**Experiment 11**

**Write a C program to implement Queue operations such as ENQUEUE, DEQUEUE and Display**

**Program**

#include <stdio.h>

#define SIZE 100

void enqueue();

void dequeue();

void show();

int inp\_arr[SIZE];

int Rear = - 1;

int Front = - 1;

main()

{

int ch;

while (1)

{

printf("1.Enqueue Operation\n");

printf("2.Dequeue Operation\n");

printf("3.Display the Queue\n");

printf("4.Exit\n");

printf("Enter your choice of operations : ");

scanf("%d", &ch);

switch (ch)

{

case 1:

enqueue();

break;

case 2:

dequeue();

break;

case 3:

show();

break;

case 4:

exit(0);

default:

printf("Incorrect choice \n");

}

}

}

void enqueue()

{

int insert\_item;

if (Rear == SIZE - 1)

printf("Overflow \n");

else

{

if (Front == - 1)

Front = 0;

printf("Element to be inserted in the Queue\n : ");

scanf("%d", &insert\_item);

Rear = Rear + 1;

inp\_arr[Rear] = insert\_item;

}

}

void dequeue()

{

if (Front == - 1 || Front > Rear)

{

printf("Underflow \n");

return ;

}

else

{

printf("Element deleted from the Queue: %d\n", inp\_arr[Front]);

Front = Front + 1;

}

}

void show()

{

if (Front == - 1)

printf("Empty Queue \n");

else

{

printf("Queue: \n");

for (int i = Front; i <= Rear; i++)

printf("%d ", inp\_arr[i]);

printf("\n");

}

}

Output:

