

## Question3.cpp

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1  //<----Lab 02- Sorting Techniques---->
2
3  // Q3. Given an array arr[ ] of length N consisting cost of N toys and an integer K the amount
4  // with you. The task is to find maximum number of toys you can buy with K amount.
5  // Test Case:
6  // Input: N = 7, K = 50, arr[] = {1, 12, 5, 111, 200, 1000, 10}
7  // Output: 4
8  // Explanation: The costs of the toys. You can buy are 1, 12, 5 and 10.
9
10 #include<iostream>
11 using namespace std;
12
13 int main(){
14     int n,k;
15     cout<<"Enter Number of Toys:";
16     cin>>n;
17     int toycosts[n];
18     for(int i=0;i<n;i++){
19         cout<<"Enter cost of Toy #"<<i<<" : "<<endl;
20         cin>>toycosts[i];
21     }
22
23     cout<<"Enter amount you have:"<<endl;
24     cin>>k;
25     int remaining = k;
26
27     for(int i=0;i<n-1;i++){
28         for(int j=0;j<n-i-1;j++){
29             if(toycosts[j]>toycosts[j+1]){
30                 int temp;
31                 temp = toycosts[j];
32                 toycosts[j]=toycosts[j+1];
33                 toycosts[j+1]=temp;
34             }
35         }
36     }
37     int count=0;
38     cout<<"The Cost of items you can buy are ";
39     for(int i=0;i<n;i++){
40         if(toycosts[i]<=remaining){
41             count++;
42             remaining-=toycosts[i];
43             cout<<toycosts[i]<<" ";
44         }
45         if(toycosts[i]>remaining){
46             break;
47         }
48     }
49     cout<<endl<<"Total Toys : "<<count<<endl;
50
51 }
52
```