Java Drills

Instructions

In this exercise you will work through core Java principles, such as variables, data types, operators, conditional logic, and functions.

Part 1 - Variables & Data Types

In Part 1 of this project, you will build out a profile for your favorite Star Wars character. You will do this by creating variables of their personal details.

To find details for your favorite Star Wars characters, I recommend you use https://starwars.fandom.com/wiki/Main_Page and then use the search button on the left to search fot a character. If you cannot find some of the details, that is okay.

- create a variable and set it equal to your characters first name.
- create a variable and set it equal to your characters last name.
- create a variable and set it equal to your characters birth year.
- create a variable and set it equal to your characters homeworld.
- create a variable and set it equal to your characters height. Be precise (this might require a little math).
- create a variable and set it equal to your characters weight.

Part Two - Mathematical Operators

Continuing with the Star Wars theme…

In this part, you will practice mathematical operators by going on a shopping spree in the Galactic Empire. Create a variable called `purse` that will hold all of your Republic Credits (the currency in the Star Wars Universe). Set the starting value of your purse to 150.0. Please use this same variable throughout the next few questions.

Write a line of code to update the credits in your purse for each of the following experiences.

- You walk into Mubo's Droid Depot to buy a droid. The cost is 24.3.
- Next, you walk into Dok-Ondar's Den of Antiquities. You purchase a very fine set of boots that cost you a flat 45 credits.
- As you move around in the Black Spire Outpost you hear some noise down an alley. A group of Jedi are playing dice. You play a few rounds and double the credits in your purse.
- With your purse bursting at the seams you walk into Savi's Lightsabers. You inquire about a rare lightsabre, and the cashier says he will give it to you for one tenth of all the credits in your pocket.

Hint: Click Here to See what the value of your purse should be

▼ *Click to hide*

Your purse should have 145.26 credits in your purse.

Part Three - Conditional Love

For the third part of this project, we are going to practice our knowledge of conditional statements. Please rewrite the following sentences into code:

- When choosing a lightsabre at Savi's Lightsabers, you want to choose a lightsabre that has a black handle and purple blade. Once you find a lightsaber like that, you will exclaim "This one's mine!". If the lightsaber does not match what you want, you will say "Pass".
- You are looking for a ride off this planet, however, you need to get out fast. If the ship available to you is called the Mellenium Falcon, then I will say "let's go", otherwise you will say "I better hide somewhere."
- You are trying to decide what to order at Chalmun's Spaceport Cantina. You decide that if an item is under 5 credits and recommended, you will try it.
- You need to add a drink to your order at Chalmun's Spaceport Cantina. You decide that if a drink is under 1 credit or bigger than 24oz, you will order it.

Part Four - FizzBuzz Deep Dive

For the final part of this project. I want you to add comments to the code posted below. I want you to explain in great detail what is happening line by line. I also would like you to explain the control flow for each line. Finally, there is a bug hidden in the code below. Add a comment calling them out.

```
public class FizzBuzz {

    public static void main(String[] args) {
        fizzBuzz100();
    }

    private static void fizzBuzz100() {
        for (int i = 1; i <= 100; i++) {
            if ((i % 3) == 0)
                System.out.println("fizz");
            else if ((i % 5) == 0)
                System.out.println("buzz");
            else if (((i % 5) == 0) && ((i % 3) == 0))
                System.out.println("fizzbuzz");
            else
                System.out.println(i);
        }
    }
}
```

The block of code above is just one of many ways to solve the FizzBuzz challenge. Please rewrite the above block of code usinng a `switch statement` to solve the challenge.

Part 5 - Functions

- Create a function called `helloWorld` that simply logs `Hello, World!`.
- Create a function called `greeting` that takes in a person's name as an argument and logs `Hello, {name}`, with {name} being the argumennt passed into the function.
- Create a function called `add` that takes in two parameters (both of these will be numbers)
  - The add function should RETURN the two parameters added together.
- Write a function called faveColorFinder that takes in one parameter called color (which will be a string).
  - If the passed in color equals 'red', return 'red is a great color'
  - If the passed in color equals 'green', return 'green is a solid favorite color'
  - If the passed in color equals 'black', return 'so trendy'
  - Otherwise, you should return the string 'you need to evaluate your favorite color choice'
- Create a function called thatsOdd that takes in a single argument (a number).
  - Using conditional logic, if the number is even, return 'That's not odd!'
  - Otherwise, return 'That is odd indeed!'
- Create a function called 'bigOrSmall' that takes in one parameter, 'arr', which will be an array of numbers.
  - Inside of the bigOrSmall function, create a new array called 'answers'.
  - Then, loop over the passed in arr parameter, and check to see if the number in the array is - GREATER than 100.
  - If it is, push 'big' as a string to the answers array.
  - If the number is LESS than or EQUAL to 100, push 'small' as a string to the answers array.
  - Return the answers array inside of the function.