**Report**

This program was easy at first, then challenging after I finished the easy stuff. Easy stuff was importing the random library, creating the simple print statements and input commands, and creating the if, elif, and else statements for choice 1 and then copying and pasting the code to fit for the other 4 choices. Once I finished that, I had to find out how to make the program reroll once the first roll was executed. Asked my good friend Google and found an answer to my question. Put my new knowledge into action by creating a variable, exitToMain, set to ‘n’ and a while statement set to run as long as the variable was NOT equal to ‘y’. Then I went down to the very bottom of my program and put an input set to the variable ‘exitToMain’ asking the user if they would like to “Exit to main menu? Y/N”. Then I had to go back and set everything up in modules and define them. Once I did that, I had to figure out how to call back specific modules and be able to get everything to run without an error. After a lot of trial and error and a skype call to a friend that knows Python, I got my program to work! I thought this program was more challenging than the other programs, but I really enjoyed it! It took longer than the other programs, and I came back with more errors than the other programs too. I enjoyed the trial and error aspect of the program, and when I finally got the program to run without errors, I was so relieved.

**Algorithm**

import the library Random

Make asterisk design

Make intro to show what Program assignment this is

Make another asterisk design

Print statement welcoming the user to the Dice Roller

Create 'choice' variable with an integer input giving the user options for which dice he/she would like to choose from

**(TROUBLESHOOTING):**

* Came back to this issue after I coded all the if statements below
* Had to figure out how to get the program to continue to run after the user was given the random roll
* Also had to find out what type of variable to create and what while loop could go along with it

Create a while loop to display the categories for the user as long as choice does NOT equal 0

Create an input for the user to select a specific category

Create 'exitToMain' variable set to '' before making the second while loop

Create while loop to keep the program running as long as ‘exitToMain’ is NOT equal to 'y'

* Create an if statement that runs if 'choice' variable is equal to 1
  + Make 'fourSided' variable equal a random range (imported from the random library) from 1-4
  + Print statement that shows what number the random range decided to generate
  + Create another if statement that tells if 'fourSided' is equal to the lowest number (1)
    - Print statement to execute a phrase telling the user that they rolled the minimum roll number
  + Create elif statement that tells if 'fourSided' is equal to the highest number (4)
    - Print statement to execute a phrase telling the user that they rolled the maximum roll number
  + Create an else statement in case they neither rolled a 1 or 4
    - Print statement to execute an encouraging message telling the user "Good roll!"

Copy and paste the main if statement from above with the if, elif, and else statements along with it 4 times

Went through the first copy and changed the if statement to run if 'choice' variable is equal to 2 instead of 1

Changed the ‘fourSided’ variable to ‘sixSided’

Changed randrange from (1,4) to (1,6)

Changed the other variable names that were ‘fourSided’ to ‘sixSided’

Changed the elif statement from seeing if ‘sixSided’ is equal to 4 to seeing if it was equal to 6

Repeat and make slight changes for the 8-sided dice (choice 3)

Repeat and make slight changed for the 10-sided dice (choice 4)

Repeat and make slight changes for the 20-sided dice (choice 5)

* Create an if statement that runs if 'choice' variable is equal to 0
  + Executes a print statement that thanks the user for using the dice roller and tells them to play again

**(TROUBLESHOOTING):**

* Forgot about the 'exitToMain' variable from before the while loop so I was having trouble with the program rerolling
* Had to reread through my code and found my mistake

Create 'exitToMain' input (from earlier, before the while loop) to allow the user to decide whether or not he/she wants to exit to the main menu by entering 'Y' or 'y'

(If 'N' or 'n' the program will reroll the same dice until the user decided to exit to the main menu)

**(SORT OF TROUBLESHOOTING):**

Went back and plugged in modules to define specific parts of my program

Defined mainMenu to print out all the stuff that was needed for my main menu

Defined main with mainMenu and all the if and elif statements inside of it

Created a break after the elif choice == 0

Then I ran main to call for the execution of main module