Schedule

A week-by-week breakdown of the material.

IMPORTANT: This schedule is revised daily as we move through the material. Notes more than 1 day in the future may be out of date.

Week 1 (09/05-09/09)

- Day 1
  - Introduction, case studies[1]
  - Some Python fundamentals[2]
- Day 2
  - Data Formats[3]
- Day 3
  - List Comprehensions[4]

Week 2 (09/12-09/16)

- Day 1
  - Reading JSON from Python[5]
  - Assignment 1: Working with JSON data[6]
- Day 2
  - Introduction to Web APIs and Web Services[7]
- Day 3
  - RESTful design[8]

[1] notes/intro.html
[2] notes/intro_python.html
[3] notes/data_formats.html
[4] notes/list_comprehensions.html
[5] notes/json_python.html
[6] assignments/1.html
[7] notes/web_apis.html
[8] notes/rest.html

Week 3 (09/19-09/23)

- Day 1
  - RESTful design, case study[9]
  - Assignment 2: Interacting with a REST API[10]
- Day 2
  - Introduction to databases[11]
- Day 3
  - Relational Databases[12]

Week 4 (09/26-09/30)

- Day 1
  - Introduction to MySQL[13]
- Day 2
  - Joins, functions, updates and deletes[14]
- Day 3
  - Joins, functions, updates and deletes (cont)[15]
  - Assignment 3: Working with MySQL database tables[16]

Week 5 (10/03-10/07)

- Day 1
  - Accessing SQL from other languages[17]
- Day 2
  - Accessing SQL from other languages[18]
  - Assignment 4: Practice with SQL queries and SQLAlchemy[19]
- Day 3

[9] notes/rest_case_study.html
[10] assignments/2.html
[11] notes/databases_intro.html
[12] notes/databases_relational.html
[13] notes/databases_mysql.html
[14] notes/databases_mysql_advanced.html
[15] notes/databases_mysql_advanced.html
[16] assignments/3.html
[17] notes/databases_sqlalchemy.html
[18] notes/databases_sqlalchemy.html
[19] assignments/4.html

  - SQL Practice[20]
  - Object-Relational Mapping[21]

Week 6 (10/10-10/14)

- Day 1
  - Object-Relational Mapping[22]
- Day 2
  - Indexes, Views, ORM[23]
- Day 3
  - Midterm (study guide[24])

Week 7 (10/17-10/21)

- Day 1
  - Fall Break
- Day 2
  - Assignment 5: Working with the SQLAlchemy ORM[25]
  - Web Scraping[26]
- Day 3
  - Web Scraping (cont)[27]

Week 8 (10/24-10/28)

- Day 1
  - Web Frameworks, and Flask[28]
- Day 2
  - Emergence of NoSQL databases[29]

[20] notes/sql_practice.html
[21] notes/databases_orm.html
[22] notes/databases_orm.html
[23] notes/sql_odds_ends.html
[24] notes/midterm1_study_guide.html
[25] assignments/5.html
[26] notes/web_scraping.html
[27] notes/web_scraping.html
[28] notes/databases_web_frameworks.html
[29] notes/nosql_start.html

  - NoSQL Data Models[30]

- Day 3
  - Distributed Database Models[31]
  - Consistency[32]

Week 9 (10/31-11/04)

- Day 1
  - Introduction to MongoDb[33]
- Day 2
  - Aggregation Framework in MongoDb[34]
- Day 3
  - More practice with aggregation

Week 10 (11/07-11/11)

- Day 1
  - Assignment 6: More MongoDb practice[35]
- Day 2
  - Map-Reduce in general and in MongoDb[36]
- Day 3
  - Work on project

Week 11 (11/14-11/18)

- Day 1
  - Case Study: Consumer Expenditure data[37]
- Day 2
- Day 3
  - Guest Lecture

[30] notes/nosql_data_models.html
[31] notes/nosql_distributed.html
[32] notes/nosql_consistency.html
[33] notes/mongodb.html
[34] notes/mongodb_aggregation.html
[35] assignments/6.html
[36] notes/mongodb_mapreduce.html
[37] notes/mongodb_practice.html

Week 12 (11/21-11/25)

- Day 1
  - Assignment 7: Web Scraping practice[38]
- Day 2
  - Thanksgiving
- Day 3
  - Thanksgiving

Week 13 (11/28-12/02)

- Day 1
  - Work on project
- Day 2
  - Work on project
- Day 3
  - Work on project

Week 14 (12/05-12/09)

- Day 1
  - Security and Authentication[39]
- Day 2
  - Security and Authentication[40]
- Day 3
  - Final study guide[41]

[38] assignments/7.html
[39] notes/security_auth.html
[40] notes/security_auth.html
[41] notes/midterm2_study_guide.html