LINEAR QUEUE:

```c
#include<stdio.h>
#define qsize 5

int f=0,r=-1,item,q[10];

void insert_rear()
 {
  if(r==qsize-1)
        {
         printf("queue overflow\n");
         return;
        }
  r=r+1;
  q[r]=item;
 }
int delete_front()
 {
  if (f>r){
     f=0;r=-1;
     return -1;
  }
  return q[f++];
 }

void display()
 {
  int i;
  if(f>r)
        {
         printf("queue empty\n");
```

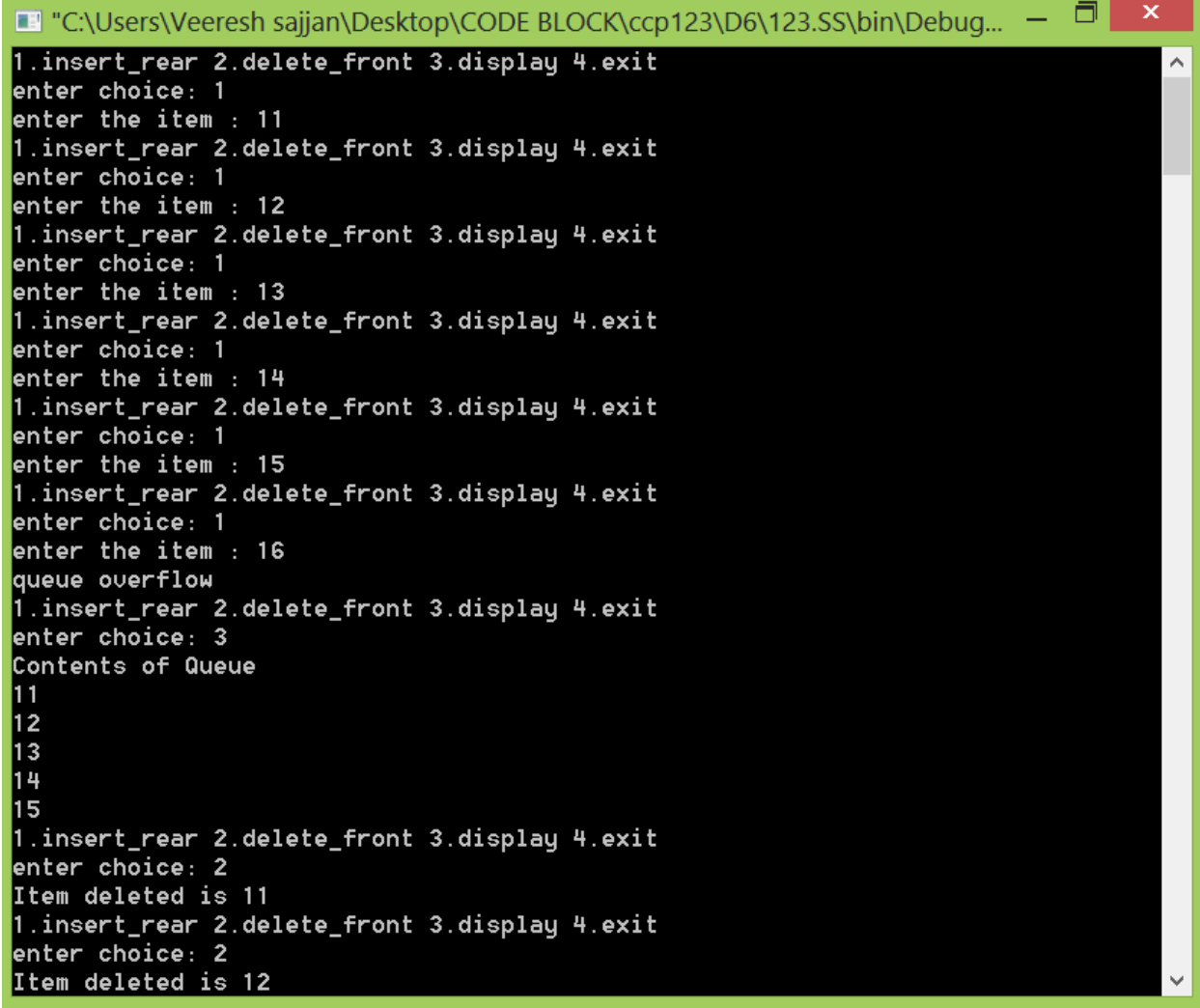```c
         return;
        }
        printf("Contents of Queue\n");
  for(i=f;i<=r;i++)
     printf("%d\n",q[i]);
  }

void main()
 {
   int choice;
  for(;;)
  {
        printf("1.insert_rear 2.delete_front 3.display 4.exit\n");
        printf("enter choice: ");
        scanf("%d",&choice);
        switch(choice)
         {
          case 1:printf("enter the item : ");
                     scanf("%d",&item);
                     insert_rear();
                     break;

          case 2:item=delete_front();
               if(item==-1)
            printf("Queue is empty\n");
          else
           printf("Item deleted is %d\n",item);
                     break;

          case 3:display();
                     break;
```

```
            default:exit(0);

        }

    }


        return 0;

}
```

```
13
14
15
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 2
Item deleted is 11
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 2
Item deleted is 12
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 2
Item deleted is 13
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 2
Item deleted is 14
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 2
Item deleted is 15
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 2
Queue is empty
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 3
queue empty
1.insert_rear 2.delete_front 3.display 4.exit
enter choice: 4

Process returned 0 (0x0)   execution time : 36.199 s
Press any key to continue.
```