

MIDDLE TENNESSEE STATE UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

CSCI-3080 DISCRETE STRUCTURE

OLA3: Recursive Definitions, Recurrence Relations

Instructor: Dr. Xin Yang

Due date: Mar 4th, 2022 (23:59 PM)

February 24, 2022



1. Download and Install Anaconda

Windows users: <https://docs.anaconda.com/anaconda/install/windows/>

Mac users: <https://docs.anaconda.com/anaconda/install/mac-os/>

Linux users: <https://docs.anaconda.com/anaconda/install/linux/>



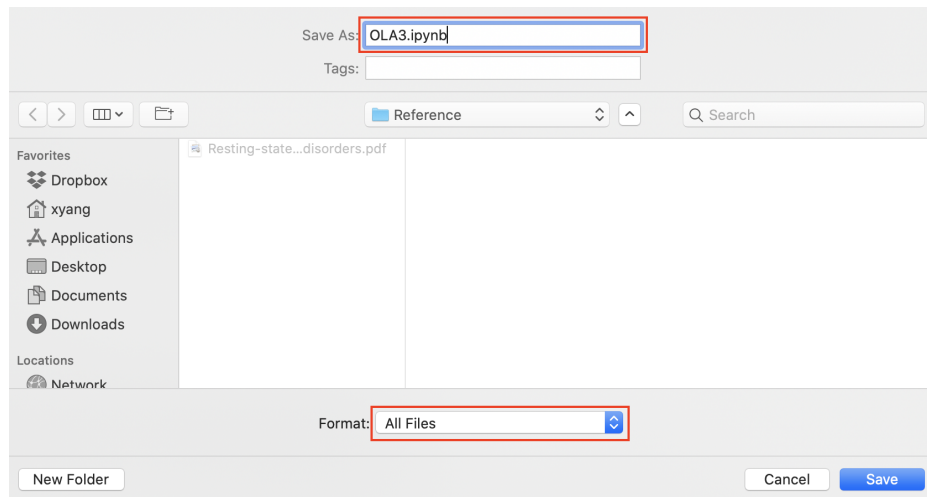
Figure 1: Anaconda: Data Science Platform

2. Download the Starter Jupyter Notebook

Please download the starter Jupyter Notebook (OLA3.ipynb) from my course calendar:

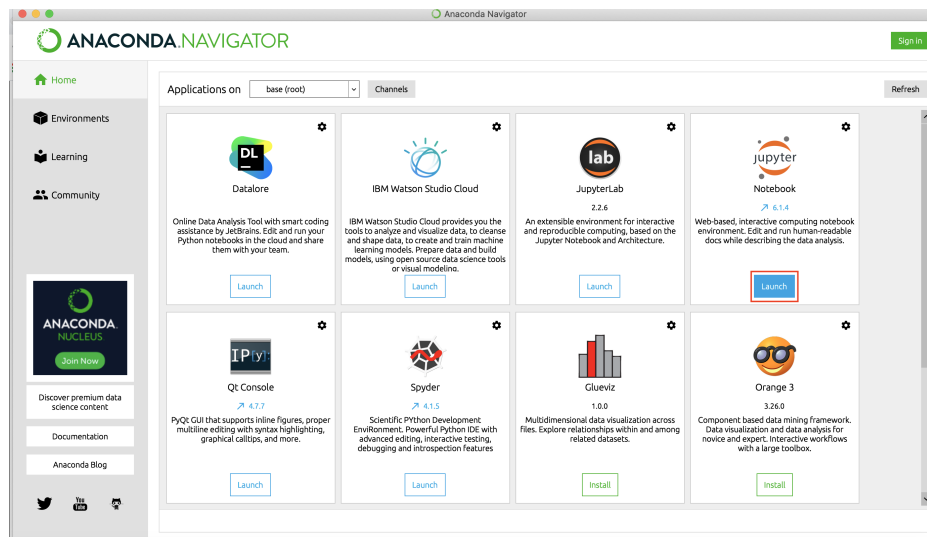
<https://www.cs.mtsu.edu/~xyang/3080/OLA/OLA3.ipynb>

- **Right click** the page.
- Click: “**Save As**”
- Select Format: **All Files**
- **Remove** the extension **.txt**.



3. Launch Jupyter Notebook

- (1) Open Anaconda.
- (2) Launch Jupyter Notebook through Anaconda.



4. Open Jupyter Notebook OLA3

(1) Locate OLA3.ipynb in your Download Folder.

jupyter
Quit
Logout

Files
Running
Clusters

Select items to perform actions on them. Upload New Refresh

<input type="checkbox"/>	0	/ Dropbox / MTSU / Teaching / Fall_2021 / CSCI3080-DiscreteStructures / HW	Name	Last Modified	File size
		..		seconds ago	
<input type="checkbox"/>		OLA1.ipynb		5 days ago	5.98 kB
<input type="checkbox"/>		OLA1_Solution.ipynb		5 days ago	3.54 kB
<input type="checkbox"/>		OLA2.ipynb		Running 7 days ago	4.51 kB
<input type="checkbox"/>		OLA3.ipynb		Running 11 minutes ago	7.12 kB
<input type="checkbox"/>		anaconda.png		14 days ago	5.7 kB
<input type="checkbox"/>		OLA1_3080.pdf		14 days ago	1.54 MB
<input type="checkbox"/>		ola2.png		7 days ago	246 kB
<input type="checkbox"/>		OLA2_3080.pdf		7 days ago	1.98 MB
<input type="checkbox"/>		xyang@ranger.cs.mtsu.edu		7 days ago	1.98 MB

(2) You should see the following page after you click OLA3.ipynb :

```
In [1]: ### CSCI-3080 Discrete Structure  
### OLA 3: Chapter 3 -- Recursive Definitions, Recurrence Relations  
### Name:  
### Student ID:  
### Date: |
```

Exercise 1: Write the first 5 values in the sequence:

$$C(1) = 5$$
$$C(n) = 2C(n-1) + 5 \text{ for } n > 1 \quad \parallel$$

In []:

In []:

Exercise 2: Write the first 5 values in the sequence:

$$A(1) = 2$$
$$A(n) = nA(n-1) + n \text{ for } n > 1$$

In []:

In []:

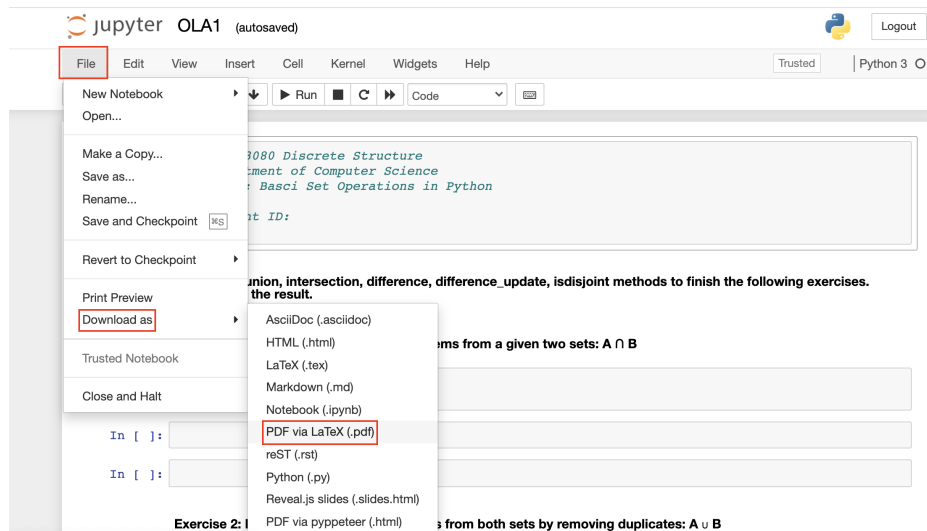
Exercise 3: An amount of \$500 is invested in an account paying 1.2% interest

(3) Please fill in your Name, ID, and Date.

(4) Please finish all 6 exercises in Jupyter Notebook.

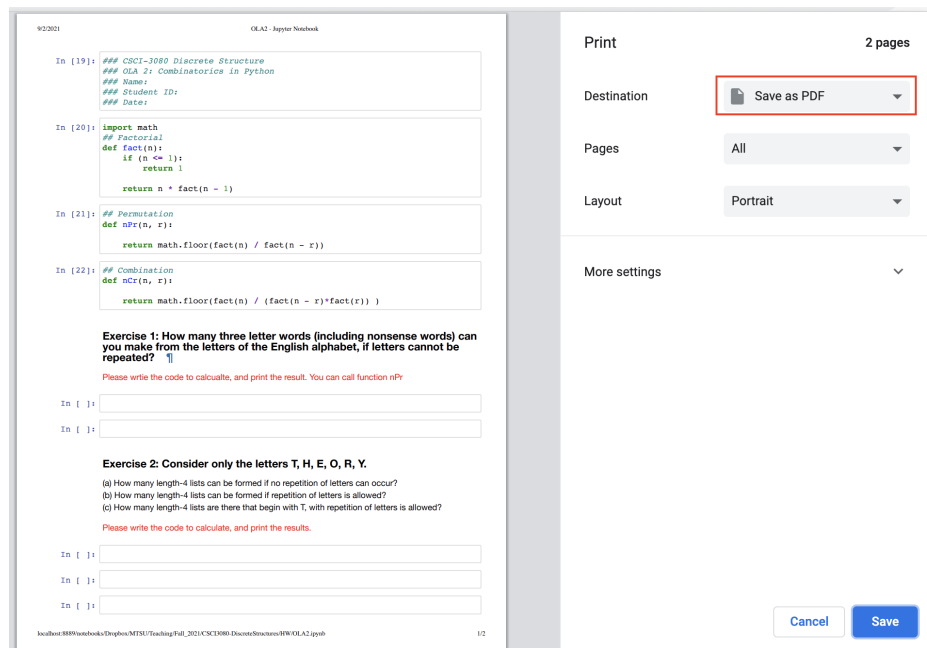
4. Save OLA3 as a PDF

(1) Please save your OLA3 as a PDF after you finish all the exercises.



(2) If the above download as PDF doesn't work, please **right click** the Jupyter Notebook, then click **Print**, and **save as PDF**.





5. Submission

1. log in the gus sytem using your **cNumber** and **Password**:

<https://www.cs.mtsu.edu/cgi-bin/gus/gus.py>

← → ↻ cs.mtsu.edu/cgi-bin/gus/gus.py

Apps fMRI Study--Simu... Big Data, Data Mi... Index of

GUS: Homework repository system start screen.

Please enter your C-number and Password below:

C-number:

Password:

2.

- Select **ola3** from the drop-down menu.
- Click **Submit**
- Click **Perform Action**

Action options:

Select an assignment from the dropdown menu and check an action on right:

☒ Submit ☐ Status/Retrieval

List of current valid assignment identification codes, followed by (if applicable) time stamp and graded status.

Assignment:	Time Stamp:	Status:	Due Date:	Deadline:
ola1	Aug 27 11:08	.	2021-09-12-23:59	2021-09-12-23:59
ola2	2021-09-10-23:59	2021-09-10-23:59
ola3	2021-09-17-23:59	2021-09-17-23:59

handin command finished.

3.

- (a) click **Choose File** to attach your OLA3.pdf
- (b) click **Upload**.

To submit ola3, upload these required files:
OLA3.pdf

Choose File

OLA3.pdfOLA3.pdf

Upload

(↔Once pressed, wait for next screen. A succesful upload can take a few moments.)

Reset

Back

Close

4. Congratulations! You are done with OLA3!

Preparing ola3 submission of the following file(s):
/tmp/c8055500/*
The following file(s) were successfully submitted:
OLA3.pdfSep 09 11:39 c8055500 1031447 bytes
SUCCESS: ola3 submitted.

Check status line above to see if submission was successful.

Back

Close