

```
1 //
2 // Taro's summer vacation starts tomorrow, and he has decided to make plans for it now.
3 // The vacation consists of N days. For each i (1≤i≤N),
4 // Taro will choose one of the following activities and do it on the i-th day:
5 //   A: Swim in the sea. Gain a[i] points of happiness.
6 //   B: Catch bugs in the mountains. Gain b[i] points of happiness.
7 //   C: Do homework at home. Gain c[i] points of happiness.
8 // As Taro gets bored easily, he cannot do the same activities for two or more consecutive days.
9 //
10 // Find the maximum possible total points of happiness that Taro gains.
11 //
12 // Time Complexity: O(N)
13 //
14
15 #include <bits/stdc++.h>
16
17 using namespace std;
18
19 int main() {
20     int n;
21     cin >> n;
22
23     vector<vector<int>> happy(n, vector<int>(3));
24     for (int i = 0; i < n; i++) {
25         for (int k = 0; k < 3; k++) {
26             scanf("%d", &happy[i][k]);
27         }
28     }
29
30     vector<vector<int>> dp(n, vector<int>(3, 0));
31
32     for (int k = 0; k < 3; k++) {
33         dp[0][k] = happy[0][k];
34     }
35
36     for (int i = 1; i < n; i++) {
37         for (int k = 0; k < 3; k++) {
38             int ans = 0;
39
40             for (int l = 0; l < 3; l++) {
41                 if (l != k) ans = max(ans, dp[i-1][l]);
42             }
43
44             dp[i][k] = happy[i][k] + ans;
45         }
46     }
47
48     int ans = 0;
49     for (int i = 0; i < 3; i++) {
50         ans = max(ans, dp[n-1][i]);
51     }
52
53     cout << ans << endl;
54     return 0;
55 }
```