Guidelines

1. Your code must follow python pep8 coding standards

http://legacy.python.org/dev/peps/pep-0008/

2. You must write basic unit test cases. We recommend using nose.

3. It must have proper error handling. (We will run it on a real server)

4. You must follow packaging and distributing guidelines.
https://packaging.python.org/en/latest/distributing.html

5. Purpose of above tasks is to test your python skills. So feel free to make assumptions if needed. Make sure you mention all assumptions in readme.md file.

6. Make sure readme contains libraries you have used.

7. It will be useful if usage instructions are also provided to understand how you expect your code to be used.

Problem Statement - Timezone based Task Execution

There is a configuration where users can setup the time when they want to perform a particular task.

Sample config:

Task Type	**User**	**Country**	**Start Time (local)**	**End Time(local)**
Email	U1	India	19:00:00	21:00:00
SMS	U1	India	10:00:00	17:00:00
Call	U1	India	13:00:00	14:30:00
Email	U1	USA	19:00:00	21:00:00
SMS	U1	USA	10:00:00	17:00:00

Call	U1	USA	13:00:00	14:30:00
SMS	U1	Aus	10:00:00	17:00:00
Call	U1	Aus	13:00:00	14:30:00
Email	U2	Japan	11:00:00	13:30:00
Email	U2	Japan	19:00:00	21:00:00
SMS	U2	Japan	10:00:00	17:00:00
Call	U2	Japan	13:00:00	14:30:00
Email	U2	Germany	19:00:00	21:00:00
SMS	U2	Germany	10:00:00	17:00:00
Call	U2	Germany	13:00:00	14:30:00
SMS	U2	India	10:00:00	17:00:00
Call	U2	India	13:00:00	14:30:00

Task can be created at any time but should be executed only during the time range specified.

1. Write a program which would be called every time a task is created.
Within this program, printout "true" if the task should be executed immediately (If the current time is between start time and end time) .
If the task cannot be executed immediately, print out the next time when the task would be picked up.

2. Enhance the program to work with configuration where users specify time and day of the week.
For example:
Email - U1 - India - 13:30:00 14:30:00 Tuesday and Thursday
Email - U1 - India - 10:30:00 12:30:00 Monday and Friday

The config provided is sample. You can change the way and what data is stored if needed.

Example:

For 1st program

1. Input:

A) CALL U2 India 13:00:00 14:30:00
Current time: 13:30:00
Output:
True

B) CALL U1 India 13:00:00 14:30:00
Current time: 16:30:00
Output:
False

2. Input:
CALL U2 India 13:00:00 14:30:00
Current time: 12:00:00
Output:
13:00:00

For enhanced version

1. Input:
Email - U1 - India - 13:30:00 14:30:00 Tuesday and Thursday
Current datetime: Wednesday 12:00:00
Output:
Thursday 13:30:00

2. Input:
Email - U1 - India - 13:30:00 14:30:00 Tuesday and Thursday
Current datetime: Friday 12:00:00
Output:
Tuesday 13:30:00

3. Input:
Email - U1 - India - 13:30:00 14:30:00 Tuesday and Thursday
Current datetime: Thusday 14:00:00
Output:
True