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Experiment No. 2

Program:

```
#include <stdio.h>
int q[100];
int f=-1, r=-1;
int i,n,x,op;
void insert();
void delete ();
void display();

void main()
{  printf("Enter the size of Queue (Max size=100):");
  scanf("%d",&n);
  do
  { printf("\t1.Insertion\t2.Deletion\t3.Display\t4.Exit\n");
    printf("\n Enter your operation:");
    scanf("%d",&op);
    switch (op)
    { case 1: if (r>=n-1)
              { printf("Queue Overflow\n");
              }
             else { printf("Enter the element to insert:");
                    scanf("%d",&x);
                    r++;
                    q[r]=x;
                    if (f==-1)
                     { f=0;
                     }
                   }
             break;
      case 2: if (f==-1)
               { printf("Queue Underflow\n");
               }
              else { printf("The deleted element is: %d\n",q[f]);
                     if (f==r)
                     f=r=-1;
                     else
                     f++;
                    }
              break;
      case 3: if (r<0)
               { printf("Queue is empty\n");
               }
              else { printf("The elements in the Queue are:\n");
                     for (i=f;i<n;i++)
                      { printf("%d",q[i]);
                      }
                     printf("\n");
                     }
              break;
      case 4: printf("Exiting Program");
```

```
            break;
        default: printf("Please enter a valid choice\n");
                 break;
    }
  } while (op != 4);
}
```

Output: