**Fractional knapsack problem using greedy approach in 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;

   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];

      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:

