



IARE
INSTITUTE OF
AERONAUTICAL ENGINEERING
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LABORATORY WORK BOOK

Name of the Student : HIMAKAR C Roll Number 21451A0565
Class : CSE - B Semester : VI
Course Code : ACTCO9 Course Name : SOA Laboratory
Name of the Course Faculty : Mr. ACHYUTHA SURESH BABU Faculty ID : IARE10996
Exercise Number : 11 Week Number : 11 Date : 21/1/24

S. No.		Exercise Number	EXERCISE NAME	MARKS AWARDED						
				Aim/ Preparation	Algorithm / Procedure		Source Code	Program Execution	Viva - Voce	Total
					Performance in the Lab		Calculations and Graphs	Results and Error Analysis		
				4	4		4	4	4	20
1	11.1	Bubble sort	u		u	u	u	u	4	20
2	11.2	Factorial								
3	11.3	sum of array								
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11. White box Testing:

11.1 Bubble sort

Program

```
def BS(l):  
    n = len(l)  
    for i in range(n):  
        for j in range(n - i - 1):  
            if l[j] > l[j + 1]:  
                l[j], l[j + 1] = l[j + 1], l[j]  
    return l
```

```
l = list(map(int, input().split()))
```

```
print(*BS(l))
```

INPUT/OUTPUT:

Test case - I:

5 3 1 2 6

1 2 3 5 6

Test case - II:

100 65 25

25 65 100

11.2 Factorial

Program:

```
def f(n):  
    if n == 1:  
        return 1  
    return n * f(n-1)
```

```
Print('Factorial is: ', f(int(input('Enter Integer:'))))
```

OUTPUT:

Testcase-1:

Enter Integer: 5

Factorial is: 120

Test case -2:

Enter Integer: 6

Factorial is: 720

11.3 Sum of array:

Program:

```
l = list(map(int, input().split()))  
s = 0  
for i in l:  
    s += i  
print('Sum is: ', s)
```

OUTPUT:

Test Case - 1:

2 3 5 8

Sum is: 18

Test Case - 2:

-1 -2 1 3

Sum is: 1

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Story