Programming Resources

I would strongly encourage you to work in groups to learn programming. Do please meet with your classmates virtually and regularly. Learning a computing language is a hard work, and it requires a lot of efforts. **Do please work together and help and support each other!**

Please refer to the below for some useful resources.

WRDS Research Applications:

WRDS provides many sample codes in SAS and Python, which are accessible through the link: https://wrds-www.wharton.upenn.edu/pages/support/research-wrds/wrds-research-applications/

There are a few of very important ones that you should understand since you are very likely to use them in your dissertation:

- Portfolios by Size. Presents SAS sample programs that demonstrate how to create portfolios. Two programs group by size, with one using NYSE breakpoints and common stocks.
- Momentum Strategies/Portfolios.Replicates the methodology of Jegadeesh and Titman (JF, 1993), creating momentum portfolios based on past 3 to 12 month returns.
- Momentum Strategies/Portfolios (Python). Replicates Jegadeesh and Titman (JF, 1993) using Python.
- The Size/Book To Market/Momentum Benchmarks of DGTW (JF 1997). Replicates the characteristic-based benchmarks of Daniel, Grinblatt, Titman, and Wermers (JF, 1997), using an assignment of stocks to one of 125 portfolios that share similar size, book to market, and momentum characteristics.
- The Size/Book-to-Market/Momentum Benchmarks of DGTW (JF 1997) (Python). Replicates characteristics-based benchmarks using Python.
- Post-Earnings Announcement Drift. Provides a sample methodology for calculating quarterly Standardized Earnings Surprises (SUE) using Compustat and IBES Unadjusted data. Shows how to form PEAD portfolios, compares the magnitude of the drift for SUE based on seasonal random walk model and analyst data for different universes of stocks and various time periods.
- Market-to-Book Ratios. Demonstrates a sample methodology for calculating Market-to-Book ratios using either Compustat Fundamentals&Pricing data exclusively or CRSP-Compustat Merged database. In addition, shows how to obtain industry-level M/B measure as well as industry-adjusted firm-level M/B ratios.
- Fama-French Factors.Recreates Fama and French (JFE, 1993) factors. This procedure reproduces, as closely as possible, the factors that are reported by Ken French's Data Library. Also included is a set of programs that can be modified or tweaked to create variants of the Fama-French method if needed.
- Fama-French Factors (Python). Recreates Fama and French (1993) using Python.

Ways to use WRDS[1]:

- https://wrds-www.wharton.upenn.edu/pages/support/getting-started/3-ways-use-wrds/Jules

Personal websites:

Many professors share their sample codes online, for example as below:

- http://pages.stern.nyu.edu/~adesouza/sasfinphd/index/
- http://www.bhwang.com/code.html
- https://sites.google.com/site/jiejaycao/home/tools
- http://www-2.rotman.utoronto.ca/simutin/aw_code.asp

WRDS Forum:

- http://www.wrds.us/index.php/forum_wrds/

UCLA

- https://stats.idre.ucla.edu/sas/

WRDS E-learning:

To learn how to make the best use of WRDS database, please refer to the link below which provides many videos and ppt slides.

- https://wrds-web.wharton.upenn.edu/wrds/E-Learning/index.cfm

[1] Please note that most of sample codes are written by accessing WRDS data through connecting remotely.