ECE 152 Programming for Engineers
Laboratory 9

NOTE:
-Please submit only C++ source files (*.cpp) through the Blackboard.
-Please put your name, project description, and date on the top of your file as a comment.
-PLEASE WORK ALONE. If cheating is found, you will get **ZERO**.

1. (Lastname_Lab9_p1.cpp, 20 points)

Write a function named `days()` that determines the number of days since January 1, 1900 for any data passed as a structure. Use the `Date` structure:

```
struct Date { int month; int day; int year;};
```

In writing the `days()` function, use the convention that all years have 360 days and each month consists of 30 days. The function should return the number of days for any `Date` structure passed to it. Write a `main()` function to test your function.

2. (Lastname_Lab9_p2.cpp, 20 points)

Write a program named `difDays()` that calculates and returns the difference between two dates. Each date is passed to the function as a structure using the following global type:

```
struct Date { int month; int day; int year;};
```

The `difDays()` function should make two calls to the `days()` function written for **Lab9_p1**.

3. (Lastname_Lab9_p3.cpp, 20 points)

Write a C++ function named `older()` to take two person's birthdays, determine who is older, and return the older birthday. Include `older()` function in a complete program. Store the `Date` structure returned by `older()` in a separate `Date` structure and display the member values of the returned `Date` in `main()` function.

(Hint: You can use `Date` structure, `days()` and `difDays()` in **Lab9_p1** and **Lab9_p2** to implement this problem.)

4. (Lastname_Lab9_p4.cpp, 20 points)

Declared a single-structure date type suitable for an employee structure of the type illustrated:

Number	Name	Rate	Hours
1322	Adam	5.62	41
6233	Jacob	6.83	39
5785	William	5.42	47
7631	Sam	7.19	41
8167	Peter	7.87	36

Using the data type declared, write a C++ program that interactively accepts the above data into an array of six structures. Once the data have been entered, the program

should create a payroll report listing each employee's name, number, and gross pay. Include the total gross pay of all employees at the end of the report.

5. (Lastname_Lab9_p5.cpp, 20 points)

Modify the problem 4, write a function called `highest()` to take those six employees, determine whose pay is highest and return that employee. Include `highest()` in `main()` function and display the name of whose payment is highest in `main()` function.