

 linearqueue - Notepad

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```
#include<stdio.h>
#include<stdlib.h>
#define QUE_SIZE 3
int item,front=0,rear=-1,q[10];
void insertrear()
{if(rear==QUE_SIZE-1)
{
printf("queue overflow\n");
return;
}
rear=rear+1;
q[rear]=item;
}int deletefront()
{if (front>rear)
{front=0;
rear=-1;
return -1;
}return q[front++];
}void displayQ()
{int i;
if (front>rear)
{
printf("queue is empty\n");
return;
}
printf("contents of queue\n");
for(i=front;i<=rear;i++)
{
printf("%d\n",q[i]);
}}
int main()
{
int choice;
```

```

for(;;)
{
printf("1:insertrear 2:deletefront 3:display 4:exit\n");
printf("enter the choice\n");
scanf("%d",&choice);
switch(choice)
{
case 1:printf("enter the item to be inserted\n");
scanf("%d",&item);
insertrear ();
break;
case 2:item=deletefront();
if(item==-1)
printf("queue is empty\n");
else
printf("item deleted=%d\n",item);
break;
case 3:displayQ();
break;
default:exit (0);

}
return 0;
}
}

```

```
❏ clang-7 -pthread -lm -o main main.c
❏ ./main
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
10
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
20
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
40
queue overflow
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=10
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
contents of queue
20
30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=20
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
queue is empty
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
4
❏
```