Program to demonstrate the working of a queue of integers using an array.

a) Insert ~~delete~~
b) delete
c) display

```
# include <stdio.h>
int q[50], rear = -1, front = -1, size;
void insert(); void display();
void delete();
int main()
{
  int choice;
  while (1)
  {
    printf ("1. insert an element\n");
    printf ("2. delete an element\n");
    printf ("3. display all elements of queue \n");
    printf ("4. Quit");
    printf ("Enter choice : "); printf (" enter size: ");
    scanf ("%d", &choice); scanf ("%d", &size);
    switch (choice)
    {
    case 1:
      insert (&q, size);
```

```
case 2:
  delete(size);
case 3:
  display(size);
  case 4:
    exit(1);
    default:
      printf("invalid input\n");
      }
    }
  }
void insert(int n)

int x;
if
    if (rear == n-1).
      front=0;
      printf("insert the element in the queue:");
      scanf("%d",&x);
      rear++;
      Q[rear]=x;

    }.
```

```
void delete(≠ int n) .
{
 if (front == -1 || front > r)
{
   print ("Queue empty");
   return;
    }
   else
  {
   printf ("deleted element " %d \n", Q[
       front++;

     }
void display (int n)
{
   int i;
  if (front == -1)
  printf (" Queue empty");
    else
 { printf (" elements are ");
 for (i = front; i <= rear ; i ++)
    printf ("%d", queue[i]);
        printf ("\n");
            }
          }
```

```
3.Display all elements of queue
4.Quit
Enter your choice : 3
Queue is :
5 5 4 3
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 2
Element deleted from queue is : 5
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 3
Queue is :
5 4 3
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :
```