```c
#include<stdio.h>
int main()
{
float y[10],xn,x,h,v,term,sum,d[10][10];
int n,m,i,j,r;
r=0;
x=1.40+((r+1)/100.);
printf("Enter the number of interpolating point\n");
scanf("%d",&n);
n=n-1;
printf("Enter the ending value of x\n");
scanf("%f",&xn);
printf("Enter the step size\n");
scanf("%f",&h);
printf("\nEnter the value of y\n");
for(i=0;i<=n;i++)
{
printf("Enter the value of y[%d]=",i);
scanf("%f",&y[i]);
}
for(i=0;i<=n;i++)
d[i][0]=y[i];
for(j=1;j<=n;j++)
{
for(i=0;i<=n-j;i++)
d[i][j]=d[i+1][j-1]-d[i][j-1];
}
printf("The difference table : \n");
for(i=0;i<=n;i++)
{
for(j=0;j<=n-i;j++)
printf("%12.10f ",d[i][j]);
printf("\n");
}
printf("Enter the number of column where noise level appears otherwise press 0 \n");
scanf("%d",&m);
if(m==0)
m=n;
else
m=m-2;
v=(x-xn)/h;
sum=y[n];
term=v;
for(j=1;j<=m;j++)
{
sum=sum+term*d[n-j][j];
term=term*(v+j)/(j+1);
}
printf("f(%0.2f)=%0.10f\n",x,sum);
return(0);
```

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}
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\\output\\