T-Rex, Weresquirrel, Mario!

T-Rex, *Weresquirrel*, *Mario* might not ring a bell, but you have probably heard of Rock Paper Scissors (RPS). RPS is a classic hand game played by youth and adults alike. The game originates from the Chinese Han Dynasty (206 BCE – 220 CE) and has passed to many cultures, each adding their own variations. An early version of the game known as mushi-ken, was played as Slug, Frog, Snake, where Frog defeats Slug, Slug defeats Snake, and Snake defeats Frog. For this project, you will create your own virtual version of the classic hand game, with your own spin on the entities in the game.

Specifications

1. First create your cast of three characters and decide their relative strengths. Please keep these moderately PG-rated and apolitical. Just have some fun picking your favorite animals or characters from movies, video games, science fiction, music, or anything that interests you. Feel free to use your imagination, but also clearly define a set of rules. You must create your own unique cast of characters for players to choose as their hand.
    - ***T-Rex, Weresquirrel, Mario***
        - ***T-Rex defeats Weresquirrel***
        - ***Weresquirrel defeats Mario***
        - ***Mario defeats T-Rex***

2. The program should first display a welcome screen that includes your name, course and section number, and the assignment name. For this assignment, also include the name of your game.

```
*****************************************
****** T-Rex, Weresquirrel, Mario! **********
** John McMeen * CISP 1010 S# * Project 2  **
*****************************************
```

3. Next your program should display the rules of your game.

```
Choose your hand against the computer.
  T-Rex defeats Weresquirrel
  Weresquirrel defeats Mario
  Mario defeats T-Rex
```

4. The program should then prompt the user for an integer corresponding to their hand choice.

```
Enter your hand number
 T-Rex [1], Weresquirrel [2], Mario [3] :
```

5. Your program will generate a random integer corresponding to a hand choice for the computer. The program should then compare the player and computers hand choices to determine the winner. The program should display the computer's hand choice, the players hand choice, and the outcome of the match. You should display an appropriate message for each possible outcome in the game.

```
Enter your hand number
 T-Rex [1], Weresquirrel [2], Mario [3] : 1
    Computer hand: Mario
      Player hand: T-Rex
      -> Mario defeats T-Rex! Computer wins!
```

```
Enter your hand number
 T-Rex [1], Weresquirrel [2], Mario [3] : 2
    Computer hand: Weresquirrel
      Player hand: Weresquirrel
      -> Weresquirrel versus Weresquirrel is a tie!
```

```
Enter your hand number
 T-Rex [1], Weresquirrel [2], Mario [3] : 3
    Computer hand: T-Rex
      Player hand: Mario
      -> Mario defeats T-Rex! Player wins!
```

6. If the user enters an invalid hand number (you must use 1, 2 ,3), the program must display an error message.

```
Enter your hand number
 T-Rex [1], Weresquirrel [2], Mario [3] : 4
  ->You entered an invalid hand number
```

7. Test your code thoroughly to ensure you have captured all possible game outcomes.
8. The game will only be played once per run, so the program should exit after a successful game or if the user enters an invalid choice. *Do not* use the System.exit() command to manually exit your program. Design your logic so the program exits naturally at the end of your main() code block.
9. All user prompts, messages, and results must be neat, appropriately organized, and easily understood by the user.
10. Make sure that your source code is well formatted for maintenance and inspection.
11. Make sure your code has the required documentation, as outlined in the CS Java Documentation Policy under Course Info on D2L.
12. This is an individual assignment. By submitting your work to D2L, you acknowledge you have read the NESCC Computer and Information Science Department's Honor Code and Documentation Policy and are following its policies to the best of your ability.

Deliverables

Make sure your code has the required documentation, as outlined in the CISP Java Documentation Policy on the course website.

This is an individual assignment. By submitting your work to D2L, you acknowledge you have read the NESCC Computer and Information Science Department's Honor Code and Documentation Policy and are following its policies to the best of your ability.

Once you are satisfied with your code, compress your src directory with a **.zip** file and upload it the Project 2 D2L drop box. Your **.zip** file should contain the following. Make sure your code is in the following package structure **edu.northeaststate.cs1.projects.project2**.

1. Your source code under the following directory structure: **src\edu\northeaststate\cs1\projects\project2**. Please **do not** include IDE project files such as .iml, .idea, or the out directory. In your **.zip** file, please prune off any unneeded packages such as examples, labs, or other projects.
2. Provide a citation document in Word **.docx** format with links or a write-up if you utilized any outside resources to complete your assignment.

Evaluation

Five factors will be considered in grading your project:

1. **Compiles** (10%): does the Java code compile with no errors?
2. **User Interface** (10%): does the program interact with the user as expected?
3. **Design** (40%): does the code meet functionality requirements and design specifications?

4. **Deliverables** (30%): are all deliverables included, named, commented, and organized appropriately?
5. **Standards** (10%): does the code follow good programming practices and coding standards?

Example Run

```
*****************************************
****** T-Rex, Weresquirrel, Mario! **********
** John McMeen * CISP 1010 S# * Project 2  **
*****************************************

Choose your hand against the computer.
  T-Rex defeats Weresquirrel
  Weresquirrel defeats Mario
  Mario defeats T-Rex

Enter your hand number
 T-Rex [1], Weresquirrel [2], Mario [3] : 3
    Computer hand: T-Rex
      Player hand: Mario
      -> Mario defeats T-Rex! Player wins!
```