

main.cpp

main

```
1 // File Name : main.cpp
2 //
3 // Author: Nitin Jibhau Aher
4 // Date: 9/12/2023
5 // Assignment Number: 1
6 // CS 5301.001 Fall 2023
7 //
8 // Olympic Medal Count.
9
10
11 #include <iostream>
12 #include <iomanip>
13 #include <string>
14
15 using namespace std;
16
17 // Define a struct called Country to represent info
18 struct Country {
19     string name;
20     int gold;
21     int silver;
22     int bronze;
23 };
24
25 // Function to display the table of countries
26 void displayCountries(const Country countries[], int numCountries) {
27     // Display the header for the table with proper formatting
28     cout << left << setw(3) << "N" << setw(15) <<
29         << setw(10) << "Gold" << setw(10) << "Silver" <<
30         << setw(10) << "Bronze" << setw(10) << "Total" << endl;
31
32     // Loop through each country and display its info
33     for (int i = 0; i < numCountries; i++) {
34         int total = countries[i].gold + countries[i].silver + countries[i].bronze;
35         // Display the country's name and medal counts
36         cout << left << setw(3) << i + 1 << setw(15) <<
37             << setw(10) << countries[i].gold << setw(10) << countries[i].silver <<
38             << setw(10) << countries[i].bronze << setw(10) << total << endl;
39     }
40 }
```

Microsoft Visual Studio Debug Console

N	Country	Gold	Silver	Bronze	Total
1	Australia	11	14	12	37
2	Canada	5	0	1	6
3	China	9	14	11	34
4	Great Britain	8	4	8	20
5	Japan	8	10	10	28
6	Netherlands	7	6	7	20
7	Russia	6	10	8	24
8	USA	10	6	7	23

Enter the country number (0 to quit):
0

Total medals awarded to all countries: 192
Country with the most Gold medals: Australia
Program ended with exit code: 0

D:\Fall_23\Programming Practicum\Assignment 4\main\x64\Debug\main.exe (process 23168) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

100 %

No issues found

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Output

Show output from: Debug

main.cpp

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27     // Display the header for the table with pro
28     cout << left << setw(3) << "N" << setw(15) <<
29     << setw(10) << "Gold" << setw(10) << "Si
30     << setw(10) << "Total" << endl;
31
32 // Loop through each country and display its
33 for (int i = 0; i < numCountries; i++) {
34     int total = countries[i].gold + countries
35     // Display the country's name and medal
36     cout << left << setw(3) << i + 1 << setw
37     << setw(10) << countries[i].gold <<
38     << setw(10) << countries[i].bronze <
39
40 }
```

Microsoft Visual Studio Debug

N	Country	Gold	Silver	Bronze	Total
1	Australia	11	14	12	37
2	Canada	5	0	1	6
3	China	9	14	11	34
4	Great Britain	8	4	8	20
5	Japan	8	10	10	28
6	Netherlands	7	6	7	20
7	Russia	6	10	8	24
8	USA	10	6	7	23

Enter the country number (0 to quit):

2

Enter the medal type (G, S, or B):

S

N	Country	Gold	Silver	Bronze	Total
1	Australia	11	14	12	37
2	Canada	5	1	1	7
3	China	9	14	11	34
4	Great Britain	8	4	8	20
5	Japan	8	10	10	28
6	Netherlands	7	6	7	20
7	Russia	6	10	8	24
8	USA	10	6	7	23

Enter the country number (0 to quit):

0

Total medals awarded to all countries: 193

Country with the most Gold medals: Australia

Program ended with exit code: 0

D:\Fall_23\Programming Practicum\Assignment 4\main\x64\Debug\main.exe (process 20788) exited with code 0.

To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.

Press any key to close this window . . .

Output

Show output from: Debug

The thread 0x388 has exited with code 0 (0x0).

The thread 0x1d80 has exited with code 0 (0x0).

main.cpp

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```
91     {"Canada", 5, 0, 1},
92     {"China", 9, 14, 11},
93     {"Great Britain", 8, 4, 8},
94     {"Japan", 8, 10, 10},
95     {"Netherlands", 7, 6, 7},
96     {"Russia", 6, 10, 8},
97     {"USA", 10, 6, 7}
98 };
99
100 int choice;
101 do {
102     // Display the table of countries and print
103     displayCountries(countries, 8);
104     cout << "Enter the country number (0 to quit) to
105     cin >> choice;
106
107     if (choice >= 1) {
108         char medalType;
109         // Prompt the user to enter the type of medal
110         cout << "Enter the medal type (G, S, or B):
111         cin >> medalType;
112
113         // Update the medal counts for the selected country
114         updateMedalCounts(countries, choice, medalType);
115     }
116 } while (choice != 0);
117
118 // Calculate the total number of medals awarded
119 int totalMedals = getTotalMedals(countries);
120 // Find the country with the most gold medals
121 string mostGoldCountry = getCountryWithMostGold(countries);
122
123 // Display the total medals awarded and the country with the most gold medals
124 cout << "Total medals awarded to all countries: " << totalMedals << endl;
125 cout << "Country with the most Gold medals: " << mostGoldCountry << endl;
126 cout << "Program ended with exit code: 0" << endl;
127
128 return 0;
```

100 %
No issues found

Autos
Search (Ctrl+E)
Name Value

D:\Fall_23\Programming Prac

N	Country	Gold	Silver	Bronze	Total
1	Australia	11	14	12	37
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7	Russia	6	10	8	24
8	USA	10	6	7	23

Enter the country number (0 to quit):

9

Enter the medal type (G, S, or B):

G

N	Country	Gold	Silver	Bronze	Total
1	Australia	11	14	12	37
2	Canada	5	0	1	6
3	China	9	14	11	34
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5	Japan	8	10	10	28
6	Netherlands	7	6	7	20
7	Russia	6	10	8	24
8	USA	10	6	7	23

Enter the country number (0 to quit):

1

Enter the medal type (G, S, or B):

X

N	Country	Gold	Silver	Bronze	Total
1	Australia	11	14	12	37
2	Canada	5	0	1	6
3	China	9	14	11	34
4	Great Britain	8	4	8	20
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Enter the country number (0 to quit):