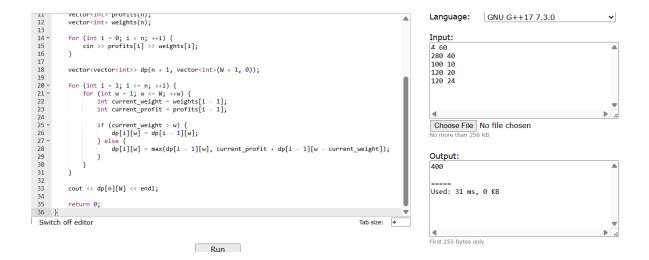# Assignment 1 (B) (Output)
0/1 Knapsack

Test Case 1:

```
11      vector<int> profits(n);
12      vector<int> weights(n);
13
14      for (int i = 0; i < n; ++i) {
15          cin >> profits[i] >> weights[i];
16      }
17
18      vector<vector<int>> dp(n + 1, vector<int>(W + 1, 0));
19
20      for (int i = 1; i <= n; ++i) {
21          for (int w = 1; w <= W; ++w) {
22              int current_weight = weights[i - 1];
23              int current_profit = profits[i - 1];
24
25              if (current_weight > w) {
26                  dp[i][w] = dp[i - 1][w];
27              } else {
28                  dp[i][w] = max(dp[i - 1][w], current_profit + dp[i - 1][w - current_weight]);
29              }
30          }
31      }
32
33      cout << dp[n][W] << endl;
34
35      return 0;
36 }
```

Switch off editor   Tab size: 4

Run

Language: GNU G++17 7.3.0

Input:
```
4 60
280 40
100 10
120 20
120 24
```

Choose File No file chosen
No more than 256 KB

Output:
```
400

=====
Used: 31 ms, 0 KB
```

First 255 bytes only

Test Case 2 :

ent_weight]);

Language: GNU G++17 7.3.0

Input:
```
3 50
60 10
100 20
120 30
```

Choose File No file chosen
No more than 256 KB

Output:
```
220

=====
Used: 77 ms, 0 KB
```