PYTHON TASK

1. Create 4 variables: an integer, a float, a string, and a boolean. Print each variable and its data type.
2. Given the string `text = " Hello, Python !"`, remove leading/trailing spaces, convert to lowercase, and replace `Python` with `World`.
3. Create a tuple with 3 values. Try to change one value and observe what happens and add a new value in it
4. Create a dictionary with keys `name`, `age`, and `city`. Print the name, update the age, and add a new key `country`.
5. Create two sets: `{1, 2, 3}` and `{3, 4, 5}`. Print their union and intersection.
6. Let `a = 10`, `b = 5`. Check and print whether:

- a > b
- a == b
- a != b
- a < 20 and b < 10

7.Given `s = "Programming"`, print:

- The first 4 characters
- The last 3 characters
- The middle characters (from index 3 to 7)

8.Write a program that checks if a number is positive.

9.Check if a number is even or odd and print a message.

10.Check a person's age and print:

- "Child" if < 13
- "Teen" if 13–19
- "Adult" if 20–59

- "Senior" if 60+

11.Use a for loop to print all items in the list `[10, 20, 30, 40, 50]`

12. Loop from 1 to 10. Stop the loop when the number is 6 and

    Loop from 1 to 5, Skip printing number 3

13..Extract all the digits from this string using regex: "My ID is A123B456"

14.Write "Welcome to Python" into a file called welcome.txt, then read and print the content.

16.Write code to divide two numbers. Use try-except to catch divide-by-zero errors and print a friendly message.

17.Create a class Student with properties name and grade. Create one object and print the student's name.

18.Append, remove elements in a list of numbers.

19.Create a list and return the duplicate elements in a list.

20.print a multiplication table of 5 and 2 up to 5 rows.