→ Queue :-

```
#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;
   }
```

```
return ;
}
printf("Contents of queue \n");
for (i = front; i <= rear; i++)
 {
 printf("%d\n", q[i]);
 }}
int main()
 {
  int choice;
  for (;;)
  {
   printf("1. Insert rear 2. Delete front 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: display Q();
break;
default: exit(0);
}
}
}
```

OUTPUT:

```
Insert rear 2. deletefront 3. Display 4. Exit
enter the choice
1
Enter the item to be inserted
1
1. Insert rear 2. deletefront 3. Display 4. Exit
Enter the choice
1
Enter the item to be inseeted
2
1. Insert rear 2. delete front 3. Display 4. Exit
Enter the choice
3
Contents of queue
1
2
1. Insert rear 2. delete front 3. Display 4. Exit
Enter the choice
2
item deleted = 1
1. Insert rear 2. deletefront 3. Display 4. Exit
Enter the choice
2
item deleted = 2
```

```
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
1
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
2
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
3
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
contents of queue
1
2
3
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=1
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=2
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=3
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
queue is empty
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
```