/\* GOPIKRISHNA V

S3 CSE A

52

C PROGRAM TO PERFORM OPERATIONS ON A CIRCULAR QUEUE

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#include <stdio.h>

#include <stdlib.h>

#define SIZE 10

int items[SIZE];

int front = -1, rear = -1;

int isFull()

{

if ((front == rear + 1) || (front == 0 && rear == SIZE - 1))

return 1;

else

return 0;

}

int isEmpty()

{

if(front == -1)

return 1;

else

return 0;

}

void enQueue()

{

int element;

printf("Enter the element = ");

scanf("%d",&element);

if ((front == -1) && (rear == -1))

{

front=0;

rear=0;

items[rear]=element;

}

else

{

if(front==(rear+1)%SIZE)

printf("\nQUEUE FULL\n");

else

{

rear=(rear+1)%SIZE;

items[rear]=element;

}

}

printf("%d -- INSERTED\n",element);

}

void deQueue()

{

int element;

if(front == -1 && rear == -1)

printf("\nQUEUE EMPTY\n");

else

{

if(front==rear)

{

element=items[front];

front=-1;

rear=-1;

}

else

{

element=items[front];

front=(front+1)%SIZE;

}

}

printf("%d -- DELETED\n",element);

}

void display()

{

int i;

if (isEmpty())

printf(" \nQUEUE EMPTY\n");

else

{

printf("\n Items = ");

for (i = front; i != rear+1; i = (i + 1) % SIZE)

printf("%d\t", items[i]);

printf("\n");

}

}

void main()

{

int sel;

start:

printf("\n\n\n### MENU ###\n");

printf("1.EnQueue\n");

printf("2.DeQueue\n");

printf("3.Display\n");

printf("4.Exit\n");

printf("Select the Operation [1/2/3/4] = ");

scanf("%d",&sel);

switch(sel)

{

case 1:enQueue();

break;

case 2:deQueue();

break;

case 3:display();

break;

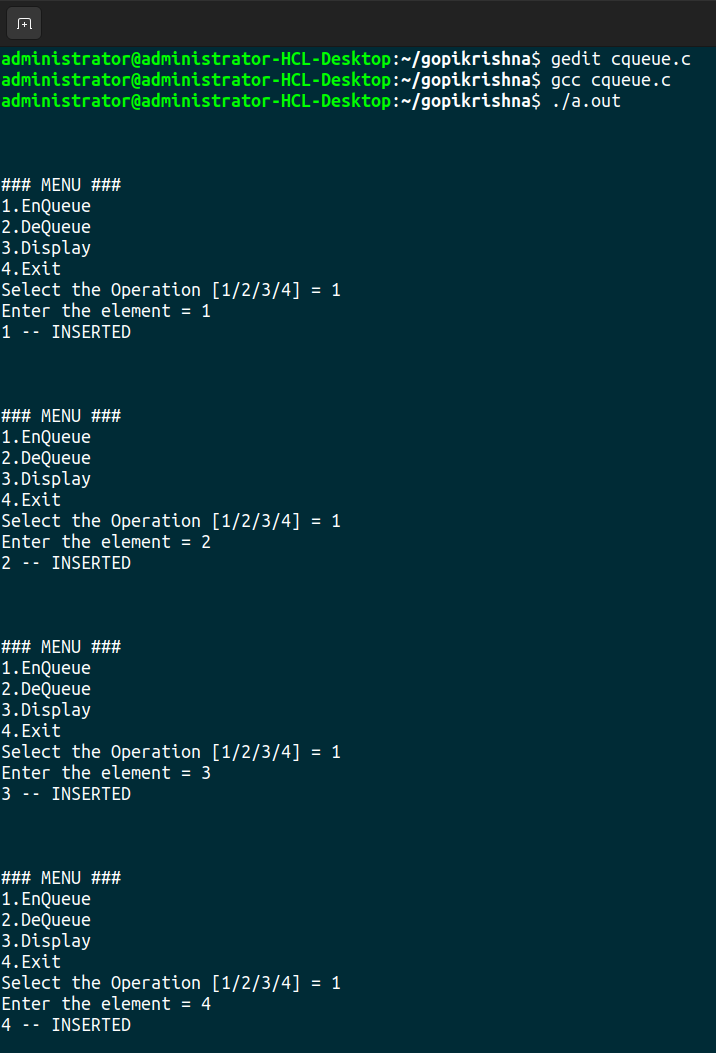
case 4:exit(0);

break;

default:printf("Wrong Input\n");

}

goto start;

}

