game");
        System.out.println("[ Press_2 ]_->_To_QUIT");
    }
}

```

```

        check = s.nextInt(); // input 1 or 2: continue or leave
        /* call function newgame to find all possibilities */
        newgame(check, player_name);

        if (check == 2) { // out of loop for its own choice
            break;
        }
        if (balance <= 0) { // out of loop because of 0 balance
            break;
        }
    }

    /* Game no. 3  Roulette game */

    if (game_no == 3) {

        game3_Rules(); // function call game2 rules
        Thread.sleep(300); // sleep for 3 seconds

        System.out.println("BET_Your_points");
        bet_points = s.nextInt(); // input betted points

        /* Function call Roulette game having bet points as parameters */

        Roulette_game(bet_points);

        /* Ask user to continue game or leave */

        System.out.println();
        System.out.println("[ Press_1 ] :->_If_You_Like_To_Try_Another_game");
        System.out.println("[ Press_2 ] :->_To_QUIT");

        check = s.nextInt(); // input 1 or 2: continue or leave

        newgame(check, player_name);

        if (check == 2) {
            break; // out of loops of its own choice
        }
        if (balance <= 0) {
            break; // out of loop because of 0 balance
        }
    }

    if (balance >= 10000) {
        System.out.println("You_Win_,_Wow_you_are_so_lucky");
        break; // come out of the loop and game gets over.
    }

}

return;
}

```

```

/* Newgame function is to check multiple possibilities
 * first to quit the game as per user's choice
 * other is to quit the game if balance is equal to 0
 * or to continue the game if balance is greater than 0
 */

```

```

public static void newgame(int check, String player_name) {
    if (check == 2) {
        System.out.println("GOODBYE_" + player_name + "_!!!");
        return; // return to the function from where it is being called
    } else {
        if (balance > 0) {
            System.out.println("LETS_PLAY_!!!");
        }
    }
}

```

```

    } else {
        System.out.println("_SORRY_YOU_HAVE_NO_BALANCE_");
        return; // return to the function from where it is being called
    }
}

/* Casino game play function with different conditions */

public static void Casino_game(int bet_points) throws InterruptedException {

    // Condition to start the game

    if (bet_points <= balance && bet_points > 0) {
        System.out.println("LETS_SEE_YOUR_LUCK_!!");
        System.out.println(" _ _ _ _ _");

        Thread.sleep(300); // pause or sleep time of 3 seconds

        Random random = new Random(); // class and object to generate random no.

        // generates random number in range 1 to 9

        int num1 = random.nextInt(10);
        int num2 = random.nextInt(10);
        int num3 = random.nextInt(10);

        System.out.println(num1 + "_ _ _" + num2 + "_ _ _" + num3 + "_ _ _");

        /*Now set different conditions for all random numbers */

        if (num1 % 2 == 0 && num2 % 2 == 0 && num3 % 2 == 0) // all are even numbers
        {
            System.out.println("CONGRATULATIONS_!!!!");

            balance += bet_points * 5;
            balance -= bet_points;

            System.out.println("You_Have_Won_:-->_" + bet_points * 5);
            System.out.println("YOUR_CURRENT_BALANCE_-->_" + balance);

        } else if (num1 % 2 != 0 && num2 % 2 != 0 && num3 % 2 != 0) // all are odd
        {
            System.out.println("CONGRATULATIONS_!!!!");

            balance += bet_points * 5;
            balance -= bet_points;

            System.out.println("You_Have_Won_:-->_" + bet_points * 5);
            System.out.println("YOUR_CURRENT_BALANCE_-->_" + balance);

        } else if (num1 == num2 && num2 == num3 && num3 == num1) // all numbers are equal
        {
            System.out.println("CONGRATULATIONS_!!!!");

            balance = balance + bet_points * 5;
            balance -= bet_points;

            System.out.println("You_Have_Won_:-->_" + bet_points * 5);
            System.out.println("YOUR_CURRENT_BALANCE_-->_" + balance);

        } else if (num1 == 7 && num2 == 7 && num3 == 7) // all are equal to 7
        {
            System.out.println("CONGRATULATIONS_!!!!");

            balance += bet_points * 5;
            balance -= bet_points;
            System.out.println("You_Have_Won_:-->_" + bet_points * 5);
            System.out.println("YOUR_CURRENT_BALANCE_-->_" + balance);

        } else {
            System.out.println();
        }
    }
}

```

```

        System.out.println("OOPS!!_You_Have_Won_Nothing_!!");
        balance -= bet_points;
        System.out.println("YOUR_CURRENT_BALANCE_—>_" + balance);
    }
} else if (bet_points < 0) // betted points less than 0
{
    System.out.println("You_Cannot_Place_A_Bet_in_Negative");
} else {
    System.out.println("You_Cannot_Place_A_Bet_More_Than_Your_Current_Balance_");
}
}

```

/ Guess game play function with different conditions */*

```

public static void Guess_game(int bet_points) throws InterruptedException {
    Scanner s = new Scanner(System.in);
    // generates random number in range 1 to 50
    Random random = new Random();
    int num = random.nextInt(51);
    // condition for start of game
    if (bet_points <= balance && bet_points > 0) {
        System.out.println("Guess_the_number_between_1-50");
        int n = s.nextInt();
        System.out.println("Let's_check_your_luck");
        Thread.sleep(500); // sleep for 3 seconds
        System.out.println("The_number_chosen_by_computer_is_" + num);
        if (num == n) // exactly equal
        {
            System.out.println("CONGRATULATIONS_!!!!");
            balance += bet_points * 5;
            balance -= bet_points;
            System.out.println("You_Have_Won:-->_" + bet_points * 5);
            System.out.println("YOUR_CURRENT_BALANCE_—>_" + balance);
        } else if ((num - 5) <= n && (num + 5) >= n) // in range of +5 to -5
        {
            System.out.println("CONGRATULATIONS_!!!!");
            balance += bet_points * 2;
            balance -= bet_points;
            System.out.println("You_Have_Won:-->_" + bet_points * 2);
            System.out.println("YOUR_CURRENT_BALANCE_—>_" + balance);
        } else if ((num - 10) <= n && (num + 10) >= n) // in range of +10 to -10
        {
            System.out.println("CONGRATULATIONS_!!!!");
            balance = balance + bet_points * 1;
            balance -= bet_points;
            System.out.println("You_Have_Won:-->+" + bet_points * 1);
            System.out.println("YOUR_CURRENT_BALANCE_—>_" + balance);
        } else {
            System.out.println();
            System.out.println("OOPS!!_You_Have_Won_Nothing_!!");
            balance -= bet_points;
        }
    }
}

```

```

        System.out.println("YOUR_CURRENT_BALANCE-->" + balance);
    }
} else if (bet_points < 0) // betted points less than 0
{
    System.out.println("You_Cannot_Place_A_Bet_in_Negative");
} else {
    System.out.println("You_Cannot_Place_A_Bet_More_Than_Your_Current_Balance");
}
}

/* Roulette game play function with different conditions */

public static void Roulette_game(int bet_points) throws InterruptedException {
    Scanner s = new Scanner(System.in);

    // generates random number in range of 1-50

    Random random = new Random();
    int num = random.nextInt(51);

    // Condition for start of game

    if (bet_points <= balance && bet_points > 0) {
        System.out.println("On_how_many_numbers_do_you_want_place_your_bet_[1-50]");

        int f;
        f = s.nextInt(); // how many numbers to bet
        int pointsnum = bet_points / f; // betted amount on each number

        System.out.println("Bet_on_EACH_Number:-" + pointsnum);

        int arr_num[] = new int[f]; // declaring array of size betted number

        /* take input as number entered by the user and store it in array */

        for (int i = 0; i < f; i++) {
            System.out.println("On_Which_Number_Do_You_Want_To_Place_Your_Bet:-");
            arr_num[i] = s.nextInt();
        }

        System.out.println("Lets_See_Your_Luck_!!!");

        Thread.sleep(3000); // sleep for 3 seconds

        System.out.println("The_Number_Choosen_By_Computer:-" + num);

        int z = 0; // for condition purpose

        /* Comparing random number with user entered number */

        for (int i = 0; i < f; i++) {
            if (arr_num[i] == num) {
                z = z + 1;
            }
        }

        if (z > 0) {
            System.out.println();
            System.out.println("CONGRATULATIONS_!!!!");

            balance += pointsnum * 50;
            balance -= bet_points;

            System.out.println("You_Have_Won:-->" + pointsnum * 50);
            System.out.println("YOUR_CURRENT_BALANCE-->" + balance);
        } else {
            System.out.println();
            System.out.println("OOPS!_You_Have_Won_Nothing_!!");
        }
    }
}

```



```

        balance -= bet_points;
        System.out.println("YOUR_CURRENT_BALANCE->" + balance);
    }
} else if (bet_points < 0) {
    System.out.println("You_Cannot_Place_A_Bet_in_Negative");
} else {
    System.out.println("You_Cannot_Place_A_Bet_More_Than_Your_Current_Balance");
}
}
}

```

4 Output

[illegible]

```
File Edit Selection View Go Run Terminal Help
Game.java - Visual Studio Code

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

=====

Game Rules

=====

1. You Currently have 5000 points in your game account.
2. You have to bet some amount in each game and you gain or loose amount in each play
3. If point balance in your account becomes zero, then it is game over
4. If point balance in you account is greater than or equal to 10000, You Win i.e. You are lucky

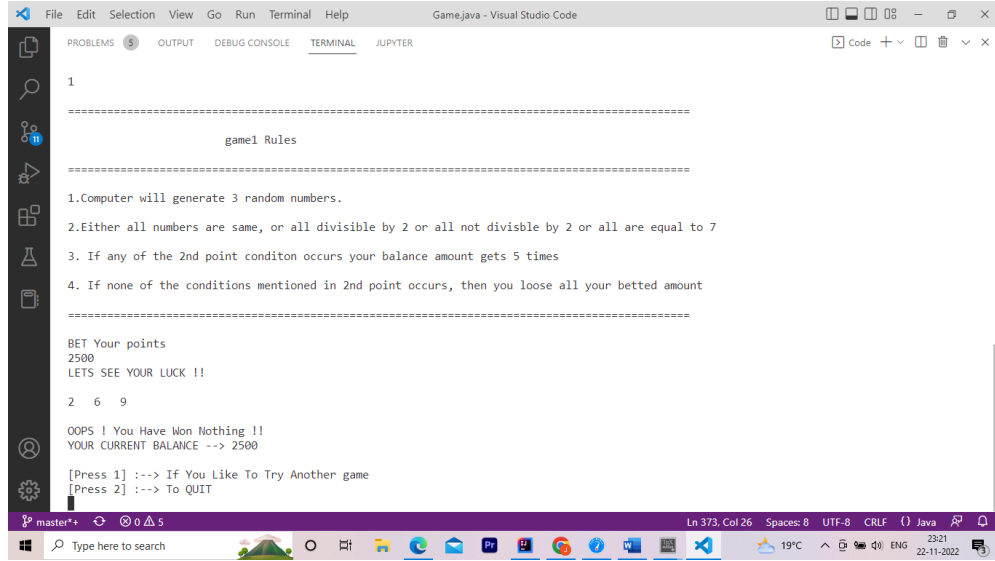
=====

Ready to check your luck

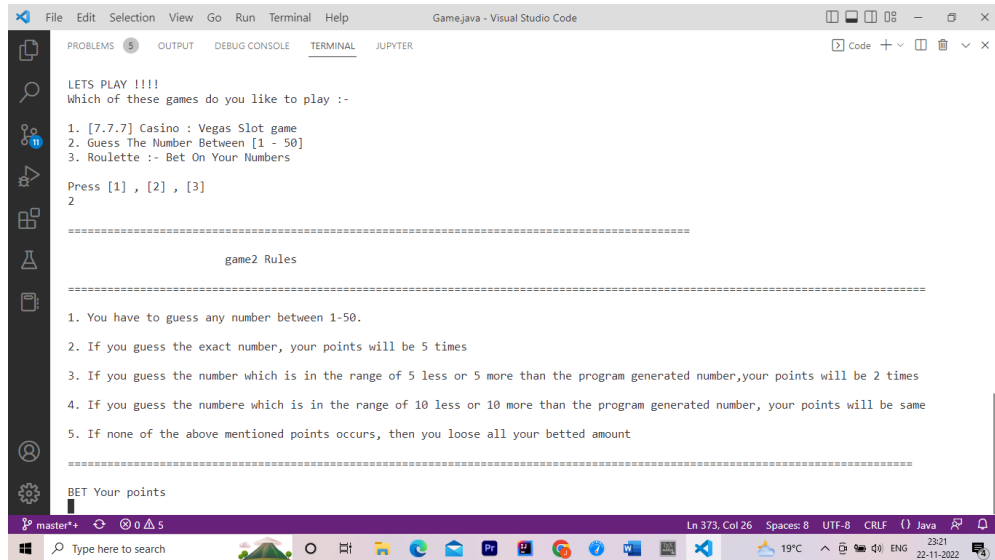
LET'S START
Which of these games do you like to play :-

1. [7.7.7] Casino : Vegas Slot game
2. Guess The Number Between [1 - 50]
3. Roulette :- Bet On Your Numbers

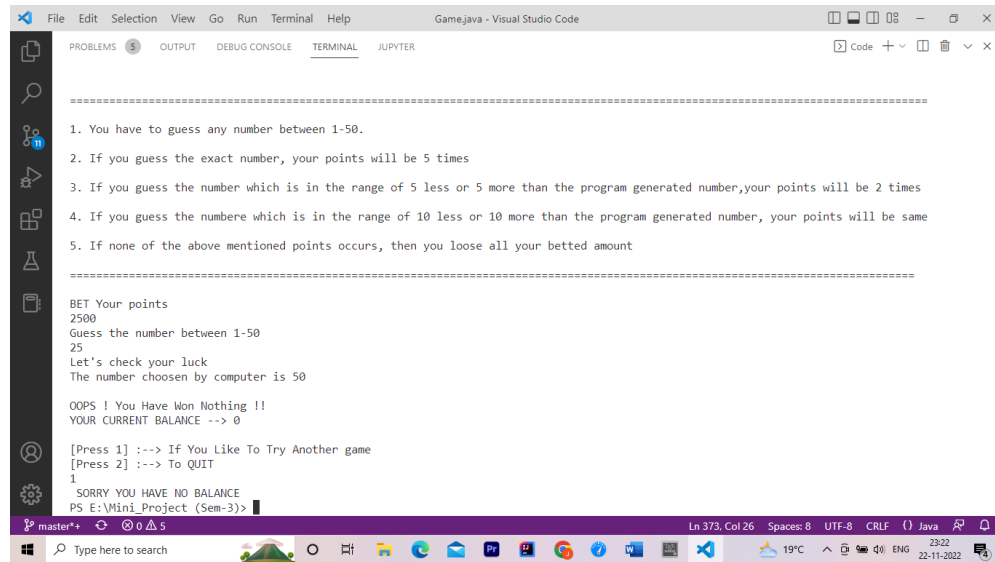
Press [1] , [2] , [3]
1
```



```
File Edit Selection View Go Run Terminal Help Game.java - Visual Studio Code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
1
=====
game1 Rules
=====
1.Computer will generate 3 random numbers.
2.Either all numbers are same, or all divisible by 2 or all not divisible by 2 or all are equal to 7
3. If any of the 2nd point conditon occurs your balance amount gets 5 times
4. If none of the conditions mentioned in 2nd point occurs, then you loose all your betted amount
=====
BET Your points
2500
LETS SEE YOUR LUCK !!
2 6 9
OOPS ! You Have Won Nothing !!
YOUR CURRENT BALANCE --> 2500
[Press 1] :--> If You Like To Try Another game
[Press 2] :--> To QUIT
Ln 373, Col 26 Spaces: 8 UTF-8 CRLF () Java
```



```
File Edit Selection View Go Run Terminal Help Game.java - Visual Studio Code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
LETS PLAY !!!!
Which of these games do you like to play :-
1. [7,7,7] Casino : Vegas Slot game
2. Guess The Number Between [1 - 50]
3. Roulette :- Bet On Your Numbers
Press [1] , [2] , [3]
2
=====
game2 Rules
=====
1. You have to guess any number between 1-50.
2. If you guess the exact number, your points will be 5 times
3. If you guess the number which is in the range of 5 less or 5 more than the program generated number,your points will be 2 times
4. If you guess the numbere which is in the range of 10 less or 10 more than the program generated number, your points will be same
5. If none of the above mentioned points occurs, then you loose all your betted amount
=====
BET Your points
Ln 373, Col 26 Spaces: 8 UTF-8 CRLF () Java
```

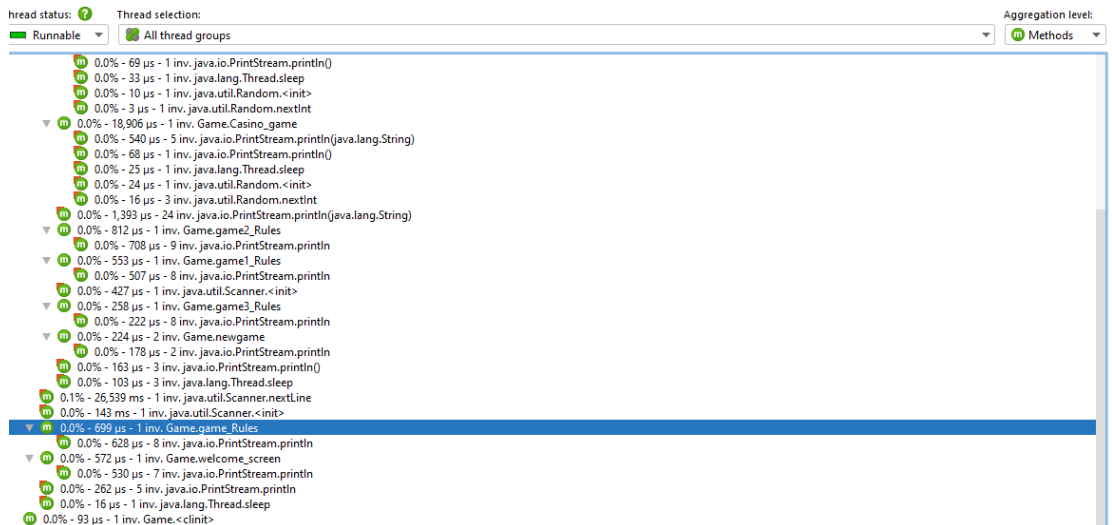
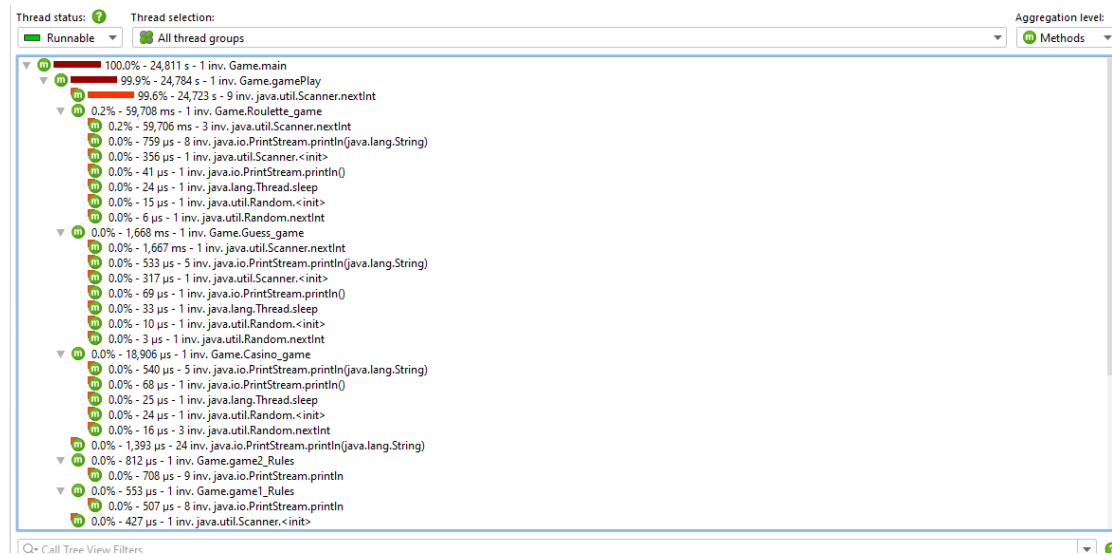


```
File Edit Selection View Go Run Terminal Help Game.java - Visual Studio Code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
=====
1. You have to guess any number between 1-50.
2. If you guess the exact number, your points will be 5 times
3. If you guess the number which is in the range of 5 less or 5 more than the program generated number,your points will be 2 times
4. If you guess the numbere which is in the range of 10 less or 10 more than the program generated number, your points will be same
5. If none of the above mentioned points occurs, then you loose all your betted amount
=====
BET Your points
2500
Guess the number between 1-50
25
Let's check your luck
The number choosen by computer is 50

OOPS ! You Have Won Nothing !!
YOUR CURRENT BALANCE --> 0

[Press 1] :--> If You Like To Try Another game
[Press 2] :--> To QUIT
1
SORRY YOU HAVE NO BALANCE
PS E:\Mini_Project (Sem-3)>
```

5 Profiling



JDB Activities

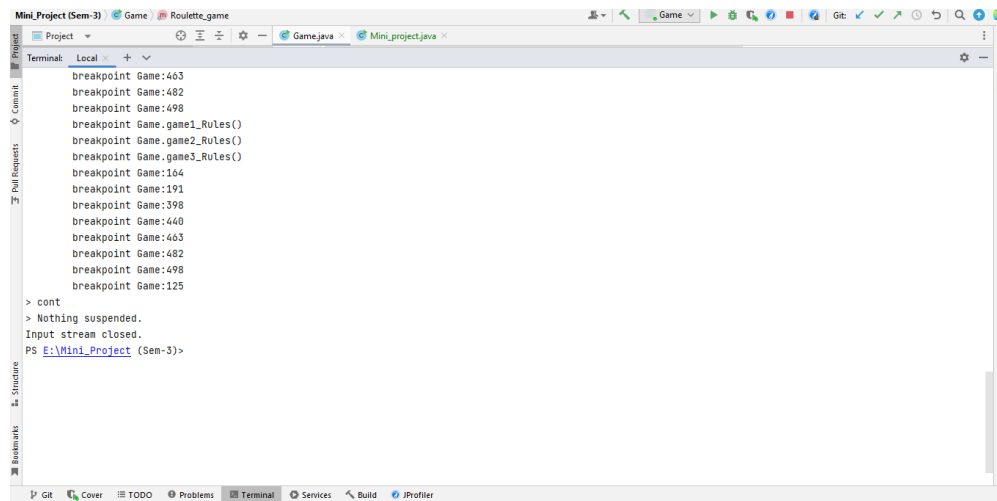
```
Terminal: Local x + v
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS E:\Mini_Project (Sem-3)> javac -g Game.java
PS E:\Mini_Project (Sem-3)> jdb Game
Initializing jdb ...
> stop in Game.game_Rules()
Deferring breakpoint Game.game_Rules().
It will be set after the class is loaded.
> stop in Game.game1_Rules()
Deferring breakpoint Game.game1_Rules().
It will be set after the class is loaded.
> stop in Game.game2_Rules()
Deferring breakpoint Game.game2_Rules().
It will be set after the class is loaded.
> stop in Game.game3_Rules()
Deferring breakpoint Game.game3_Rules().
It will be set after the class is loaded.
> stop in Game:164
Deferring breakpoint Game:164.
It will be set after the class is loaded.
>
```

```
Terminal: Local x + v
It will be set after the class is loaded.
> stop in Game:164
Deferring breakpoint Game:164.
It will be set after the class is loaded.
> stop in Game:191
Deferring breakpoint Game:191.
It will be set after the class is loaded.
> stop in Game:398
Deferring breakpoint Game:398.
It will be set after the class is loaded.
> stop in Game:440
Deferring breakpoint Game:440.
It will be set after the class is loaded.
> stop in Game:463
Deferring breakpoint Game:463.
It will be set after the class is loaded.
> stop at Game:482
Deferring breakpoint Game:482.
It will be set after the class is loaded.
> stop at Game:498
Deferring breakpoint Game:498.
It will be set after the class is loaded.
> █
```

[illegible]



Miscellaneous Data

Starting Date -16/11/22

Starting Day -Wednesday

Ending Date -20/11/22

Ending Day -Sunday

Total Time required - 5 days

Total line of code - 528 lines

Total number of functions - 11 functions used

Language Used - Java

Profiler used - Jprofiler

Debugger used - JDB

Project Title - Luck Test