```cpp
#include <iostream>
using namespace std;

int max(int a, int b) {
    return (a > b) ? a : b;
}

int main() {
    int n, W;
    cout << "Enter number of items: ";
    cin >> n;

    int wt[n], val[n];
    cout << "Enter weights:\n";
    for(int i = 0; i < n; i++)
        cin >> wt[i];

    cout << "Enter values:\n";
    for(int i = 0; i < n; i++)
        cin >> val[i];

    cout << "Enter capacity of knapsack: ";
    cin >> W;

    int dp[n + 1][W + 1];

    for(int i = 0; i <= n; i++) {
        for(int w = 0; w <= W; w++) {
```

```cpp
        if(i == 0 || w == 0)

            dp[i][w] = 0;

        else if(wt[i - 1] <= w)

            dp[i][w] = max(val[i - 1] + dp[i - 1][w - wt[i - 1]],

                    dp[i - 1][w]);

        else

            dp[i][w] = dp[i - 1][w];

    }

  }


    cout << "Maximum profit: " << dp[n][W];

    return 0;

}
```

```
Output
Enter number of items:
3
Enter weights:
8
3
5
Enter values:
3 2 4
Enter capacity of knapsack: 10
Maximum profit: 6

=== Code Execution Successful ===
```