

Program 1

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

int main(){

    //declare the struct data
    struct data
    {
        string month;
        int day;
    };

    //initialization for birth_data variable
    data birth_data[10];

    //receive input from the users
    cout << "Enter your Birth Day: ";
    cin >> birth_data[0].day;
    cout << "Enter you Birth Month: ";
    cin >> birth_data[0].month;

    //set the limit for the day no more than 31, if yes then output error
    if (birth_data[0].day >= 32 || birth_data[0].day <= 0) cout << "Input Doesn't Match, Please Try Again" << endl;

    else if (birth_data[0].month == "March" && birth_data[0].day >= 21 || birth_data[0].month == "April" && birth_data[0].day <= 19) {
        cout << "Your Zodiac is Aries";
    }

    else if (birth_data[0].month == "April" && birth_data[0].day >= 20 || birth_data[0].month == "May" && birth_data[0].day <= 20) {
```

```

        cout << "Your Zodiac is Taurus";
    }

    else if (birth_data[0].month == "May" && birth_data[0].day >= 21 || birth_data[0].month ==
"June" && birth_data[0].day <= 20) {

        cout << "Your Zodiac is Gemini";
    }

    else if (birth_data[0].month == "June" && birth_data[0].day >= 21 || birth_data[0].month ==
"July" && birth_data[0].day <= 22) {

        cout << "Your Zodiac is Cancer";
    }

    else if (birth_data[0].month == "July" && birth_data[0].day >= 23 || birth_data[0].month ==
"August" && birth_data[0].day <= 22) {

        cout << "Your Zodiac is Leo";
    }

    else if (birth_data[0].month == "August" && birth_data[0].day >= 23 || birth_data[0].month ==
"September" && birth_data[0].day <= 22) {

        cout << "Your Zodiac is Virgo";
    }

    else if (birth_data[0].month == "September" && birth_data[0].day >= 23 || birth_data[0].month
== "October" && birth_data[0].day <= 22) {

        cout << "Your Zodiac is Libra";
    }

    else if (birth_data[0].month == "October" && birth_data[0].day >= 23 || birth_data[0].month ==
"November" && birth_data[0].day <= 21) {

        cout << "Your Zodiac is Scorpio";
    }

    else if (birth_data[0].month == "November" && birth_data[0].day >= 22 || birth_data[0].month
== "December" && birth_data[0].day <= 21) {

        cout << "Your Zodiac is Sagittarius";
    }

    else if (birth_data[0].month == "December" && birth_data[0].day >= 22 || birth_data[0].month ==
"January" && birth_data[0].day <= 19) {

        cout << "Your Zodiac is Capricorn";
    }

```

```
    else if (birth_data[0].month == "January" && birth_data[0].day >= 20 || birth_data[0].month ==  
"February" && birth_data[0].day <= 18) {  
        cout << "Your Zodiac is Aquarius";  
    }  
    else if (birth_data[0].month == "February" && birth_data[0].day >= 19 || birth_data[0].month ==  
"March" && birth_data[0].day <= 20) {  
        cout << "Your Zodiac is Pisces";  
    }  
    else cout << "Input Doesn't Match, Please Try Again" << endl;  
  
    return 0;  
}
```

```

1 #include <iostream>
2 #include <string>
3 using namespace std;
4
5 int main(){
6
7     //declare the struct data
8     struct data
9     {
10         string month;
11         int day;
12     };
13     //initialization for birth_data variable
14     data birth_data[10];
15
16     //receive input from the users
17     cout << "Enter your Birth Day: ";
18     cin >> birth_data[0].day;
19     cout << "Enter you Birth Month: ";
20     cin >> birth_data[0].month;
21
22     //set the limit for the day no more than 31, if yes then output error
23     if (birth_data[0].day >= 32 || birth_data[0].day <= 0) cout << "Input Doesn't Match, Please Try Again" << endl;
24
25     else if (birth_data[0].month == "March" && birth_data[0].day >= 21 || birth_data[0].month == "April" && birth_data[0].day <= 19) {
26         cout << "Your Zodiac is Aries";
27     }
28     else if (birth_data[0].month == "April" && birth_data[0].day >= 20 || birth_data[0].month == "May" && birth_data[0].day <= 20) {
29         cout << "Your Zodiac is Taurus";
30     }
31     else if (birth_data[0].month == "May" && birth_data[0].day >= 21 || birth_data[0].month == "June" && birth_data[0].day <= 20) {
32         cout << "Your Zodiac is Gemini";
33     }
34     else if (birth_data[0].month == "June" && birth_data[0].day >= 21 || birth_data[0].month == "July" && birth_data[0].day <= 22) {
35         cout << "Your Zodiac is Cancer";
36     }
37     else if (birth_data[0].month == "July" && birth_data[0].day >= 23 || birth_data[0].month == "August" && birth_data[0].day <= 22) {
38         cout << "Your Zodiac is Leo";
39     }
40     else if (birth_data[0].month == "August" && birth_data[0].day >= 23 || birth_data[0].month == "September" && birth_data[0].day <= 22) {
41         cout << "Your Zodiac is Virgo";
42     }
43     else if (birth_data[0].month == "September" && birth_data[0].day >= 23 || birth_data[0].month == "October" && birth_data[0].day <= 22) {
44         cout << "Your Zodiac is Libra";
45     }
46     else if (birth_data[0].month == "October" && birth_data[0].day >= 23 || birth_data[0].month == "November" && birth_data[0].day <= 21) {
47         cout << "Your Zodiac is Scorpio";
48     }
49     else if (birth_data[0].month == "November" && birth_data[0].day >= 22 || birth_data[0].month == "December" && birth_data[0].day <= 21) {
50         cout << "Your Zodiac is Sagittarius";
51     }
52     else if (birth_data[0].month == "December" && birth_data[0].day >= 22 || birth_data[0].month == "January" && birth_data[0].day <= 19) {
53         cout << "Your Zodiac is Capricorn";
54     }
55     else if (birth_data[0].month == "January" && birth_data[0].day >= 20 || birth_data[0].month == "February" && birth_data[0].day <= 18) {
56         cout << "Your Zodiac is Aquarius";
57     }
58     else if (birth_data[0].month == "February" && birth_data[0].day >= 19 || birth_data[0].month == "March" && birth_data[0].day <= 20) {
59         cout << "Your Zodiac is Pisces";
60     }
61     else cout << "Input Doesn't Match, Please Try Again" << endl;
62
63     return 0;
64 }
65
66

```

Enter your Birth Day: 2
Enter you Birth Month: May
Your Zodiac is Taurus

...Program finished with exit code 0
Press ENTER to exit console.

Enter your Birth Day: 34
Enter you Birth Month: November
Input Doesn't Match, Please Try Again

...Program finished with exit code 0
Press ENTER to exit console.

Enter your Birth Day: 17
Enter you Birth Month: January
Your Zodiac is Capricorn

...Program finished with exit code 0
Press ENTER to exit console.

Enter your Birth Day: 0
Enter you Birth Month: September
Input Doesn't Match, Please Try Again

...Program finished with exit code 0
Press ENTER to exit console.

Program 2

```
#include <iostream>

using namespace std;

int main(){

    int max_students;

    struct data
    {
        int std_id;
        int score_mid;
        int score_final;
    };

    cout << "Enter the number of students : ";
    cin >> max_students;
    data students_data[max_students];
    cout << endl;

    for (int i = 0; i < max_students; i++){

        cout << "Enter Student's ID : ";
        cin >> students_data[i].std_id;

        cout << "Enter the Midterm Score : ";
        cin >> students_data[i].score_mid;

        cout << "Enter the Final Exam Score : ";
```

```
        cin >> students_data[i].score_final;
        cout << endl;
    }

    cout << "Recap Data for Students";
    cout << endl;
    for(int i = 0; i < max_students; i++){

        cout << endl;
        cout << "Students ID : " << students_data[i].std_id << endl;
        cout << "Average : " << (students_data[i].score_final + students_data[i].score_mid)/2 << endl;
    }

    return 0;
}
```

```

1  #include <iostream>
2  using namespace std;
3
4  int main(){
5
6      int max_students;
7      struct data
8      {
9          int std_id;
10         int score_mid;
11         int score_final;
12     };
13
14
15     cout << "Enter the number of students : ";
16     cin >> max_students;
17     data students_data[max_students];
18     cout << endl;
19
20     for (int i = 0; i < max_students; i++){
21
22         cout << "Enter Student's ID : ";
23         cin >> students_data[i].std_id;
24
25
26         cout << "Enter the Midterm Score : ";
27         cin >> students_data[i].score_mid;
28
29
30         cout << "Enter the Final Exam Score : ";
31         cin >> students_data[i].score_final;
32         cout << endl;
33     }
34
35
36     cout << "Recap Data for Students";
37     cout << endl;
38     for(int i = 0; i < max_students; i++){
39
40         cout << endl;
41         cout << "Students ID : " << students_data[i].std_id << endl;
42         cout << "Average : " << (students_data[i].score_final + students_data[i].score_mid)/2 << endl;
43     }
44
45     return 0;
46 }

```

```

Enter the number of students : 1

Enter Student's ID : 412
Enter the Midterm Score : 72
Enter the Final Exam Score : 74

Recap Data for Students

Students ID : 412
Average : 73

...Program finished with exit code 0
Press ENTER to exit console.

```

```

Enter the number of students : 2

Enter Student's ID : 32
Enter the Midterm Score : 97
Enter the Final Exam Score : 81

Enter Student's ID : 18
Enter the Midterm Score : 55
Enter the Final Exam Score : 77

Recap Data for Students

Students ID : 32
Average : 89

Students ID : 18
Average : 66

...Program finished with exit code 0
Press ENTER to exit console.

```