SIMULATE THE WORKING OF A QUEUE: -

```c
#include <stdio.h>
#include <stdlib.h>

#define MAX 5

int queue_array[MAX];
int front=-1;
int rear=-1;

void insert(int add_item)
{
    if(rear==MAX-1)
    {
        printf("\n Queue Overflow");
        return;
    }
    else{
        if(front==-1)
        {
            front=0;
        }
        rear=rear+1;
        queue_array[rear]=add_item;
        printf("Inserted the element in queue %d\n",add_item);
    }
}
void delete_item()
{
    if(front==-1||front>rear)
    {
        printf("\n Queue Underflow");
        return;
    }
    else{
        printf("Deleted element is: %d\n",queue_array[front]);
        front=front+1;
    }
```

```
}
void display()
{
    int i;
if(front==-1||front>rear)
{
    printf("\n Queue is empty \n");
    return;
}
else {
    printf("\n Queue is: ");
    for(i=front;i<=rear;i++)
    {
        printf("%d",queue_array[i]);
    }
    printf("\n");
}
}
int main()
{
    int choice;
int item;
while (1) {
    printf("\n\n ***Queue Operations ***");
    printf("\n 1. Insert (Enqueue)");
    printf("\n 2. Display");
    printf("\n 3. Delete (Dequeue)");
    printf("\n 4. Exit");
    printf("\n Enter your choice: ");
    scanf("%d",&choice);
    switch(choice) {
        case 1:
        printf("Enter the element to insert: ");
        scanf("%d",&item);
        insert(item);
        break;
        case 2:
        display();
        break;
        case 3:
        delete_item();
        break;
        case 4:
        printf("Exiting the program.");
        exit(0);
        default:
        printf("Invalid choice. Please try again.");
    }
}
}
```

OUTPUT: -

```
 ***Queue Operations ***
 1. Insert (Enqueue)
 2. Display
 3. Delete (Dequeue)
 4. Exit
 Enter your choice: 1
Enter the element to insert: 56
Inserted the element in queue 56
```