

## Python Programming Assignment

### 1. Working with Dictionaries

Write a Python program that does the following:

- Create a dictionary to store information about a book (title, author, price).
- Add a new key-value pair for the year of publication.
- Update the price of the book.
- Print all the keys and values in the dictionary using a loop.

### 2. Sets and Lists

Write a Python program to:

- Create a list of integers with some duplicate values.
- Convert the list into a set to remove duplicates.
- Add three more unique values to the set.
- Convert the set back into a sorted list and print the result.

### 3. Loops with Conditional Statements

Write a Python program to find the prime numbers between 10 and 50 using a loop.

- Use a `for` loop to check each number in the range.
- Use a nested loop or conditions to check if the number is prime.
- Print the prime numbers.

### 4. Exception Handling

Write a Python program that:

- Takes two numbers as input from the user.
- Divides the first number by the second.
- Handles the `ZeroDivisionError` with a custom error message.
- Handles the `ValueError` if the user enters non-numeric input.

### 5. File Handling

Write a Python program to:

- Create a text file called `students.txt`.
- Write the names of 5 students into the file (one name per line).
- Read the file and print each name with its line number (e.g., "1: John").
- Ensure the file is properly closed after both writing and reading operations.