



**IARE**  
INSTITUTE OF  
AERONAUTICAL ENGINEERING  
(An Autonomous Institute affiliated to JNTU, Hyderabad)  
Dundigal, Hyderabad - 500 043


## LABORATORY WORK BOOK

Name of the Student : HIMAKAR C  
Class : CSE - B Semester : VI  
Course Code : ACIC09 Course Name : SRAT Laboratory  
Name of the Course Faculty : Mr. ACHYUTHA SURESH BABU Faculty ID : IARE10996  
Exercise Number : ..... Week Number : 09 Date : 18/6/24

Roll Number									
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S. No.	Exercise Number	EXERCISE NAME	MARKS AWARDED					Viva - Voce	Total
			Aim/ Preparation	Algorithm / Procedure		Source Code	Program Execution		
				Performance in the Lab		Calculations and Graphs	Results and Error Analysis		
			4	4		4	4	4	20
1	9.1	Quick Sort	4		4		4	4	20
2	9.2	Absolute Letter Grading							
3									
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Signature of the Student

  
Signature of the Faculty

## 9.1) Quick Sort

Program:

```
def Partition(l, L, H):
```

```
    p = l[H]
```

```
    i = L - 1
```

```
    for j in range(L, H):
```

```
        if l[j] <= p:
```

```
            i += 1
```

```
            l[i], l[j] = l[j], l[i]
```

```
    l[i + 1], l[H] = l[H], l[i + 1]
```

```
    return i + 1
```

```
def qs(l, L, H):
```

```
    if L < H:
```

```
        pi = Partition(l, L, H)
```

```
        qs(l, L, pi - 1)
```

```
        qs(l, pi + 1, H)
```

```
    return l
```

```
l = list(map(int, input('Enter elements: ').split()))
```

```
print('sorted array is: ', *qs(l, 0, len(l) - 1))
```

OUTPUT:

Test-case-I:

Enter elements: 3 5 2 1

Sorted array is: 1 2 3 5

Test-case-II:

Enter elements: 65 25 33 56 8

Sorted array is: 8 25 33 56 65

Test-case-III:

Enter elements: -4 -3 1 0 -2

Sorted array is: -4 -3 -2 0 1

## 9.2) Absolute Letter Grading

Program:

```

s = int(input('Enter score: '))
if s in range(90, 101):
    print('Grade A')
elif s in range(80, 90):
    print('Grade B')
elif s in range(70, 80):
    print('Grade C')
elif s in range(60, 70):
    print('Grade D')
elif s in range(50, 60):
    print('Grade E')
else:
    print('Fail')

```

OUTPUT:Test-case-I:

Enter score: 95

Grade A

Test-case-II:

Enter score: 49

Fail