Assignment 3 – Instructions

Python problems

Additional Instructions:

- Create a Python File for each Python Question
  - Save file as **StudentNumber_Prac3-x.py**
- Submit your Python files(*.py) here on eFundi, under this assignment, and make sure you attach and submit your files successfully.
  - If not, receive 0 for the practical.
- Back up your work regularly
  - Either USB or Dropbox
- Use Python IDLE (version), not the Python IDLE GUI
- Read the Rubric before calling the Demi

Tips:

- *Use the **input()** function to read input from the user.*
- *Use the **int()** function to convert strings to integers.*
- *Use the **float()** function to convert strings to integers.*
- *Make use of the **print()** function to supply output to the user.*
- *Save file as **StudentNumber_Prac3-x.py***

Practical 3.1 - Positive, Negative, or Zero

Write a program that takes an integer input and prints whether it is positive, negative, or zero.

```
Enter a number: 10
The number is Positive
```

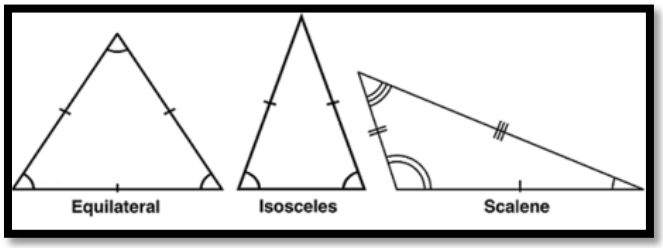
Practical 3.2 - Age Classifier

Write a program that takes a person's age as input and prints whether they are an infant (0-1), child (2-12), teenager (13-19), adult (20-64), or senior (65+).

```
Enter your age: 19
You're a Teenager
```

Practical 3.3 – Triangle Type Checker

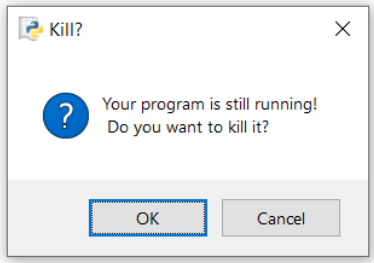
Write a program that takes three integer inputs representing the lengths of the sides of a triangle and prints whether it is an equilateral, isosceles, or scalene triangle.



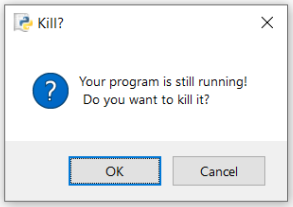
- Prompt the user to continue (1) or exit the program (2), and handle invalid inputs by displaying an error message and exiting the program if the user enters an invalid option.
- If the user select 1, prompt the user to input the lengths of the three sides of the triangle, and print the type of triangle based on the following:
    - An equilateral triangle is a triangle in which all three sides are equal in length
    - An Isosceles triangle is a triangle that has at least two sides of equal length.
    - A scalene triangle is a triangle in which all three sides have different lengths.

```
Triangle Type Checker

Do you want to continue? 1 (Yes) or 2(No): 1

Enter length of side A: 10
Enter length of side B: 10
Enter length of side C: 30

Isosceles triangle
```

```
Triangle Type Checker

Do you want to continue? 1 (Yes) or 2(No): 2

Press enter to quit the program
```




```
Triangle Type Checker

Do you want to continue? 1 (Yes) or 2(No): 5

Invalid option. Please enter 1 (Yes) or 2 (No)
```



Practical 3.4 – Divisibility Checker

Write a program that takes two numbers as input and prints whether the first number is divisible by the second number.

```
Enter first number: 10
Enter second number: 5
10 is divisible by 5
```

RUBRIC		
Question	**Item**	**Marks**
Prac3.1	Use an if-else statement to determine whether it is positive or negative	2
	Print the correct output	1
Prac3.2	Use an if-elif-else statement to determine their age group	2
	Print the correct output	1
Prac3.3	Menu Item and error handling	3
	Receive 3 inputs from user as integers	1
	Use an if-elif-else statement to determine the type of triangle (including correct operators)	4
	Print the correct output	1
Prac3.4	Use an if-else statement to determine whether the first number is divisible by the second number (including correct operators)	3
	Print the correct output	1
	Comments in all programs	1
	TOTAL	**20**