

```

1  #include <fstream>
2  #include <cstdlib>
3  #include <ctime>
4  #include <iostream>
5
6  int main()
7  {
8      int numberItems = 0, knapsackCapacity = 0, itemName, itemValue,
        itemWeight;          //Creating variables
9
10     srand(time(NULL));
        //Ensuring Random Numbers Changed
11
12     //Create File
13     std::ofstream file;
14     file.open ("jouleFile.txt");
15
16     while(numberItems <= 0 || knapsackCapacity <= 0){
17         //Number of Items & Knapsack Capacity
18         std::cout << "Number of Items:
19         ";
20         std::cin >> numberItems;
21         std::cout << "Knapsack Capacity:
22         ";
23         std::cin >> knapsackCapacity;
24         //Gathering Number of Items
25         //Gathering Knapsack Capacity
26     }
27
28     file << numberItems << " " << knapsackCapacity << "\n";
29     //Input Information
30
31     //Item, Item Value, and Item Weight
32     for(int i = 0; i < numberItems; i++)
33     {
34         itemName = i + 1;
35         //Setting Item Number
36         itemValue = rand()%(176) + 25;
37         //Allowing for between 25 and 200 in item value
38         itemWeight = rand()%(3*numberItems) + 1;
39         //Allowing for weights between 1 and 3 * numberItems
40         file << itemName << " " << itemValue << " " << itemWeight << std::endl;
41         //Input Information
42     }
43
44     //Close File
45     file.close();
46
47     return 0;
48 }

```