**DAA-Lab**

**LAB - 7**

LQ1. Aim of the experiment : To implement Fractional knapsack Weight : 10, 20, 30 Value : 60, 100, 120 Capacity : 50 Expected output : [ 10 20 20 ] 240

CASE-1

**INPUT:**

Enter the number of items: 3

Enter weight for item 1: 10

Enter value for item 1: 60

Enter weight for item 2: 20

Enter value for item 2: 100

Enter weight for item 3: 30

Enter value for item 3: 120

Enter the knapsack capacity: 50

**OUTPUT:**

Selected weights: [ 10 20 20 ] Total value: 240

CASE-2

**INPUT**

Enter the number of items: 4

Enter weight for item 1: 10

Enter value for item 1: 200

Enter weight for item 2: 20

Enter value for item 2: 300

Enter weight for item 3: 30

Enter value for item 3: 400

Enter weight for item 4: 40

Enter value for item 4: 500

Enter the knapsack capacity: 40

**OUTPUT:**

Selected weights: [ 10 20 10 0 ] Total value: 633.333

CASE-3

**INPUT:**

Enter the number of items: 3

Enter weight for item 1: 12

Enter value for item 1: 10

Enter weight for item 2: 10

Enter value for item 2: 8

Enter weight for item 3: 7

Enter value for item 3: 11

Enter the knapsack capacity: 15

**OUTPUT:**

Selected weights: [ 7 8 0 ] Total value: 17.6667

LQ2. Aim of the experiment : To implement Activity selection

**INPUT:**

Enter the number of activities: 11

Enter start time for activity 1: 0

Enter end time for activity 1: 6

Enter start time for activity 2: 1

Enter end time for activity 2: 4

Enter start time for activity 3: 2

Enter end time for activity 3: 14

Enter start time for activity 4: 3

Enter end time for activity 4: 5

Enter start time for activity 5: 3

Enter end time for activity 5: 9

Enter start time for activity 6: 5

Enter end time for activity 6: 7

Enter start time for activity 7: 5

Enter end time for activity 7: 9

Enter start time for activity 8: 6

Enter end time for activity 8: 10

Enter start time for activity 9: 8

Enter end time for activity 9: 11

Enter start time for activity 10: 8

Enter end time for activity 10: 12

Enter start time for activity 11: 12

Enter end time for activity 11: 16

**OUTPUT:**

Selected activities: (1, 4) (5, 7) (8, 11) (12, 16)

LQ3. Aim of the experiment : To implement Huffman Code

**INPUT:**

Enter the number of symbols: 6

Enter symbol and its frequency: a 45

Enter symbol and its frequency: b 13

Enter symbol and its frequency: c 12

Enter symbol and its frequency: d 16

Enter symbol and its frequency: e 9

Enter symbol and its frequency: f 5

**OUTPUT:**

Huffman Codes:

d=111 e=1101 f=1100 b=101 a=0 c=100