Schedule

A week-by-week breakdown of the material.

Week 1 (09/05-09/09)

- Day 1

  - Introduction, case studies[1]

- Day 2

  - Data Formats[2]

- Day 3

  - Reading JSON from Python[3]
  - Assignment 1: Working with JSON data[4]

Week 2 (09/12-09/16)

- Day 1

  - List Comprehensions[5]
  - Introduction to Web APIs and Web Services[6]

- Day 2

  - RESTful design[7]

- Day 3

  - RESTful design, case study[8]
  - Assignment 2: Working more with Twitter API[9]

Week 3 (09/19-09/23)

- Day 1

  - Introduction to databases[10]

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

– Relational Databases[11]

- Day 2

  – Introduction to MySQL[12]

- Day 3

  – Joins, functions, updates and deletes[13]
  – Assignment 3: Working with MySQL database tables[14]

Week 4 (09/26-09/30)

- Day 1

  – Accessing SQL from other languages[15]

- Day 2

  – Accessing SQL from other languages (cont)[16]

- Day 3

  – Web Frameworks, and Flask[17]
  – Assignment 4: Tweets via SQL queries and SQLAlchemy[18]

Week 5 (10/03-10/07)

- Day 1

  – Guest lecture

- Day 2

  – Web Frameworks, and Flask (cont)[19]

- Day 3

  – Assignment 5: Implementing a simple messaging web service[20]

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[11]notes/databases_relational.html
[12]notes/databases_mysql.html
[13]notes/databases_mysql.html
[14]assignments/3.html
[15]notes/databases_sqlalchemy.html
[16]notes/databases_sqlalchemy.html
[17]notes/databases_web_frameworks.html
[18]assignments/4.html
[19]notes/databases_web_frameworks.html
[20]assignments/5.html

Week 6 (10/10-10/14)

- Day 1
  - SQL Practice[21]
- Day 2
  - Midterm (study guide[22])
- Day 3
  - Work on assignment 5

Week 7 (10/17-10/21)

- Day 1
  - Fall Break
- Day 2
  - Indexes, Views, ORM[23]
- Day 3
  - Work on Assignment 5

Week 8 (10/24-10/28)

- Day 1
  - Emergence of NoSQL databases[24]
  - NoSQL Data Models[25]
- Day 2
  - Lab work
- Day 3
  - Distributed Database Models[26]
  - Consistency[27]

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[21] notes/sql_practice.html
[22] notes/midterm1_study_guide.html
[23] notes/sql_odds_ends.html
[24] notes/nosql_start.html
[25] notes/nosql_data_models.html
[26] notes/nosql_distributed.html
[27] notes/nosql_consistency.html

Week 9 (10/31-11/04)

- Day 1
  - Introduction to MongoDb[28]
- Day 2
  - Aggregation Framework in MongoDb[29]
- Day 3
  - More practice with aggregation

Week 10 (11/07-11/11)

- Day 1
  - Assignment 6: More MongoDb practice[30]
- Day 2
  - Map-Reduce in general and in MongoDb[31]
- Day 3
  - Work on project

Week 11 (11/14-11/18)

- Day 1
  - Case Study: Consumer Expenditure data[32]
- Day 2
  - Web Scraping[33]
- Day 3
  - Guest Lecture

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[28]notes/mongodb.html
[29]notes/mongodb_aggregation.html
[30]assignments/6.html
[31]notes/mongodb_mapreduce.html
[32]notes/mongodb_practice.html
[33]notes/web_scraping.html

Week 12 (11/21-11/25)

- Day 1
  - Assignment 7: Web Scraping practice[34]
- 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[35]
- Day 2
  - Security and Authentication[36]
- Day 3
  - TBA

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[34]assignments/7.html
[35]notes/security_auth.html
[36]notes/security_auth.html