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3) Stage v (verify)

Home Activities:

Activity 1:

Write a Python code to accept marks of a student from 1-100 and display the grade according to the following formula.

Grade F if marks are less than 50 Grade E if marks are between 50 to 60 Grade D if marks are between 61 to 70 Grade C if marks are between 71 to 80 Grade B if marks are between 81 to 90
Grade A if marks are between 91 to 100

Activity 2:

Write a Python code to accept temperature value from user (in centigrade) and display an appropriate message as below.

FREEZING if temperature in less than 0 COLD if temperature is between 0 to 15 WARM if temperature is between 16 to 30 HOT if temperature is between 31 to 40 VERY HOT if temperature is greater than 40

4) Stage a2 (assess)

Assignment:

Zeller's algorithm computes the day of the week on which a given date will fall (or fell). In this exercise, you will write a program to run Zeller's algorithm on a specific date. Create a new file for this program, zellers.py. The program should use the algorithm outlined below to compute the day of the week on which the user's birthday fell in the year you were born and print the result to the screen.

Zeller's algorithm is defined as follows:

Let A, B, C, and D denote integer variables that represent a date and have the following values:

A = the month of the year, with March having the value 1, April the value 2, … December the value 10, and January and February being counted as months 11 and 12 of the preceding year (in which case, subtract 1 from C)
B = the day of the month (1, 2, 3, … , 30, 31)
C = the year of the century (e.g. C = 89 for the year 1989)
D = the century (e.g. D = 19 for the year 1989)

The month is a number between 1-12 where March is 1 and February is 12. If born in Jan or Feb, assume previous year by subtracting 1 from C. In the end, print out the name of the user and the day of the week they were born.

Note: if the month is January or February, then the preceding year is used for computation. This is because there was a period in history when March 1st, not January 1st, was the beginning of the year.

Let W, X, Y, Z, R also denote integer variables. Compute their values in the following order using integer arithmetic:

W = (13*A - 1) / 5
X = C / 4
Y = D / 4
Z = W + X + Y + B + C - 2*D
R = the remainder when Z is divided by 7

The value of R is the day of the week, where 0 represents Sunday, 1 is Monday, … , 6 is Saturday. If the computed value of R is a negative number, add 7 to get a non-negative number between 0 and 6.

Print out R. You can check to be sure your code is working by looking at http://www.timeanddate.com/calendar/.

Run some test cases- try today's date, your birth date, any other dates you like.
Start with the program in Exercise 2.6, but **ask for the month as a number between 1-12 where March is 1 and February is 12**. If born in Jan or Feb, enter previous year (see the notes below). Review how to get user input of different types. In the end, print out the name of the user and the day of the week they were born.