**Assignment B Additional features**

## Display multiple clocks in the page

## Each clock shall display a different time zone (ex: GMT+1, GMT+2...)

## Add a reset button to reinitialize a clock after using the edit button

## Add a button that dynamically creates and displays a new clock (extra bonus if you can choose the time zone before creating it)

## Add a button to change the display between 24h and AM/PM format

## Extend the class diagram

**Prerequisites:**

**ANACONDA Spyder**

1. Install tkinter library using “pip install tk”
2. Import datetime and pytz

**Implementation Steps:**

* 1. Install the required libraries
  2. Import the required modules
  3. Create the GUI using tkinter
     1. GUI has four buttons: create new clock, toggle format, reset all clocks, and reset all.
     2. Click the create new clock. New window will appear in the screen to enter the timezone. The timezone name must be in the format “Continent/City”, such as “America/New\_york”, “Asia/Kolkata”, “Europe/Paris”.
     3. The mode button toggles between the three modes described in the prompt, and the increase button updates the time label according to the current mode. The light button changes the background and foreground colors to make the watch readable in the dark.
     4. Toggle format button provides the clock display format in AM/PM format by clicking the “Toggle Format” button.
     5. To reset all clocks, click on the “Reset All” button.
     6. To add more clocks, repeat steps ii-iv.

**Source code:**



**Note:** Kindly open the above .txt file to review the source code

**Output:**

|  |
| --- |
|  |
| (a) |
|  |
| (b) |
|  |
| (c) |
|  |
| (d) |
|  |
| (e) |
| Figure 1. Representative images a) Created GUI b) New clock time zone dialog box after clicking the create new clock c) Europe/Paris time zone is entered which is shown in GUI d) Multiple clocks such as America/New\_york, and Asia/Kolkata is presented in the 24-hour format e) AM/PM format is shown in the GUI |