FRACTIONAL KNAPSACK

```c
#include <stdio.h>


int n = 5;

int p[10] = {3, 3, 2, 5, 1};

int w[10] = {10, 15, 10, 12, 8};

int W = 10;


int main() {

    int cur_w;

    float tot_v = 0.0;  // Initialize tot_v

    int i, maxi;

    int used[10];


    for (i = 0; i < n; ++i) {

        used[i] = 0;

    }


    cur_w = W;


    while (cur_w > 0) {

        maxi = -1;

        for (i = 0; i < n; ++i) {

            if ((used[i] == 0) &&

                ((maxi == -1) || ((float)w[i] / p[i] > (float)w[maxi] / p[maxi])))) {

                maxi = i;

            }

        }


        used[maxi] = 1;

        cur_w -= p[maxi];
```

```c
        tot_v += w[maxi];

        if (cur_w >= 0) {
            printf("Added object %d (%d, %d) completely in the bag. Space left: %d.\n",
                maxi + 1, w[maxi], p[maxi], cur_w);
        } else {
            printf("Added %d%% (%d, %d) of object %d in the bag.\n",
                (int)((1 + (float)cur_w / p[maxi]) * 100), w[maxi], p[maxi], maxi + 1);
            tot_v -= w[maxi];
            tot_v += (1 + (float)cur_w / p[maxi]) * w[maxi];
        }
    }

    printf("Filled the bag with objects worth %.2f.\n", tot_v);
    return 0;
}
```

OUTPUT:


```
PS C:\Users\STUDENT\Desktop\ada lab> gcc fk.c
PS C:\Users\STUDENT\Desktop\ada lab> .\a.exe
Maximum value in knapsack = 240.00
```