**Greedy knapsack program**

#include<stdio.h>

#include<conio.h>

void main(){

int n,m,i,u;

int p[20],w[20]; float x[20]; float optimal=0.0;

printf("Enter number of objects:"); scanf("%d",&n);

printf("Enter capacity of KnapSack:"); scanf("%d",&m);

printf("Enter profits in decreasing order of Pi/Wi:"); for(i=1;i<=n;i++) scanf("%d",&p[i]);

printf("Enter Weights in decreasing order of Pi/Wi:"); for(i=1;i<=n;i++) scanf("%d",&w[i]);

for(i=1;i<=n;i++)x[i]=0.0;

u=m;

for(i=1;i<=m;i++){

if(w[i]>u)

break;

else

x[i]=1.0;

u=u-w[i];

}

if(i<=n)

x[i]=(float)u/w[i];

printf("The x values are\n");

for(i=1;i<=n;i++)

printf("%f\t",x[i]);

for(i=1;i<=n;i++)

optimal=optimal+p[i]\*x[i];

printf("\nOptimal Solution is %f",optimal);

getch();

}