JAVA Capstone Project

*In this project, you are asked to write some programs using Java language. The submission should be as a complete project named as following: JCapstone-Studentname and submitted as a .zip file. Include //comments to make it more clear and descriptive.*

Let’s build some games!

Available games are:

* RPS: Rock – Paper – Scissors
* HT: Head – Tail
* DG: Dice Game
* HL: High - Low
* PAL: Palindrome
* LDM: Let’s Do Math
* FACT: Factorial
* SORT: Sorting

Game 1: RPS: *Multiplayer*

* Asks in order what is each player going to choose.
* Return the winner based on the basic rules of rock paper scissors.
* Rules: Paper beats rock, rock beats scissors, scissors beats paper.

Output:

Please enter the game that you wish to play

RPS

Player one enter your choice

rock

Player two enter your choice

scissor

Player one is the winner!

Game 2: HT: *Multiplayer*

* Asks the players to each choose heads or tails.
* Create a random integer according to a randomly generated integer.
* Assign “0” to heads and “1” to tails.
* Return the winner based on how many times each appeared.

Output:

Please enter the game that you wish to play

HT

Player one enter your choice

Heads

Player two enter your choice

Tails

Chances = 4

Heads: 3

Tails: 1

Heads wins!

Game 3: DG: *Multiplayer*

* Create a random integer between 1 and 6 for each player.
* Return what each player got and who is the winner.

Output:

Please enter the game that you wish to play

DG

Player 1, your number is: 6

Player 2, your number is: 2

The winner is Player 1!

Game 4: HL: *Single Player*

* Create a random integer between 1 and 10
* You have 3 trials to guess the number

Output:

Please enter the game you want to play:

*HL*

I chose a number, make a guess between 1- 10:

*8*

High, try again

*7*

High, try again

*4*

Low, try again

The number is 5!

Hard luck! Try again

Game 5: PAL: *Single Player*

* Each player enters a string
* Check if it’s a palindrome.
* Return results, who wins, if it’s a tie, keep repeating.

Output:

Please enter the game that you wish to play

*Pal*

Player 1 Enter a string to check if it is a palindrome

*abba*

It is a palindrome

Player 2 Enter a string to check if it is a palindrome

*asd*

It is not a palindrome.

Player 1 wins!

Game 6: LDM: *Multiplayer Player*

* Each player enters a number, its square root, and the number to the power of two.
* The program compares the answers using Math class.
* Returns Correct or Wrong

Output:

Please enter the game that you wish to play

*LDM*

Player one enter your number, the square root of it, and the number to the power of 2.

*4*

*2*

*16*

Player two enter your number, the square root of it, and the number to the power of 2.

*4*

*3*

*15*

Player 1 got it correct!

Player 2 you are wrong!

Game 7: FACT: *Single Player*

Write a program that finds the factorial of inputs from the user as long as the input is not a zero

Output:

Please enter the game you wish to play:

*Fact*

Please enter a number:

*6*

The factorial of 6 is: 720

Please enter a number:

*0*

Game 8: Sort: *Single Player*

Write a program that asks that gives the user 5 random integers. If the user sorts the integers correctly, they win, otherwise, they lose. They have 3 trials.

Output:

Please enter the game you wish to play:

*SORT*

Sort the following array: [199, 23, 422, 33, 18]

[18,23,33,199,422]

Correct! You won.