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22/492162/PA/21075

WEEK 6 ASSIGNMENT

1. Source code:

```
#include <iostream>

using namespace std;

struct monthData{
    int monthNum;
    string monthName;
};

monthData month[12];

struct zodiacData{
    string zodiacName;
    int startDate;
    int endDate;
    int startMonth;
    int endMonth;
};

zodiacData zodiac[12];

int main()
{
    month[1].monthNum = 1;
    month[1].monthName = "January";

    month[2].monthNum = 2;
    month[2].monthName = "February";

    month[3].monthNum = 3;
    month[3].monthName = "March";

    month[4].monthNum = 4;
    month[4].monthName = "April";

    month[5].monthNum = 5;
    month[5].monthName = "May";

    month[6].monthNum = 6;
    month[6].monthName = "June";

    month[7].monthNum = 7;
    month[7].monthName = "July";

    month[8].monthNum = 8;
    month[8].monthName = "August";

    month[9].monthNum = 9;
    month[9].monthName = "September";
```

```
month[10].monthNum = 10;
month[10].monthName = "October";

month[11].monthNum = 11;
month[11].monthName = "November";

month[12].monthNum = 12;
month[12].monthName = "December";

zodiac[1].zodiacName = "Aries";
zodiac[1].startDate = 21;
zodiac[1].startMonth = 3;
zodiac[1].endDate = 19;
zodiac[1].endMonth = 4;

zodiac[2].zodiacName = "Taurus";
zodiac[2].startDate = 20;
zodiac[2].startMonth = 4;
zodiac[2].endDate = 20;
zodiac[2].endMonth = 5;

zodiac[3].zodiacName = "Gemini";
zodiac[3].startDate = 21;
zodiac[3].startMonth = 5;
zodiac[3].endDate = 20;
zodiac[3].endMonth = 6;

zodiac[4].zodiacName = "Cancer";
zodiac[4].startDate = 21;
zodiac[4].startMonth = 6;
zodiac[4].endDate = 22;
zodiac[4].endMonth = 7;

zodiac[5].zodiacName = "Leo";
zodiac[5].startDate = 23;
zodiac[5].startMonth = 7;
zodiac[5].endDate = 22;
zodiac[5].endMonth = 8;

zodiac[6].zodiacName = "Virgo";
zodiac[6].startDate = 23;
zodiac[6].startMonth = 8;
zodiac[6].endDate = 22;
zodiac[6].endMonth = 9;

zodiac[7].zodiacName = "Libra";
zodiac[7].startDate = 23;
zodiac[7].startMonth = 9;
zodiac[7].endDate = 22;
zodiac[7].endMonth = 10;

zodiac[8].zodiacName = "Scorpio";
zodiac[8].startDate = 23;
zodiac[8].startMonth = 10;
zodiac[8].endDate = 21;
zodiac[8].endMonth = 11;

zodiac[9].zodiacName = "Sagittarius";
```

```
    zodiac[9].startDate = 22;
    zodiac[9].startMonth = 11;
    zodiac[9].endDate = 21;
    zodiac[9].endMonth = 12;

    zodiac[10].zodiacName = "Capricorn";
    zodiac[10].startDate = 22;
    zodiac[10].startMonth = 12;
    zodiac[10].endDate = 19;
    zodiac[10].endMonth = 1;

    zodiac[11].zodiacName = "Aquarius";
    zodiac[11].startDate = 20;
    zodiac[11].startMonth = 1;
    zodiac[11].endDate = 18;
    zodiac[11].endMonth = 2;

    zodiac[12].zodiacName = "Pisces";
    zodiac[12].startDate = 19;
    zodiac[12].startMonth = 2;
    zodiac[12].endDate = 20;
    zodiac[12].endMonth = 3;

    int birthDate;
    int birthMonth;
    string birthMonthName;

    cout << "Insert birth date!";
    cin >> birthDate;
    cout << "Insert birth month!";
    cin >> birthMonthName;

    for (int i=1; i<=12; i++){
        if (birthMonthName == month[i].monthName){
            birthMonth = month[i].monthNum;
            break;
        }
    }

    for (int i=1; i<=12; i++){
        if ( ( (birthDate >= zodiac[i].startDate) &&
(birthMonth == zodiac[i].startMonth) ) || ( (birthDate <=
zodiac[i].endDate) && (birthMonth == zodiac[i].endMonth) ) ){
            cout << birthDate << " " << birthMonthName << "
zodiac is " << zodiac[i].zodiacName;
            break;
        }
    }

    return 0;
}
```

Screenshot:

```
Insert birth date!7
Insert birth month!August
7 August zodiac is Leo
```

```
Insert birth date!2
Insert birth month!March
2 March zodiac is Pisces
```

```
Insert birth date!20
Insert birth month!December
20 December zodiac is Sagittarius
```

2. Source code:

```
3. #include <iostream>

   using namespace std;

   struct studentData{
       string zodiacName;
       int studentID;
       float midtermScore;
       float finalExamScore;
   };

   int main()
   {
       int n;
       cout << "Insert the value of N!";
       cin >> n;
       studentData student[n];

       cout << endl;

       for (int i=1; i<=n; i++){
           cout << "Insert the Student ID!";
           cin >> student[i].studentID;

           cout << "Insert the MidTerm Score!";
           cin >> student[i].midtermScore;

           cout << "Insert the Final Exam Score!";
           cin >> student[i].finalExamScore;

           cout << endl;
       }

       cout << endl;

       for (int i=1; i<=n; i++){
           cout << "Student ID : " << student[i].studentID <<
   endl;
           cout << "Average Score : " <<
   (student[i].midtermScore + student[i].finalExamScore) / 2 <<
   endl;
       }

       return 0;
   }
```

Screenshot:

```
Insert the value of N!3

Insert the Student ID!492120
Insert the MidTerm Score!80
Insert the Final Exam Score!85

Insert the Student ID!492138
Insert the MidTerm Score!77
Insert the Final Exam Score!92

Insert the Student ID!492162
Insert the MidTerm Score!98
Insert the Final Exam Score!90


Student ID : 492120
Average Score : 82.5
Student ID : 492138
Average Score : 84.5
Student ID : 492162
Average Score : 94
```

```
Insert the value of N!1

Insert the Student ID!492162
Insert the MidTerm Score!98
Insert the Final Exam Score!90


Student ID : 492162
Average Score : 94
```