In [1]:
```
# Program make a simple calculator
def add(x, y):
    return x + y
def subtract(x, y):
    return x - y
def multiply(x, y):
    return x * y
def divide(x, y):
    return x / y


print("Select operation.")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")

while True:
    choice = input("Enter choice(1/2/3/4): ")
    if choice in ('1', '2', '3', '4'):
        num1 = float(input("Enter first number: "))
        num2 = float(input("Enter second number: "))

        if choice == '1':
            print(num1, "+", num2, "=", add(num1, num2))

        elif choice == '2':
            print(num1, "-", num2, "=", subtract(num1, num2))

        elif choice == '3':
            print(num1, "*", num2, "=", multiply(num1, num2))

        elif choice == '4':
            print(num1, "/", num2, "=", divide(num1, num2))
        break
    else:
        print("Invalid Input")
```

```
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 1
Enter first number: 2
Enter second number: 3
2.0 + 3.0 = 5.0
```

In [2]:
```
# Program to calculate simple interest
P = float(input("Enter the principal amount : "))
N = float(input("Enter the number of years : "))
R = float(input("Enter the rate of interest : "))
SI = (P * N * R)/100
print("Simple interest : {}".format(SI))
```

```
Enter the principal amount : 100
Enter the number of years : 5
Enter the rate of interest : 5
Simple interest : 25.0
```

In [3]:
```
# Program to calculate area of circle
PI = 3.14
radius = float(input(' Please Enter the radius of a circle: '))
area = PI * radius * radius
circumference = 2 * PI * radius

print(" Area Of a Circle = %.2f" %area)
print(" Circumference Of a Circle = %.2f" %circumference)
```

```
 Please Enter the radius of a circle: 4
 Area Of a Circle = 50.24
 Circumference Of a Circle = 25.12
```

In [4]:
```
# Program to calculate area of triangle
a = float(input('Enter first side: '))
b = float(input('Enter second side: '))
c = float(input('Enter third side: '))
s = (a + b + c) / 2
area = (s*(s-a)(s-b)(s-c)) ** 0.5
print('The area of the triangle is %0.2f' %area)
```

```
Enter first side: 3
Enter second side: 2
Enter third side: 4

---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-4-da44769fac39> in <module>
      4 c = float(input('Enter third side: '))
      5 s = (a + b + c) / 2
----> 6 area = (s*(s-a)(s-b)(s-c)) ** 0.5
      7 print('The area of the triangle is %0.2f' %area)

TypeError: 'float' object is not callable
```

In [5]:
```
# Program to calculate area of triangle
a = float(input('Enter first side: '))
b = float(input('Enter second side: '))
c = float(input('Enter third side: '))
s = (a + b + c) / 2
area = (s*(s-a)*(s-b)*(s-c)) ** 0.5
print('The area of the triangle is %0.2f' %area)
```

```
Enter first side: 3
Enter second side: 2
Enter third side: 4
The area of the triangle is 2.90
```

In [6]:
```
# Program to calculate temperature in celsius to fahrenheit
celsius = float(input("Enter temperature in celsius: "))
fahrenheit = (celsius * 9/5) + 32
print('%.2f Celsius is: %0.2f Fahrenheit' %(celsius, fahrenheit))
```

```
Enter temperature in celsius: 99
99.00 Celsius is: 210.20 Fahrenheit
```

In [7]:
```
# Program to calculate area of rectangle
width = float(input('Please Enter the Width of a Rectangle: '))
height = float(input('Please Enter the Height of a Rectangle: '))
Area = width * height
Perimeter = 2 * (width + height)
print("\n Area of a Rectangle is: %.2f" %Area)
print(" Perimeter of Rectangle is: %.2f" %Perimeter)
```

```
Please Enter the Width of a Rectangle: 3
Please Enter the Height of a Rectangle: 2

 Area of a Rectangle is: 6.00
 Perimeter of Rectangle is: 10.00
```

In [8]:
```
# Program to calculate perimetre of square
print("Enter 'x' for exit.");
side = input("Enter side length of square: ");
if side == 'x':
    exit();
else:
    slength = int(side);
    perimeter = 4*slength;
    print("\nPerimeter of Square =", perimeter);
```

```
Enter 'x' for exit.
Enter side length of square: 3

Perimeter of Square = 12
```

In [9]:
```
# Program to calculate circumference of a circle
rad = input("Enter radius of circle: ");
if rad == 'x':
    exit();
else:
    radius = float(rad);
    circumference = 2*3.14*radius;
    print("\nCircumference of Circle =",circumference);
```

```
Enter radius of circle: 2

Circumference of Circle = 12.56
```

In [11]:
```
# Program to swap two numbers
x = 5
y = 10
temp = x
x = y
y = temp
print('The value of x after swapping: {}'.format(x))
print('The value of y after swapping: {}'.format(y))
```

```
The value of x after swapping: 10
The value of y after swapping: 5
```

In [ ]:
```

```