

Knapsack Problem (Greedy Method) - Highlighted Code

```
#include<stdio.h>
int main()
{
    float weight[50], profit[50], ratio[50], Totalvalue, temp, capacity,
amount;
    int i, j, num;
    printf("Enter number of items :");
    scanf("%d", &num);
    for (i = 0; i < num; i++)
    {
        printf("\n\nEnter Weight and Profit for item[%d] :\n", i);
        scanf("%f %f", &weight[i], &profit[i]);
    }
    printf("\n\nEnter capacity of knapsack :\n");
    scanf("%f", &capacity);
    for(i = 0; i < num; i++)
    {
        ratio[i] = profit[i] / weight[i];
    }
    for (i = 0; i < num; i++)
    {
        for (j = i + 1; j < num; j++)
        {
            if (ratio[i] < ratio[j])
            {
                temp = ratio[j]; ratio[j] = ratio[i]; ratio[i] = temp;
                temp = weight[j]; weight[j] = weight[i]; weight[i] = temp;
                temp = profit[j]; profit[j] = profit[i]; profit[i] = temp;
            }
        }
    }
    printf("\nKnapsack Problem using Greedy Method :\n");
    for (i = 0; i < num; i++)
    {
        if (weight[i] > capacity)
            break;
        else
        {
            Totalvalue = Totalvalue + profit[i];
            capacity = capacity - weight[i];
        }
    }
}
```

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```
}  
if (i < num)  
{  
    Totalvalue = Totalvalue + (ratio[i] * capacity);  
}  
printf("\nThe maximum value is :%f\n", Totalvalue);  
return 0;  
}
```