Lab Assessment 1

1. **WAP to greeting user and display his/her name**

   print('Hello ABC', 'Welcome to programming')

2. **Write a program that asks the user for his/her name and then welcomes him/her**

   ```
   name = input("Enter your name: ")
   print("Hello", name)
   ```

3. **WAP to demonstrate arithmetic operators**

   ```
   a = 7
   b = 2
   # addition
   print ('Sum: ', a + b)

   # subtraction
   print ('Subtraction: ', a - b)
   # multiplication
   print ('Multiplication: ', a * b)

   # division
   print ('Division: ', a / b)
   # floor division
   print ('Floor Division: ', a // b)
   ```

```
# modulo
print ('Modulo: ', a % b)

# a to the power b
print ('Power: ', a ** b)
```

4. **Write a program that prompts the user to enter two integers and display their sum on the screen**

```
num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
sum = num1 + num2
print("The sum of", num1, "and", num2, "is", sum)
```

5. **Write a program that prompts the user to input a Celsius temperature and outputs the equivalent temperature in Fahrenheit. The formula to convert the temperature is: F = 9/5 C + 32 where F is the Fahrenheit temperature and C is the Celsius temperature.**

```
celsius = float(input("Enter the temperature in Celsius: "))
fahrenheit = (9/5)*celsius + 32
print("The temperature in Fahrenheit is:", fahrenheit)
```

6. **WAP which accept principle, rate and time from user and print the simple interest. The formula to calculate simple interest is: simple interest = (principle * rate * time) / 100**

7. **Write a program that prompts the user to input a number and display if the number is even or odd**

```
# Prompt the user to input a number
number = int(input("Enter a number: "))

# Check if the number is even or odd
if number % 2 == 0:
  print(number, "is even.")
else:
   print(number, "is odd.")
```

8. **WAP to find area of rectangle**
9. **Write a program that prompts the user to input the radius of a circle and outputs the area and circumference of the circle. The formula is**

   Area = pi * radius2

   Circumference = 2 * pi * radius

```
radius = float(input("Enter the radius of the circle: "))
area = 3.14 * radius ** 2
circumference = 2 * 3.14 * radius
print("The area of the circle is:", area)
print("The circumference of the circle is:", circumference)
```

10. **Write a program that prompts the user to input the length and the width of a rectangle and outputs the area and perimeter of the rectangle. The formula is**

Area = Length * Width

Circumference = 2 * (Length + Width)

```
length = int(input("Enter the length of the rectangle: "))
width = int(input("Enter the width of the rectangle: "))

area = length * width
perimeter = 2 * (length + width)

print("The area of the rectangle is:", area)
print("The perimeter of the rectangle is:", perimeter)
```

11. **Write a program which prompts the user to input principle, rate and time and calculate compound interest. The formula is :**

CI = P(1+R/100)^T - P

```
principal = float(input("Enter the principal amount: "))
rate = float(input("Enter the rate of interest: "))
time = float(input("Enter the time in years: "))
compound_interest = principal * ((1 + rate/100) ** time) - principal
print("The compound interest is:", compound_interest)
```