4/01/24 LAB-3 WEEK-3

Linear Queue:

```
#include <stdio.h>
#define MAX 50
int queue[MAX];
int rear = -1;
int front = -1;

display()
{
   int i;
   if (front == -1)
      printf("Queue is empty\n");
   else
   {
      printf("Queue is :\n");
      for(i = front; i<=rear; i++)
       printf("%d", queue[i]);
       printf("\n");
   }
}
insert()
{
   int add;
   if (rear == MAX-1)
   printf("Queue overflow\n");
   else
   {
      if (front == -1)
      front = 0;
      printf("Insert the element");
      scanf("%d", &add);
      rear = rear+1;
```

```
        queue[rear] = add;
    }
}
delete()
{
    if (front == -1 || front > rear)
    {
        printf("Queue underflow \n");
        return;
    }
    else
    {
        printf("Deleted Element is: %d \n", queue[fr
        front = front + 1;
    }
}
main()
{
    int choice;
    while (1)
    {
        printf("1 Insert \n 2 Delete \n 4 Exit \n");
        switch (ch)
        {
            case 1 : Insert();
                     break;
            case 2 : delete()
                     break;
            Case 3 : display();
                     break;
            case 4 : exit(1)
        }
    }
}
```

output:

1. Enqueue 2. Dequeue 3. Display 4. Exit
Enter your choice
1
Enter the number to be inserted into the queue.
2
Queue underflow
Enter choice : 1.
Insert an element : 6.
Enter choice : 4
Exited.

Sp.1
28/11/23