

# Python Functions Exercise

## Exercise 1: Create a function in Python

Write a program to create a function that takes two arguments, name and age, and print their value.

## Exercise 2: Create a function with variable length of arguments

Write a program to create function `func1()` to accept a variable length of arguments and print their value.

**Note:** Create a function in such a way that we can pass any number of arguments to this function and the function should process them and display each argument's value.

**Read:** [variable length of arguments in functions](#)

**Function call:**

```
# call function with 3 arguments
func1(20, 40, 60)

# call function with 2 arguments
func1(80, 100)
```

**Expected Output:**

```
Printing values
```

```
20
```

```
40
```

```
60
```

```
Printing values
```

```
80
```

```
100
```

## Exercise 3: Return multiple values from a function

Write a program to create function `calculation()` such that it can accept two variables and calculate addition and subtraction. Also, it must **return both addition and subtraction in a single return call**.

**Given:**

```
def calculation(a, b):  
    # Your Code  
  
res = calculation(40, 10)  
print(res)
```

**Expected Output**

```
50, 30
```

## Exercise 4: Create a function with default argument

Write a program to create a function `show_employee()` using the following conditions.

- It should accept the employee's name and salary and display both.
- If the salary is missing in the function call then assign default value 9000 to salary

**See:** [Default arguments in function](#)

**Given:**

```
showEmployee("Ben", 12000)
showEmployee("Jessa")
```

**Expected output:**

```
Name: Ben salary: 12000
```

```
Name: Jessa salary: 9000
```

## Exercise 5: Create an inner function to calculate the addition in the following way

- Create an outer function that will accept two parameters, `a` and `b`
- Create an inner function inside an outer function that will calculate the addition of `a` and `b`
- At last, an outer function will add 5 into addition and return it

## Exercise 6: Create a recursive function

Write a program to create a **recursive function to calculate the sum of numbers** from 0 to 10.

A recursive function is a function that calls itself, again and again.

**Expected Output:**

55

## Exercise 7: Assign a different name to function and call it through the new name

Below is the function `display_student(name, age)`. Assign a new name `show_student(name, age)` to it and call it using the new name.

**Given:**

```
def display_student(name, age):  
    print(name, age)  
  
display_student("Emma", 26)
```

You should be able to call the same function using

```
show_student(name, age)
```

## Exercise 8: Generate a Python list of all the even numbers between 4 to 30

**Expected Output:**

```
[4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28]
```

## Exercise 9: Find the largest item from a given list

```
x = [4, 6, 8, 24, 12, 2]
```

**Expected Output:**

```
24
```