#include<stdio.h>

#include<math.h>

void main()

{

int i,j,k,l,N,n,sm;float s=0.0,sq=0.0,P[100],mn[200],u,sig,mm,vm;

printf("Enter the size of population");

scanf("%d",&N);

printf("Enter the size of sample");

scanf("%d",&n);

printf("Enter the population");

for(i=0;i<N;i++){

scanf("%f",&P[i]);

s=s+P[i];

sq=sq+(P[i]\*P[i]);

}

u=s/N;

sig=(sq/(float)N)-(u\*u);i=0;

sm=pow(N,n);

printf("total number of possible samples-%d\n",sm);

s=0.0;sq=0.0;

while(i<sm){

for(j=0;j<N;j++){

for(k=0;k<N;k++){

for(l=0;l<N;l++){

mn[i]=(P[j]+P[k]+P[l])/3;

s=s+mn[i];

sq=sq+(mn[i]\*mn[i]);i++;

}

}

}

}

mm=s/(float)sm;

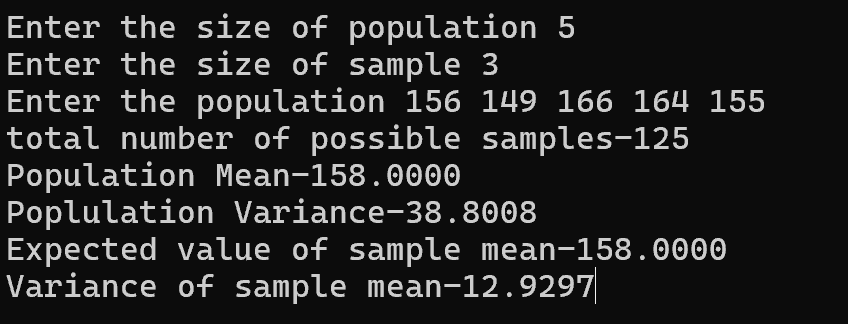
vm=(sq/(float)sm)-(mm\*mm);

printf("Population Mean-%0.4f\nPoplulation Variance-%0.4f\nExpected value of sample mean-%0.4f\nVariance of sample mean-%0.4f",u,sig,mm,vm);

getch();

}

**Output :**

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