```
#include<stdio.h>
#include<stdlib.h>
int main()
{
	int n,capacity,i,j,count=0;
	printf("Enter the maximum capacity of knapsack :");
	scanf("%d",&capacity);
	printf("Enter the number of items :");
	scanf("%d",&n);
	float prof=0,p[50],w[50],ratio[50],knap[50],Wt=0,temp;
	printf("Enter the weights and profits of items :\n");
	for(i=0;i<n;i++)
	{
		printf("For item(%d) :",i+1);
		scanf("%f%f",&w[i],&p[i]);
	}
	for(i=0;i<n;i++)
	{
		ratio[i]=p[i]/w[i];
	}
		bool flag;
	for(i=0;i<n-1;i++)
	{
		flag==false;
		for(j=0;j<n-i-1;j++)
```

```
        {
                if(ratio[j]<ratio[j+1])
                {
                        temp=ratio[j];
                        ratio[j]=ratio[j+1];
                        ratio[j+1]=temp;

                        temp=p[j];
                        p[j]=p[j+1];
                        p[j+1]=temp;

                        temp=w[j];
                        w[j]=w[j+1];
                        w[j+1]=temp;

                flag=true;

                }

        }
        if(flag==false)
                  break;
}
printf("weight\t \t  profit\t \t p/w\n---------------------------------------\n");
for(i=0;i<n;i++)
```

```
{
        printf("%f\t  %f\t  %f\n",w[i],p[i],ratio[i]);
}
for(i=0;i<n;i++)
        knap[i]=0;
for(i=0;i<n;i++)
{
        if((Wt+w[i])<=capacity)
        {
                count++;
                knap[i]=1;
                Wt=Wt+w[i];
                prof=prof+p[i];
                printf("The item with weight=%f and profit=%f is selcted\n",w[i],p[i]);
        }
        else
        {
                count++;
                knap[i]=(capacity-Wt)/w[i];
                w[i]=capacity-Wt;
                Wt=capacity;
                prof=prof+(knap[i]*p[i]);
                p[i]=knap[i]*p[i];
                printf("The item with weight=%f and profit=%f is selcted\n",w[i],p[i]);
                break;
```

```
                }
        }
        printf("Number of item selected:%d\n ",count);
        printf("total profit :%f ",prof);

}
```