Fractional knapsack

```c
#include <stdio.h>

struct Item {
    int weight;
    int value;
    float ratio;
};

void swap(struct Item *a, struct Item *b) {
    struct Item temp = *a;
    *a = *b;
    *b = temp;
}

void sort(struct Item arr[], int n) {
    for (int i = 0; i < n-1; i++) {
        for (int j = i+1; j < n; j++) {
            if (arr[i].ratio < arr[j].ratio) {
                swap(&arr[i], &arr[j]);
            }
        }
    }
}

float knapsack(int W, struct Item arr[], int n) {
    int weight = 0;
    float totalValue = 0.0;

    for (int i = 0; i < n; i++) {
        if (weight + arr[i].weight <= W) {
            weight += arr[i].weight;
            totalValue += arr[i].value;
        } else {
            int remainingWeight = W - weight;
            totalValue += arr[i].value * ((float)remainingWeight / arr[i].weight);
            break;
        }
    }

    return totalValue;
}
```

```c
int main() {
    int n, W;
    printf("Enter number of items: ");
    scanf("%d", &n);
    struct Item arr[n];

    printf("Enter the weight and value of each item:\n");
    for (int i = 0; i < n; i++) {
        scanf("%d %d", &arr[i].weight, &arr[i].value);
        arr[i].ratio = (float)arr[i].value / arr[i].weight;
    }

    printf("Enter the capacity of the knapsack: ");
    scanf("%d", &W);

    sort(arr, n);

    printf("Maximum value in Knapsack = %.2f\n", knapsack(W, arr, n));

    return 0;
}
```

```
Enter number of items: 3
Enter the weight and value of each item:
10 60
20 100
30 120
Enter the capacity of the knapsack: 50
Maximum value in Knapsack = 240.00
```