01219116/117 Final Examination
Part 2 (Afternoon Session)

Second Semester, 2021

Allowed Materials

The exam is closed book. However, you are allowed to view your own code on your computer and Google Colab for all the assignments after the midterm, as well as the following online resources:

- Python 3.x Documentation
    - https://docs.python.org/3/
- Tkinter References
    - Tkinter Class API Reference https://tkdocs.com/pyref/index.html
    - John Shipman's Tkinter Ref: https://tkdocs.com/shipman/ or PDF https://tkdocs.com/shipman/tkinter.pdf
    - Tkinter tutorial & ref: https://python-course.eu/tkinter/
    - Tkinter tutorial & ref: https://www.pythontutorial.net/tkinter/
    - Widget Attributes https://anzeljg.github.io/rin2/book2/2405/docs/tkinter/
    - Tkinter Docs https://docs.python.org/3/library/tkinter.html
    - Tkdocs https://tkdocs.com and tutorial https://tkdocs.com/tutorial
- Pandas API Reference
    - https://pandas.pydata.org/pandas-docs/stable/reference/index.html
- NumPy Reference
    - https://numpy.org/doc/stable/reference/index.html
- Matplotlib API Reference
    - https://matplotlib.org/stable/api/index.html
- Code examples used during lectures
    - Lecture 8
    - Lecture 12

You are also allowed to access the Final section of Google Classroom, as well as your GItHub repository for this exam part.

Procedure

1. Disconnect any auxiliary monitors. Use only one monitor during the exam.
2. Turn off your mobile phone and keep it away from your working area.
3. Connect your computer to KUWIN.
4. Join the TAs voice channel on Discord and share your screen. Don't watch anyone else's screen.
5. Start recording a video using OBS or Webex.
6. Start working on the exam as described below.
7. Once you are done, message the TA on Discord and submit your screen recording video.

Tasks [50 Points]

<u>Aj.Chaiporn's part [25 points]</u>

● Accept GitHub Classroom assignment at https://classroom.github.com/a/oFGk7AgW and follow the instructions described in the README.

<u>Aj.Piyamate's part [25 points]</u>

● Access your own copy of Colab notebook via the assignment "Final Part 2 (Afternoon) - Scientific Computing in Python" on Google Classroom.
● Work on the questions directly using the Colab notebook provided (above) with all your answers included inside. The notebook is automatically saved.
● When you are finished, go to the assignment on Google Classroom again and "Turn In" your assignment and the Colab notebook will be automatically submitted and locked. **After the submission, you won't be able to make changes to that Colab notebook.**
● Grading of the assignment will be done by running the entire notebook and inspecting the visible results. If the question asks to show an array/data table, add a statement to show the array/data table in your code.
● Please note that the grader won't modify or add any code in order to see your results. If the result is not visible by simply running your notebook, then you'll get zero points for that question.

Submitting Your Screen Recording Video

1. Rename your video file as *Yourname*-part2.mkv, or *Yourname*-part2.mp4 if you used Webex. Then upload to your Google Drive.
2. Share it with these people:
   ● chaiporn.j@ku.th
   ● piyamate.w@ku.th
   ● poomtum.r@ku.th
   ● thanatibordee.s@ku.th
   ● vitvara.v@ku.th
   ● nabhan.s@ku.th
3. Submit a link to your video on this form: https://forms.gle/BEzYwQdiJVKTRuAZ7

If you configured Webex to save your record in the cloud, you may submit the webex link to the form directly.