Project 1: Zodiac

This homework is due October 26th at 11:59pm. For submission, you must upload the final version of your .c file to Github under the "Project 01: Zodiac" repository.

Do not forget to add a comment at the top of your code with your name.

This program will consist of two parts: 1) the program will display the user's month of birth, along with their corresponding Zodiac sign. For simplicity, each month is assumed to have only one Zodiac sign associated with it. A list is provided below to help. 2) The program will display the lucky lottery numbers of the day.

Part 1: Zodiac Sign

Your program will begin with scanning in the birth month and day of the user. Using these two numbers, calculate and display his/her sign - a list of zodiac signs is below.

Zodiac Sign	Dates
Capricorn	Dec 22 - Jan 19
Aquarius	Jan 20 - Feb 18
Pisces	Feb 19 - March 20
Aries	March 21 - April 19
Taurus	April 20 - May 20
Gemini	May 21 - June 20
Cancer	June 21 - July 22
Leo	July 23 - Aug 23
Virgo	Aug 23 - Sept 22
Libra	Sept 23 - Oct 22
Scorpio	Oct 23 - Nov 21
Sagittarius	Nov 22 - Dec 21

Write your program such that the month variable refers to the number of the month. Your program should handle numbers below 1 and greater than 12 by printing "This month does not exist."

Part 2: Lucky Numbers

Next, generate and display three lucky numbers for the user. A lucky number is a random integer from 1 to 59 (inclusive - both 1 and 59 should be able to be chosen).

When displaying the numbers, you do not need to show them in order. (See the Extra Credit option below for different options).

Sample Output

/*Entered the numbers 1 and 10*/

>> ./zodiac

You were born month number 1, day number 10.
Your zodiac sign is Capricorn.

Your lucky numbers are: 10 45 2

Random Numbers

It is difficult for deterministic machines (i.e., computers) to pick random numbers. For this program, add these lines to the top of your program:

#include <stdlib.h>

#include <unistd.h>

Then put this as your very first line within main:

srand(getpid());

To generate a random number, add a line that is something like this:

int num1 = rand();

Read the man page for *srand* and *rand r*outines to get more details of how they operate.

Hints

- Your program is interactive, in that it does ask the user for his or her month of birth. Be sure to properly code the scanf() statement.

- It is okay for your program to randomly choose the same lucky number twice (or even thrice).

Extra Credit

You may earn an additional 2 points on this assignment by enhancing your lucky number display. To do such, sort and display the three lucky numbers in sequential order. That is, first print the smallest number, then next smallest, then last lucky number.