<u>Stack Assignment</u>

Part 1

Create a Decimal to Binary converter that will store the digits of the binary value in a stack and then pop them off to display it properly.

Set up a simple while loop that will utilize %2 and /2 to convert to binary.

Essentially just keep dividing by 2 to see the remainder and add that remainder to the stack and then divide the value by 2. Repeat this process until the number reaches 0.

Part 2

Use a stack to reverse a string. Fill any string variable with a long string of characters (any string you would like).
Add each character to a stack and then remove them from the stack to display them.

Part 3

Using the StarWarsCharacters csv file (read in the csv file the same way that you have read in text files – csv files split categories with the use of a comma):

1. Create a Character object that will store character name, birth year, gender, home world, and species. Character object must be embedded into your runner class so you only have to upload one file.
2. You need to construct 4 separate Stacks. The four stacks are:
   a. Male characters
   b. Female characters
   c. Droids
   d. Characters with a valid birth year
3. Display each of the stacks as shown below (categories must be aligned perfectly – use String.format) :

Male Characters		
Name	Homeworld	
Poe Dameron	Unknown	
…	…	

Female Characters		
Name	Homeworld	
Padme Amidala	Naboo	
…	…	

Droids		
Name	Homeworld	
BB8	Unknown	
…	…	

Ages		
Name	Homeworld	Birth Year (BBY)
Padme Amidala	Naboo	46.0