

python_Assignment

1. Variables and Type Casting

Task:

- Write a Python script that:
 - Defines variables of different types (e.g., integer, float, and string).
 - Prints the type of each variable.
 - Converts a string to an integer and a float to an integer, then prints the results.

Simplified Version:

- Write a Python script that:
 - Defines an integer, float, and string variable.
 - Prints their values and their types.
 - Converts the string to an integer and prints it.
 - Converts the float to an integer and prints it.

2. Conditionals and Loops

Task:

Write a Python script that:

- Takes a number as input.
- Checks if the number is even or odd.
- Prints the sum of all even numbers from 1 to the given number using a regular `for` loop.

3. Function

Task:

Define a function in Python that:

- Takes a list of numbers as input.

- Returns the sum of even numbers and the sum of odd numbers separately.

4. File Handling

Task:

Write a Python program to:

- Create a file named `sample.txt`.
- Write 3 lines of random text into the file.
- Read and display the contents of the file.

Simplified Version: Write a Python program that:

- Creates a file `sample.txt`.
- Writes 3 lines of text into the file.
- Reads and displays the contents.

5. Object-Oriented Programming (OOP)

Task:

Create a Python class `Rectangle` that:

- Has attributes for length and width.
- Includes a method to calculate the area of the rectangle.

Simplified Version:

Create a Python class `Rectangle` that:

- Has attributes for length and width.
- Includes a method to calculate the area of the rectangle.
- Create an object of the class and print its area.

6. Error Handling

Write a Python program that:

- Prompts the user to input two numbers.
- Divides the first number by the second number.
- Includes error handling to manage division by zero and invalid inputs.