## CSE 309 & CSE 310 Spring 2020

**Final Question Format:**

1. Django
2. Django
3. OOP
4. OOP

or

OOP

Course Outline 309: [(3-1) CSE 309\_Object Oriented Programming II (Spring 2020)](https://docs.google.com/document/d/1Qskw8kSOdEeWsByRkl0iFSOgyaesDErg23tqmKCDEcI/edit?usp=sharing)

Course Outline 310: [(3-1) CSE 310\_Object Oriented Programming II Lab (Spring 2020)](https://docs.google.com/document/d/19PNG-S2nMYmixKjzYYgOSyAu3IJwypIv9u1zxsGiJgw/edit?usp=sharing)

UAP Calendar: [University of Asia Pacific Calendar](http://www.uap-bd.edu/academic%20calender/Calendar.pdf)

CSE 309 Course Assessment:

1. Class Assessment (30%)
   1. Viva: (10) [Python]

[A CSE 309 Assessment-1 (Viva ) Marks Spring 2020](https://docs.google.com/spreadsheets/d/169Wn85BYC8qLfJZGmjoXHKCA7mPNrEZ58lkTHGCH4kw/edit?usp=sharing)

[B CSE 309 Assessment-1 (Viva ) Marks Spring 2020](https://docs.google.com/spreadsheets/d/11A5SFRkng7PdaqS-8HpExhyTT9crpuA8NSMAUmpWJps/edit?usp=sharing)

[CSE 309 Viva A Question Bank.ipynb](https://colab.research.google.com/drive/1mbz-NYpTImFe0BIdyOJ6HPIC0oOGTXbV?usp=sharing)

[CSE 309 Viva B Question Bank.ipynb](https://colab.research.google.com/drive/1HlZYYspy9wPXR6gAghXPMEsQVmVLpmKr?usp=sharing)

* 1. Assignment-1: (10) [OOP]

[**https://piastanmoy.github.io/CSE-309-Assignment-1/**](https://piastanmoy.github.io/CSE-309-Assignment-1/)

* 1. Assignment-2: (10) [Web]

Portfolio

* 1. CT 4: (10) [Django]

Django [with final viva]

1. MID (20%):

[Question CSE 309 Mid spring 2020](https://docs.google.com/document/d/1J0CsLZK_PNyE9jibrmsLGSSxm4UeFuO8tuAccIztA_I/edit?usp=sharing)

Marks: Google Classroom

1. Final (50%):

CSE 310 Lab Assessment:

1. Coding test: Google Classroom
2. Project: [CSE 310 Project Marks (TSR)](https://docs.google.com/spreadsheets/d/1Gurtinhb3S3ZDkcvvjH76HAweugfFij0O4ZQzEK4zVw/edit?usp=sharing)

Project Codes:

<https://github.com/PiasTanmoy/CompleteDjangoProject>

<https://github.com/PiasTanmoy/Complete-Django-Project-A>

<https://github.com/PiasTanmoy/Complete-Django-Project-B>

Django Step by step:

[Django Project Guide](https://docs.google.com/document/d/1RIs49e3rZNewutU7-BNKxQnOHVSkJYdc6oNpaFLB0Bo/edit?usp=sharing)

CSE 309 Final Question Fall 2019

[CSE 309 Final Question Fall 2019 (sample for Spring 2020)](https://docs.google.com/document/d/1F6IZFNahBjx2DdKwGmM4eS3UiJqgYsQU9HOiYs-8Gsk/edit?usp=sharing)

## Week 1: Lecture 1

1. Course outline

[(3-1) CSE 309\_Object Oriented Programming II (Spring 2020).docx](https://drive.google.com/file/d/1hRcTvaOpQQLYS00AVBo69motMqFlbSsK/view?usp=sharing)

1. Google classroom
2. **Introduction to Python (Basic Syntax)**
3. Introduction to Google Colab

[Show notebooks in Drive](https://colab.research.google.com/)

1. Introduction to Github (Account open): **[Lab]**

[The world's leading software development platform · GitHub](https://github.com/)

1. Submit Github account in the classroom **[Lab]**
2. Book: Python official book:

[Download — Python 3.8.3 documentation](https://docs.python.org/3/download.html), [3.8.3 Documentation](https://docs.python.org/3.8/)

1. Coursera course assign (Basic Python):

[Programming for Everybody (Getting Started with Python)](https://www.coursera.org/learn/python?specialization=python)

## Week 1: Lecture 2

1. Introduction to interpreter

<https://drive.google.com/file/d/1Aidn31rVKWMsun-ljp1fMhi_nM57jkoT/view?usp=sharing>

1. **Python: Input, Output, Variables, Strings**

Reference: Python Tutorial (Release 3.8.3) [Page: 9-14]

Tutorial: [Variables & Data Types In Python | Python Tutorial For Beginners | Python Programming | Edureka](https://www.youtube.com/watch?v=6yrsX752CWk)

1. Install Anaconda 3 (Python 3.7 or 3.8) **[Lab]**

[Install Anaconda Python, Jupyter Notebook And Spyder on Windows 10](https://www.youtube.com/watch?v=5mDYijMfSzs)

[Installing on Windows — Anaconda documentation](https://docs.anaconda.com/anaconda/install/windows/)

1. Install Python (3.7 or 3.8) and connect with CMD **[Lab]**
2. Install Jupyter Notebook **[Lab]**
3. Use Anydesk (<https://anydesk.com/en>) to access others computer **[Lab]**
4. **Declaration: Lab test-1 (Simple Python Programming) in week-2**

## Week 2: Lecture 3

1. **Python: List and Indexing**

Ref: Python Tutorial (Release 3.8.3) [Chapter 4]

Tutorial: [Variables & Data Types In Python | Python Tutorial For Beginners | Python Programming | Edureka](https://www.youtube.com/watch?v=6yrsX752CWk)

Tutorial: [Python Tutorial](https://www.w3schools.com/python/)

1. Lab-2 Coding test-1 (Basic python)

## Week 2: Lecture 4

1. Python: **Conditional (If-else), Indentation**

Tutorial: [Python Tutorial](https://www.w3schools.com/python/)

1. Lab-2 Coding test-1 (Basic python)
2. Declaration: Lab-3 coding test-2 (Python Programming: Conditional, List, Dictionary and previous items)

## Week 3: Lecture 5

1. **Python: Loop and Range**

Tutorial: [Python Tutorial for Beginners 7: Loops and Iterations - For/While Loops](https://www.youtube.com/watch?v=6iF8Xb7Z3wQ)

[Range Function In Python | Python Range Function With Example](https://www.youtube.com/watch?v=0Hp7AThTZhQ)

1. Class feedback: How to improve and what method is effective.
2. Saving files of Google Colab in GitHub
3. Discuss about Project.

## Week 3: Lecture 6

1. **Project Idea discussion**
2. Discussion about exam/tests
3. Discussion about syllabus and course topics
4. Declaration: Lab-4 coding test-3

(Python Programming: Loop, Range and topics of previous weeks)

1. **Declaration of class test-1**
2. Run python from CMD

## Week 4: Lecture 7

1. **OOP: Introduction to OOP, Class and Object**

Lecture slide: [Intro to object oriented programming by Tanmoy Sarkar](https://docs.google.com/presentation/d/1h3LPYrVmeflujYqoGtJGuvq3mg7cmKTSkwhUGprq844/edit?usp=sharing)

1. **Access Modifiers: Private, Protected and Public**

[public, private and protected Access Modifiers in Python](https://www.tutorialsteacher.com/python/private-and-protected-access-modifiers-in-python)

[Access Modifiers in Python : Public, Private and Protected](https://www.geeksforgeeks.org/access-modifiers-in-python-public-private-and-protected/)

1. **Python: Function and Modules**

Tutorial:

[How To Use Functions In Python (Python Tutorial #3)](https://www.youtube.com/watch?v=NSbOtYzIQI0)

[Python Tutorial for Beginners 8: Functions](https://www.youtube.com/watch?v=9Os0o3wzS_I)

[What Are Python Modules? | Modules In Python](https://www.youtube.com/watch?v=7GXaobCrBb4)

## Week 4: Lecture 8

1. **Assessment-1 (Viva) for all students**
2. Declaration: Lab-5

Project Proposal Presentation

1. Declaration: Lab-6 Coding test-4

(Python Programming: Class, Object, Function, Module and previous topics)

## Week 5: Lecture 9 [Last Lecture before Eid Vacation]

1. Web: Introduction to Django, Django Project Structure

Tutorial: <https://www.youtube.com/watch?v=a48xeeo5Vnk&list=PL-osiE80TeTtoQCKZ03TU5fNfx2UY6U4p&index=2>

1. Web: Django - Simple Page

[Django Step by Step](https://docs.google.com/document/d/1iIQfGHSlNKyog_kXsXSehFtu6X8LNqKu5XqDD1XbgR0/edit?usp=sharing)

1. GitHub: Part 2 (Manage Project and Collaboration)

## Week 6: Lecture 10 [After Eid Vacation]

1. **OOP: Inheritance**

[**Inheritance by Tanmoy Sarkar**](https://docs.google.com/presentation/d/1_hpudEt92CxyedwJXRbMnnNGvlHc12d8tah88CtesQk/edit?usp=sharing)

1. **Declaration of Assessment-2 (Assignment-1)**

**[ Topic: OOP, Class, Object and Inheritance ]**

[**https://piastanmoy.github.io/CSE-309-Assignment-1/**](https://piastanmoy.github.io/CSE-309-Assignment-1/)

1. Discuss the application of different topics of python in Django project
2. Declaration: Lab-6 Coding test-4

(Python Programming: Class, Object, Function, Module and previous topics)

## 

## Week 7: Lecture 11

1. Discussion on Django
2. DIscussion on OOP: Inheritance

[**Inheritance by Tanmoy Sarkar**](https://docs.google.com/presentation/d/1_hpudEt92CxyedwJXRbMnnNGvlHc12d8tah88CtesQk/edit?usp=sharing)

1. Class diagram

[Class Diagram: Inheritance](https://docs.google.com/document/d/1ReAcrdacpd3qoe8eUd4jzq1nLxxrQhyakCoBBj-BXoE/edit?usp=sharing)

1. Project QA
2. Mid Question pattern discussion
3. **Submission of Assessment-2 (Assignment-1)**

**[ Topic: OOP, Class, Object and Inheritance ]**

## Week 7: Lecture 12

1. Mid Question pattern discussion
2. Overview of the Mid syllabus

**MID EXAM**

## Week 8: Lecture 13

1. Python: Argument from command line

Tutorial: [Command Line Arguments in Python](https://www.youtube.com/watch?v=R2_beoINHe4)

1. if \_\_name\_\_ == '\_\_main\_\_':
2. HTML
3. CSS
4. Portfolio

[Student Portfolio](https://docs.google.com/document/d/1YTy95lnAI0ZxGxPib1ZBz16eKbMfOLkb0w1tlxmCf0E/edit?usp=sharing)

1. **Lab: Github (Teamwork and professional)**

[**https://desktop.github.com/**](https://desktop.github.com/)

1. **Assignment-2: Portfolio (theory)**

## Week 8: Lecture 14

1. Django: Simple Database set up (Model)
2. Django: Admin panel to manage database
3. Django: View database in HTML

[Django Step by step (Spring 2020)](https://docs.google.com/document/d/1DLOLXqyPl1S_tqxs4OwiZY0O6f5qyd61uHn8SKFpk7U/edit?usp=sharing)

1. ERD and Schema diagram

Create: [ERDPlus](https://erdplus.com/)

## Week 9: Lecture 15

1. Django: Templates (Base)
2. Django: User authentication form
3. Django: User Registration (Sign up)

## Week 9: Lecture 16

1. Django: Don’t use a virtual environment anymore!
2. Django: GitHub [always migrate]
3. Django: Static files
4. Django: Form
5. Django: Insert from HTML
6. **Assignment-2: Submission**
7. Complete Django Project:

<https://github.com/PiasTanmoy/Complete-Django-Project-A>

<https://github.com/PiasTanmoy/Complete-Django-Project-B>

## Week 10: Lecture 17

1. Django: Database Relationship in Models

[Django Project Guide](https://docs.google.com/document/d/1RIs49e3rZNewutU7-BNKxQnOHVSkJYdc6oNpaFLB0Bo/edit?usp=sharing)

1. Lab: Research Survey

[Research Survey](https://docs.google.com/document/d/1kLDQ_nVydFcDApEi5smNIAQ5yML36eQbKdrCG36yUs4/edit?usp=sharing)

1. Lab: Live the portfolio [Mark]
2. **Lab: Submit Project Database Design (ERD and Schema) (Project)**

## Week 10: Lecture 18

1. Django: Registration (recap)
2. Django: User Login

<https://docs.djangoproject.com/en/3.1/topics/auth/default/>

1. Django: User Logout

## Week 11: Lecture 19

1. Django: Change Password
2. Django: User Profile
3. Django: File management[image, pdf, video etc.] (upload, download, view)
4. **Submit: Lab Project Update 1:**
   1. **Implement DB according to the Schema diagram and create one way connection with HTML and DB (Project)**
   2. **Project github link**
5. **Lab: Project Update 2: (submission on next week)**
   1. **Implement forms for the required tables (at least 1)**
   2. **Take input from html to DB by using the created form**
   3. **Implement authentication** 
      1. **Registration**
      2. **Login**
      3. **Logout**
      4. **Add login-required decorator**
      5. **Profile page**
   4. **File Management [upload, view, download files]**

## Week 11: Lecture 20

1. Survey: 2

<https://www.mysurveygizmo.com/s3/5743436/Survey-A2-after-class-A>

1. Django: Frontend template design (bootstrap)
2. Github: Fork and clone (Complete Projects)
3. Lab: Project Report and Documentation Sample

[SOS Project Book Final.pdf](https://drive.google.com/file/d/1kJbzX7T2j9BZu0YwMt69HlzKLnaaCez-/view)

1. Survey: 3

## Week 12: Lecture 21

1. Django: Dynamic URL routing
2. Django: Filtering (Database searching)
3. **Submission: Project Update 2:** 
   1. **Implement forms for all the tables**
   2. **Take input from html to DB via views**
   3. **Implement authentication** 
      1. **Registration**
      2. **Login**
      3. **Logout**
      4. **Add login-required decorator**

## Week 12: Lecture 22

1. OOP: Abstract class
2. OOP: Interface
3. OOP: Polymorphism

Lecture slide: [Intro to object oriented programming by Tanmoy Sarkar](https://docs.google.com/presentation/d/1h3LPYrVmeflujYqoGtJGuvq3mg7cmKTSkwhUGprq844/edit?usp=sharing)

1. Research Survey: 1, 2, 3 (recap)\*\*
2. **Declaration: Final Viva + Class Test + Make-up Test (14th week)**

**Makeup class: [1 October 2020 at 7.00 pm] [Cancelled]**

1. **Django: Simple E-commerce Project**
2. **Email Service (Optional)**

## Week 13: Lecture 23

1. OOP: Association, Aggregation and Composition

Lecture slide: [Intro to object oriented programming by Tanmoy Sarkar](https://docs.google.com/presentation/d/1h3LPYrVmeflujYqoGtJGuvq3mg7cmKTSkwhUGprq844/edit?usp=sharing)

1. Lab: Django Test: Create a simple website with DB [marks: 50] **[Cancelled]**

## Week 13: Lecture 24

1. [Everything about Web Development](https://docs.google.com/presentation/d/1LzscDPozUFJZLINPqxcvdAsmehuEYX9NwuDxGWyO3nQ/edit?usp=sharing)

<https://docs.google.com/presentation/d/1LzscDPozUFJZLINPqxcvdAsmehuEYX9NwuDxGWyO3nQ/edit?usp=drivesdk>

1. Theory: All marks
2. Lab: All marks Lab
3. Lab: Python to exe file
4. Lab: Emotion Recognition
5. Missed tests make up based on evidence

## Week 14: Lecture 25

1. Final Viva (B1)
2. What have we learned so far!
3. Future scope
4. What to do next
5. Problem Solving for finals
6. Final exam discussion
7. Question format

[Question Format(final) for students](https://docs.google.com/document/d/1qvGbBa9u6dGvSDZbylu_EAC6BVikV-h3g5tpUdjRV18/edit?usp=sharing)

1. **Lab: Final Project Presentation [Demonstration]**
2. **Project Submission: Source code, report (Pdf, Online)**

## Week 14: Lecture 26

1. Final Viva (A1, A2, B2)