

Program

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
```



```
void shellsort(int x[ ],int increments[ ],int numinc,int n)
{
    int incr,span,y,pos,i;
    for(incr=0;incr<numinc;incr++)
    {
        span=increments[incr];
        for(pos=span;pos<n;pos++)
        {
            y=x[pos];
            for(i=pos-span;i>=0&& y<x[i];i-=span)
            {
                x[i+span]=x[i];
            }
            x[i+span]=y;
        }
        printf("End of pass output:\n");
        for(i=0;i<n;i++)
            printf("%d\t",x[i]);
        printf("\n");
    }
}
```

```
void main( )
{
    int *info,n,i;
    int increments[3]={5,3,1};
    clrscr();

    printf("feed no of data items\n");
    scanf("%d",&n);

    info=(int *)malloc(sizeof(int)*n);
    printf("feed in the values\n");
    for(i=0;i<n;i++)
        scanf("%d",&info[i]);

    shellsort(info,increments,3,n);

    printf("the list data is as follows\n");
    for(i=0;i<n;i++)
        printf("%d\t",info[i]);

    getch();
}
```

