

Programme 1:

```
//discrete frequency distribution methods
#include<stdio.h>
int main()
{
    int a;
    int counter;
    int total=0;
    printf("enter howmany data ?\n");
    scanf("%d",&a);
    int rec[a],rec2[a];
    for(int i=0;i<a;i++)
    {
        scanf("%d",&rec[i]);
    }
    for(int i=0;i<a-1;i++)
    {
        for(int j=i+1;j<a;j++)
        {
            if(rec[i]>rec[j])
            {
                int temp=rec[i];
                rec[i]=rec[j];
                rec[j]=temp;
            }
        }
    }
    for(int i=0;i<a;i++)
    {
        printf("\n%d",rec[i]);
    }
    int lowest=rec[0];
    int highest=rec[a-1];
    int low=lowest;
    int high=highest;
    printf("\nlowest : %d\n",lowest);
    printf("highest : %d\n",highest);
    int count=0;
    for(int i=lowest;i<=highest;i++)
        count++;
    printf("\n\n%d\n\n",count);
    int n2[count],n[count];
    for(int i=0;i<count;i++)
    {
        n2[i]=lowest;
        lowest++;
    }
    for(int j=0;j<count;j++)
    {
```

o/p:

44

1
1
1
1
2
2
2
2
2
2
2
2
3
3
3
3
3
3
4
4
4
4

5
5
5
5
5
5
5
6
6
6
6
6
7
7
7
7
8
8
8
8
10
11
lowest : 1
highest : 11

11

class	frequency
-------	-----------

1	4
---	---

2	8
---	---

3	6
---	---

4	4
---	---

5	7
---	---

6	5
---	---

7	4
---	---

8	4
---	---

9	0
---	---

10	1
----	---

11	1
----	---

total : 44

developer@vivek:~/state\$./prog.exe

enter howmany data ?
20

2
2
2
3
3
4
4
5
5
6
7
7
8
10
12
16
16
19
19
20

lowest : 2
higest : 20

19

class	frequency
2	3
3	2
4	2
5	2
6	1
7	2
8	1
9	0
10	1
11	0
12	1

```
13    0
14    0
15    0
16    2
17    0
18    0
19    2
20    1
total : 20
```

programme 2: inclusive method

```
#include<stdio.h>
int main()
{
    int a;
    int class;
    printf("how many record are insert ? ");
    scanf("%d",&a);
    int rec[a];
    for(int i=0;i<a;i++)
    {
        scanf("%d",&rec[i]);
    }
    for(int i=0;i<a-1;i++)
    {
        for(int j=i+1;j<a;j++)
        {
            if(rec[i]>rec[j])
            {
                int temp=rec[i];
                rec[i]=rec[j];
                rec[j]=temp;
            }
        }
    }
    for(int i=0;i<a;i++)
        printf("%d",rec[i]);
    int lower=rec[0];
    int highest=rec[a-1];
    int low=lower;
    int high=highest;
    printf("howmany classes are applied ?\n");
```

```

scanf("%d",&class);
float r=(float)(highest-lower)/class;
int r1=r;
int n1[class],n2[class],n5[class];
if(r1<r)
{
    r1=r1+1;
    printf("range is : %d",r1);
}
int x=1;
for(int i=0;i<class;i++)
{
    if(i>0)
        n1[i]=lower+1;
    else
        n1[i]=lower;
    n2[i]=lower+r1;
    lower=lower+r1;
}
int counter;
for(int j=0;j<class;j++)
{
    for(int i=0;i<a;i++)
    {
        if(rec[i]>=n1[j] && rec[i]<=n2[j])
            counter++;
    }
    n5[j]=counter;
    counter=0;
}
float n3[class],n4[class];
float cf=(n1[1]-n2[0])/2.0;
printf("\n cf : %f\n",cf);
for(int i=0;i<class;i++)
{
    n3[i]=n1[i]-cf;
    n4[i]=n2[i]+cf;
}
printf("\n\nclass\t\tboundries\t\tfrequency");
for(int i=0;i<class;i++)
{
    printf("\n%d -",n1[i]);
    printf("%d\t\t",n2[i]);
    printf("%.1f -",n3[i]);
    printf("%.1f\t\t",n4[i]);
    printf("%d\n",n5[i]);
}
int total=0;
printf("total\t\t\t\t: ");
for(int i=0;i<class;i++)
    total=total+n5[i];
printf("\t\t\t %d \n",total);

```

}

o/p:

range is : 10
cf : 0.500000

class	boundries	frequency
0 -10	-0.5 -10.5	5
11 -20	10.5 -20.5	3
21 -30	20.5 -30.5	3
31 -40	30.5 -40.5	5
41 -50	40.5 -50.5	10
51 -60	50.5 -60.5	6
61 -70	60.5 -70.5	8
71 -80	70.5 -80.5	6
81 -90	80.5 -90.5	3
91 -100	90.5 -100.5	1
total	:	50

developer@vivek:~/state\$./inclusive.exe

how many record are insert ? 10

12

34

32

56

12

7

8

12

34

26

781212122632343456howmany classes are applied ?

5

range is : 10
cf : 0.500000

class	boundries	frequency
7 -17	6.5 -17.5	5
18 -27	17.5 -27.5	1
28 -37	27.5 -37.5	3
38 -47	37.5 -47.5	0
48 -57	47.5 -57.5	1
total		10