

Code for maximizing site-seeing values for tourists:

```
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 vector<int> ss_value = {3, 6, 5, 8, 3, 2, 6, 4, 2, 3, 3, 7, 7, 6, 5, 2, 6};
5 vector<int> cost = {9, 7, 3, 8, 11, 6, 17, 2, 3, 11, 19, 5, 5, 12, 13, 6, 8};
6 int budget = 15; // Tourists Budget
7
8 int knapsack(int W)
9 {
10     int n = cost.size();
11     vector<vector<int>> dp(n + 1, vector<int>(W + 1, 0));
12     for (int i = 1; i <= n; i++)
13     {
14         for (int w = 1; w <= W; w++)
15         {
16             if (cost[i - 1] <= w)
17             {
18                 dp[i][w] = max(dp[i - 1][w], dp[i - 1][w - cost[i - 1]] + ss_value[i - 1]);
19             }
20             else
21             {
22                 dp[i][w] = dp[i - 1][w];
23             }
24         }
25     }
26
27     // Printing the resultant table
28     cout << "Resultant Table (0/1 Knapsack Table):" << endl;
29     cout << "-----" << endl;
30     cout << setw(6) << " ";
31     for (int w = 0; w <= W; w++)
32     {
33         cout << setw(6) << w;
34     }
35     cout << endl;
36     cout << "-----" << endl;
37     for (int i = 0; i <= n; i++)
38     {
39         cout << setw(4) << i << " |";
40         for (int w = 0; w <= W; w++)
41         {
42             cout << setw(6) << dp[i][w];
43         }
44         cout << endl;
45     }
46     cout << "-----" << endl;
47
48     return dp[n][W];
49 }
50
51 int main()
52 {
53     cout << "Maximum Site-Seeing ss_value : " << knapsack(budget) << endl;
54
55     return 0;
56 }
57
```

Resultant table and output for the tourists :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  GITLENS
• SAKIB  AA Test
  cd "c:\PU Projects\OJ Problem Solve\Codeforces Random Problem Solve\AA Test\" ; if ($?) { g++ knapsack.cpp -o knapsack } ; if (
  $?) { .\knapsack }
Resultant Table (0/1 Knapsack Table):
-----
      0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
-----
0 |  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
1 |  0   0   0   0   0   0   0   0   0   3   3   3   3   3   3   3
2 |  0   0   0   0   0   0   0   6   6   6   6   6   6   6   6   6
3 |  0   0   0   5   5   5   5   6   6   6  11  11  11  11  11  11
4 |  0   0   0   5   5   5   5   6   8   8  11  13  13  13  13  14
5 |  0   0   0   5   5   5   5   6   8   8  11  13  13  13  13  14
6 |  0   0   0   5   5   5   5   6   8   8  11  13  13  13  13  14
7 |  0   0   0   5   5   5   5   6   8   8  11  13  13  13  13  14
8 |  0   0   4   5   5   9   9   9   9  10  12  13  15  17  17  17
9 |  0   0   4   5   5   9   9   9   9  11  12  13  15  17  17  17
10 |  0   0   4   5   5   9   9   9   9  11  12  13  15  17  17  17
11 |  0   0   4   5   5   9   9   9   9  11  12  13  15  17  17  17
12 |  0   0   4   5   5   9   9  11  12  12  16  16  16  18  18  19
13 |  0   0   4   5   5   9   9  11  12  12  16  16  18  19  19  23
14 |  0   0   4   5   5   9   9  11  12  12  16  16  18  19  19  23
15 |  0   0   4   5   5   9   9  11  12  12  16  16  18  19  19  23
16 |  0   0   4   5   5   9   9  11  12  12  16  16  18  19  19  23
17 |  0   0   4   5   5   9   9  11  12  12  16  16  18  19  19  23
-----
Maximum Site-Seeing Value : 23
• SAKIB  AA Test
  ↵
git main
```