# OUTPUTS OF PROGRAM 7 TO 12

## Singly Linked List (Program 7)

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

4

Empty list

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

1

Enter the value of n

3

Enter the usn 1

Enter the name pooja

Enter the pgm reading

Enter the sem 1

Enter the phno 12345678

Enter the usn 2

Enter the name praveen

Enter the pgm writing

Enter the sem 2

Enter the phno 87654321

Enter the usn 3

Enter the name kushi

Enter the pgm eating

Enter the sem 3

Enter the phno 45678321

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

2

Student 1usn is 3

name is kushi

pgm is eating

sem is 3

phno is 45678321

Student 2usn is 2

name is praveen

pgm is writing

sem is 2

phno is 87654321

Student 3usn is 1

name is pooja

pgm is reading

sem is 1

phno is 12345678

There are 3 students

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

3

Enter the usn 4

Enter the name jay

Enter the pgm walking

Enter the sem 4

Enter the phno 898906759

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

2

Student 1usn is 4

name is jay

pgm is walking

sem is 4

phno is 898906759

Student 2usn is 3

name is kushi

pgm is eating

sem is 3

phno is 45678321

Student 3usn is 2

name is praveen

pgm is writing

sem is 2

phno is 87654321

Student 4usn is 1

name is pooja

pgm is reading

sem is 1

phno is 12345678

There are 4 students

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

4

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

2

Student 1usn is 3

name is kushi

pgm is eating

sem is 3

phno is 45678321

Student 2usn is 2

name is praveen

pgm is writing

sem is 2

phno is 87654321

Student 3usn is 1

name is pooja

pgm is reading

sem is 1

phno is 12345678

There are 3 students

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

5

Enter the usn 5

Enter the name darshan

Enter the pgm project

Enter the sem 3

Enter the phno 843189667

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

2

Student 1usn is 3

name is kushi

pgm is eating

sem is 3

phno is 45678321

Student 2usn is 2

name is praveen

pgm is writing

sem is 2

phno is 87654321

Student 3usn is 1

name is pooja

pgm is reading

sem is 1

phno is 12345678

Student 4usn is 5

name is darshan

pgm is project

sem is 3

phno is 843189667

There are 4 students

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

6

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

2

Student 1usn is 3

name is kushi

pgm is eating

sem is 3

phno is 45678321

Student 2usn is 2

name is praveen

pgm is writing

sem is 2

phno is 87654321

Student 3usn is 1

name is pooja

pgm is reading

sem is 1

phno is 12345678

There are 3 students

List Operations

1.Create list of n students

2.Display status and count

3.Insertion at front

4.Delete at front

5.Insert at end

6.Delete at end

7.Exit

7

# Doubly Linked List (Program 8)

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

1

enter the no of employee

2

enter ssn

1001

enter name

Anil

enter dept

Marketing

enter desgn

leader

enter salary

70000

enter phno

1234567890

enter ssn

1002

enter name

Bhor

enter dept

Design

enter desgn

intern

enter salary

10000

enter phno

2345678901

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

2

elements in the forward direction

1002 Bhor Design intern 10000 2345678901

1001 Anil Marketing leader 70000 1234567890

elements in the backward direction

1001 Anil Marketing leader 70000 1234567890

1002 Bhor Design intern 10000 2345678901

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

3

enter ssn

1003

enter name

cherry

enter dept

logistics

enter desgn

director

enter salary

800000

enter phno

3456789012

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

2

elements in the forward direction

1002 Bhor Design intern 10000 2345678901

1001 Anil Marketing leader 70000 1234567890

1003 cherry logistics director 800000 3456789012

elements in the backward direction

1003 cherry logistics director 800000 3456789012

1001 Anil Marketing leader 70000 1234567890

1002 Bhor Design intern 10000 2345678901

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

5

enter ssn

1004

enter name

Dev

enter dept

purchasing

enter desgn

manager

enter salary

400000

enter phno

4567890123

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

2

elements in the forward direction

1004 Dev purchasingmanager manager 400000 4567890123

1002 Bhor Design intern 10000 2345678901

1001 Anil Marketing leader 70000 1234567890

1003 cherry logistics director 800000 3456789012

elements in the backward direction

1003 cherry logistics director 800000 3456789012

1001 Anil Marketing leader 70000 1234567890

1002 Bhor Design intern 10000 2345678901

1004 Dev purchasingmanager manager 400000 4567890123

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

4

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

2

elements in the forward direction

1004 Dev purchasingmanager manager 400000 4567890123

1002 Bhor Design intern 10000 2345678901

1001 Anil Marketing leader 70000 1234567890

elements in the backward direction

1001 Anil Marketing leader 70000 1234567890

1002 Bhor Design intern 10000 2345678901

1004 Dev purchasingmanager manager 400000 4567890123

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

6

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

2

elements in the forward direction

1002 Bhor Design intern 10000 2345678901

1001 Anil Marketing leader 70000 1234567890

elements in the backward direction

1001 Anil Marketing leader 70000 1234567890

1002 Bhor Design intern 10000 2345678901

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

7

since insertion and deletion can be done from both end it works as a double ended queue

1-create

2-display

3-insertend

4-deleteend

5-insertfront

6-deletefront

7-dequeue

8-exit

8

# Circular Linked List-Polynomial (Program 9)

Enter the number of terms of polynomial 1

3

Enter coefficient and exponent: 3 2

Enter coefficient and exponent: 5 1

Enter coefficient and exponent: 4 0

Enter the number of terms of polynomial 2

3

Enter coefficient and exponent: 6 2

Enter coefficient and exponent: 4 1

Enter coefficient and exponent: 2 0

1 - Add

2 - Evaluate

1

Polynomial 1 is

3 x^2 + 5 x^1 + 4 x^0

Polynomial 2 is

6 x^2 + 4 x^1 + 2 x^0

Result is

9 x^2 + 9 x^1 + 6 x^0

Enter the number of terms of polynomial 1

3

Enter coefficient and exponent: 3 2

Enter coefficient and exponent: 5 1

Enter coefficient and exponent: 4 0

Enter the number of terms of polynomial 2

3

Enter coefficient and exponent: 6 2

Enter coefficient and exponent: 4 1

Enter coefficient and exponent: 2 0

1 - Add

2 - Evaluate

2

Enter x value: 2

Polynomial A after evaluation is 26

# BST (Program 10)

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 1

Enter value to insert: 6

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 1

Enter value to insert: 5

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 1

Enter value to insert: 9

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 1

Enter value to insert: 12

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 1

Enter value to insert: 16

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 1

Enter value to insert: 15

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 2

Inorder traversal: 5 6 9 12 15 16

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 3

Preorder traversal: 6 5 9 12 16 15

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 4

Postorder traversal: 5 15 16 12 9 6

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 5

Enter value to search: 16

Key 16 found in the tree.

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 5

Enter value to search: 15

Key 15 found in the tree.

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 5

Enter value to search: 1

Key 1 not found in the tree.

Menu:

1. Insert

2. Display Inorder Traversal

3. Display Preorder Traversal

4.Display Postorder Traversal

5. Search

6. Exit

Enter your choice: 6

# DFS (Program 11)

Pgm 11

Enter number of vertices: 8

Enter number of edges: 10

Enter an edge (u v): 0 1

Enter an edge (u v): 0 2

Enter an edge (u v): 1 3

Enter an edge (u v): 1 4

Enter an edge (u v): 2 5

Enter an edge (u v): 2 6

Enter an edge (u v): 3 7

Enter an edge (u v): 4 7

Enter an edge (u v): 5 7

Enter an edge (u v): 6 7

Nodes visited in DFS order:

0 1 3 7 4 5 2 6%

# Hashing-Linear Probing (Program 12)

Collision handling by linear probing

enter the data 2

want to continue 1/0

1

enter the data 5

want to continue 1/0

1

enter the data 8

want to continue 1/0

0

1. Filtered display

2. display all

enter choice

1

Hash table is:

0 5

2 2

3 8