***DATA STUCTURES AND ALGORITHM***

***LAB-7***

Object: Code a menu based program of Queue of Linear List which have the following options:

1. Enque
2. Deque
3. Display
4. Exit

**Code:**

#include <iostream>

#include<conio.h>

#define MAX\_SIZE 20

using namespace std;

void main()

{

int item, choice, i;

int arr\_queue[MAX\_SIZE];

int rear = 0;

int front = 0;

int exit = 1;

do {

cout<<"\nQUEUE Program";

cout<<"\n1.Enque \n2.Deque \n3.Display \n4.Exit";

cout<<"\nEnter Your Choice: ";

cin>>choice;

system("cls");

switch (choice)

{

case 1:

if(rear==MAX\_SIZE)

cout<<"Queue is Full!!";

else

{

cout<<"Enter Value to be Inserted: ";

cin>>item;

cout<<"\nPosition: " <<rear<< " , Inserted Value: "<<item;

arr\_queue[rear++] = item;

}

break;

case 2:

if(front==rear)

cout<<"Queue is Empty!";

else

{

cout<<"\nPosition: " <<front<< " , Deleted Value: " <<arr\_queue[front];

front++;

}

break;

case 3:

cout<<"Queue Size : "<<(rear - front);

for(i=front;i<rear;i++)

cout<<"\nPosition : " <<i<< " , Value: "<<arr\_queue[i];

break;

case 4:

exit=0;

break;

default:

cout<<"INVALID SELECTION!!";

break;

}

}

while (exit);

getch();

}

**Output:**





