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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")
```

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

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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
print(" Area Of a Circle = %.2f" %area)
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Please Enter the radius of a circle: 2
Area Of a Circle = 12.56
```

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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)
```

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

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

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

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In [6]: # 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
print("\n Area of a Rectangle is: %.2f" %Area)
```

```
Please Enter the Width of a Rectangle: 2
Please Enter the Height of a Rectangle: 4

Area of a Rectangle is: 8.00
```

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In [7]: # Program to calculate perimeter 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 [8]: # Program to calculate circumference of 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

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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 [ ]: