



## **EXPERIMENT – 1.3**

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**Subject Name: Programming in Python lab**

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### **1. Aim:**

- 1.) Write a python program to calculate area of 10 different circles. Given the  $\pi = 22/7$  and radius of the circles entered by user using Simple Function , Parameterized Function , Return Type with function and return type with parameterized Functions .
  
- 2.) Write a python program to print Multiplication tables from 2 to 20 whether table values entered by user using Simple Function , Parameterized Function , Return Type with function and return type with parameterized Functions .

## Aim:

- 1.) Write a python program to calculate area of 10 different circles. Given the  $\pi = 22/7$  and radius of the circles entered by user using Simple Function , Parameterized Function , Return Type with function and return type with parameterized Functions .

### 1.1) Source code:

#### # Using Simple Function

```
def simple_function_area():  
    pi = 22/7  
    for i in range(10):  
        x = int(input("Enter the radius of the circle: "))  
        area = x*x*pi  
        print("Area of circle with radius "+str(x)+" is "+str(area)+" unit Sq")
```

#### # Using Simple Parametarised Function

```
def parametarised_function_area(radd):  
    pi = 22/7  
    radd = x  
    area = x*x*pi  
    print("Area of circle with radius "+str(x)+" is "+str(area)+" unit Sq")
```

```
for i in range(10):
```

```
    x = int(input("Enter the radius of the circle: "))  
    parametarised_function_area(x)
```

**# Using Simple Function but with return type**

```
def simple_function_area():
```

```
    pie = 22/7
```

```
    area = x*x*pie
```

```
    return area
```

```
for i in range(10):
```

```
    x = int(input("Enter the radius of the circle: "))
```

```
    simple_function_area()
```

```
    print("Area of the circle is "+str(simple_function_area()))
```

**# Using Parametarised Function but with return type**

```
def parametarised_function_area(x,pie):
```

```
    area = x*x*pie
```

```
    return area
```

```
for i in range(10):
```

```
    pie = 22/7
```

```
    x = int(input("Enter the radius of the circle: "))
```

```
    parametarised_function_area(x,pie)
```

```
    print("Area of the circle is "+str(parametarised_function_area(x, pie)))
```



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## Output:

```
Enter the radius of the circle: 11
Area of circle with radius 11 is 380.2857142857143 unit Sq
Enter the radius of the circle: 22
Area of circle with radius 22 is 1521.142857142857 unit Sq
Enter the radius of the circle: 33
Area of circle with radius 33 is 3422.5714285714284 unit Sq
Enter the radius of the circle: 44
Area of circle with radius 44 is 6084.571428571428 unit Sq
Enter the radius of the circle: 55
Area of circle with radius 55 is 9507.142857142857 unit Sq
Enter the radius of the circle: 66
Area of circle with radius 66 is 13690.285714285714 unit Sq
Enter the radius of the circle: 77
Area of circle with radius 77 is 18634.0 unit Sq
Enter the radius of the circle: 88
Area of circle with radius 88 is 24338.285714285714 unit Sq
Enter the radius of the circle: 99
Area of circle with radius 99 is 30803.142857142855 unit Sq
Enter the radius of the circle: 110
Area of circle with radius 110 is 38028.57142857143 unit Sq
```

2.) **Aim:** Write a python program to print Multiplication tables from 2 to 20 whether table values entered by user using Simple Function , Parameterized Function , Return Type with function and return type with parameterized Functions .

### Source Code:

```
# multiplication table
```

```
def table_simple_func():
```

```
    value = int(input("Enter table value : "))
```

```
    print("Multiplication table of ",value," : "," Using simple function")
```

```
    for i in range(1,11):
```

```
        print(f"{value} x {i} = {i*value}")
```

```
    print("\n")
```

```
def table_parameterized_func(value):
```

```
    print("Multiplication table of ",value," Using Parametarised function")
```

```
    for i in range(1,11):
```

```
        print(f"{value} x {i} = {i*value}")
```

```
    print("\n")
```

```
def table_simple_func_return():
```

```
    value = int(input("Enter table value : "))
```

```
    print("Multiplication table of ",value," Using simple function with return type")
```

```
    table = []
```

```
for i in range(1,11):  
    table.append(str(f"{value} x {i} = {i*value}"))  
  
return table
```

```
def table_parameterized_func_return(value):  
    print("Multiplication table of ",value," Using Parametarised function with retrun  
type")  
    table = []  
    for i in range(1,11):  
        table.append(str(f"{value} x {i} = {i*value}"))  
  
    return table
```

```
table_simple_func()  
x = int(input("Enter table value: "))  
table_parameterized_func(x)
```

```
table1 = table_simple_func_return()  
for i in table1: print(i)
```

```
print('\n')
```

```
x = int(input("Enter table value: "))  
table2 = table_parameterized_func_return(x)  
for i in table2: print(i)
```



## OUTPUT:

```
Enter table value : 3
Multiplication table of 3 : Using simple function
3 x 1 = 3
3 x 2 = 6
3 x 3 = 9
3 x 4 = 12
3 x 5 = 15
3 x 6 = 18
3 x 7 = 21
3 x 8 = 24
3 x 9 = 27
3 x 10 = 30

Enter table value: 6
Multiplication table of 6 Using Parametarised function
6 x 1 = 6
6 x 2 = 12
6 x 3 = 18
6 x 4 = 24
6 x 5 = 30
6 x 6 = 36
6 x 7 = 42
6 x 8 = 48
6 x 9 = 54
6 x 10 = 60
```

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```
Enter table value : 9
Multiplication table of 9 Using simple function with return type
9 x 1 = 9
9 x 2 = 18
9 x 3 = 27
9 x 4 = 36
9 x 5 = 45
9 x 6 = 54
9 x 7 = 63
9 x 8 = 72
9 x 9 = 81
9 x 10 = 90

Enter table value: 8
Multiplication table of 8 Using Parametarised function with retrun type
8 x 1 = 8
8 x 2 = 16
8 x 3 = 24
8 x 4 = 32
8 x 5 = 40
8 x 6 = 48
8 x 7 = 56
8 x 8 = 64
8 x 9 = 72
8 x 10 = 80
```

Get Started!