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//find mean continuous exclusive methods
#include<stdio.h>
int main()
{
    int a, interval;
    printf("\n enter howmany class ? \n");
    scanf("%d",&a);
    printf("\n enter interval between two classes : \n");
    scanf("%d",&interval);
    int rec[a], rec2[a];
    printf("\n enter classes : \n");
    for(int i=0; i<a; i++)
    {
        scanf("%d",&rec[i]);
    }
    for(int i=0; i<a; i++)
    {
        rec2[i]=rec[i]+interval;
    }
    int fre[a];
    printf("\n enter frequency : \n");
    for(int i=0; i<a; i++)
    {
        scanf("%d",&fre[i]);
    }
    float xi[a];
    for(int i=0; i<a; i++)
    {
        xi[i]=(rec[i]+rec2[i])/2;
    }
    float fixi[a];
    for(int i=0; i<a; i++)
    {
        fixi[i]=fre[i]*xi[i];
    }
    int d;
    printf("enter the A value : \n");
    scanf("%d",&d);
    float di[a];
    for(int i=0; i<a; i++)
    {
        di[i]=xi[i]-d;
    }
    float fidi[a];
    float fd=0;
    for(int i=0; i<a; i++)
    {
        fidi[i]=fre[i]*di[i];
        fd=fd+fidi[i];
    }
    float ui[a];
    for(int i=0; i<a; i++)

```

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{
    ui[i]=(xi[i]-d)/interval;
}
float fiui[a];
float fu=0;
for(int i=0;i<a;i++)
{
    fiui[i]=fre[i]*ui[i];
    fu=fu+fiui[i];
}
float total=0;
int sum=0;
for(int i=0;i<a;i++)
{
    total=total+fixi[i];
    sum=sum+fre[i];
}
printf("\n\nclass  freq  xi  fixi  di=x-%d  fidi  ui=x-%d/%d  fiui \n",d,d,interval);
for(int i=0;i<a;i++)
{
    printf("%d-%d\t%d\t%.1f\t%.1f\t%.1f\t%.1f\t%.1f\t\t%.1f\n",rec[i],rec2[i],fre[i],xi[i],fixi[i],di[i],fidi[i],ui[i],fiui[i]);
}
printf("total:\tfi\t\ttfixi\t\ttfidi\t\t\t\tfiui\n");
printf("\t%d\t\t%.1f\t\t%.1f\t\t%.1f\n",sum,total,fd,fu);
float mean;
mean=(float)total/sum;
printf("\n mean= fixi / fi \n");
printf("      =%.1f / %d\n",total,sum);
printf("  mean=%.1f",mean);
float mean2;
mean2=d+(float)fd/sum;
printf("\n");
printf("\n mean=A +(fixi / fi) \n");
printf("      =%d + ( %.1f / %d\n ) ",d,total,sum);
printf("  mean=%.1f\n",mean2);
float mean3;
float u;
printf("\n");
u=fu/sum;
printf("u = fiui / n");
printf("\n  = %.1f / %d ",fu,sum);
printf("\nu=%.1f",u);
mean3=d+(interval*u);
printf("\n");
printf("\n mean=A +(c * u) \n");
printf("      =%d + ( %d * %.1f\n ) ",d,interval,u);
printf("  mean=%.1f",mean3);
}

```

o/p:

enter howmany class ?

6

enter interval between two classes :

10

enter classes :

0

10

20

30

40

50

enter frequency :

5

10

25

30

20

10

enter the A value :

45

class	freq	xi	fixi	di=x-45	fidi	ui=x-45/10	fiui
0-10	5	5.0	25.0	-40.0	-200.0	-4.0	-20.0
10-20	10	15.0	150.0	-30.0	-300.0	-3.0	-30.0
20-30	25	25.0	625.0	-20.0	-500.0	-2.0	-50.0
30-40	30	35.0	1050.0	-10.0	-300.0	-1.0	-30.0
40-50	20	45.0	900.0	0.0	0.0	0.0	0.0
50-60	10	55.0	550.0	10.0	100.0	1.0	10.0
total:	fi		fixi		fidi		fiui
total:	100		3300.0		-1200.0		-120.0

mean= fixi / fi
=3300.0 / 100
mean=33.0

mean=A +(fixi / fi)
=45 + (3300.0 / 100
) mean=33.0

u = fiui / n
= -120.0 / 100
u=-1.2

mean=A +(c * u)
=45 + (10 * -1.2
) mean=33.0