Solutions of the Exercises of Module 1

Exercise 1: Write a program that prompts the user for two integers, and then performs the following operations using those integers: addition, subtraction, multiplication, division, modulus, and floor division. Print the results of each operation to the console.

In [ ]:
```
# Exercise 1
x = int(input("Enter the first number: "))
y = int(input("Enter the second number: "))

print("Addition:", x + y)
print("Subtraction:", x - y)
print("Multiplication:", x * y)
print("Division:", x / y)
print("Modulus:", x % y)
print("Floor Division:", x // y)
```

Exercise 2: Write a program that prompts the user for a string, and then performs the following operations using that string: concatenation, repetition, and indexing. Print the results of each operation to the console.

In [ ]:
```
# Exercise 2
s = input("Enter a string: ")
t = input("Enter another string: ")

print("Concatenation:", s + t)
print("Repetition:", s * 3)
print("Indexing:", s[2])
```

Exercise 3: Write a program that prompts the user for a list of integers, and then performs the following operations using that list: appending, inserting, and removing elements. Print the results of each operation to the console.

In [ ]:
```
# Exercise 3
l = [int(x) for x in input("Enter a list of integers: ").split()]

l.append(5)
print("After Appending: ",l)

l.insert(2,10)
print("After Inserting: ",l)

l.remove(10)
print("After Removing: ",l)
```

Exercise 4: Write a program that prompts the user for a number, and then performs the following mathematical operations: square root, power, trigonometric and logarithmic functions. Print the results of each operation to the console.

In [ ]:
```
import math
# Exercise 4
x = int(input("Enter a number: "))

print("Square root:", math.sqrt(x))
print("Power:", math.pow(x,2))
```

```
print("Sin:", math.sin(math.radians(x)))
print("log10:", math.log10(x))
```