**ST.XAVIER’S COLLEGE**

**MAITIGHAR, KATHMANDU**

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**DIGITAL LOGIC LAB ASSIGNMENT#10**

QUEUE IMPLEMENTATION

**SUBMITTED BY:**

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2ND SEM

014BSCIT040

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| --- | --- | --- |
|  | **Signature** | **Remarks** |
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Source code:

#include<stdio.h>

#include<conio.h>

#include<process.h>

#define SIZE 20

struct queue

{

int item[SIZE];

int rear;

int front;

};

typedef struct queue qu;

void insert(qu\*);

void delet(qu\*);

void display(qu\*);

void main()

{

int ch;

qu \*q;

q-> rear=-1;

q-> front=0;

clrscr();

printf("Menu for program: \n");

printf("1: insert\n 2:delete\n 3:display\n 4: exit\n");

do

{

printf("enter your choice\n");

scanf("%d", &ch);

switch(ch)

{

case 1:

insert(q);

break;

case 2:

delet(q);

break;

case 3:

display(q);

break;

case 4:

exit(1);

break;

default:

printf("Your choice is wrong\n");

}

}while(ch<5);

getch();

}

void insert(qu \*q)

{

int d;

printf("Enter data to be inserted\n");

scanf("%d",&d);

if(q->rear==SIZE-1)

{

printf("Queue is full\n");

}

else

{

q->rear++;

q->item[q->rear]=d;

}

}

void delet(qu \*q)

{

int d;

if(q->rear< q->front)

{

printf("Queue is empty\n");

}

else

{

d=q->item[q->front];

q->front++;

printf("Deleted item is:");

printf("%d\n",d);

}

}

void display(qu \*q)

{

int i;

if(q->rear< q->front)

{

printf("Queue is empty\n");

}

else

{

for(i=q->front;i<=q->rear; i++)

{

printf("%d\t", q->item[i]);

}

}

}

OUTPUT:





