

Lab 0 (Week 0)

Introduction to Labs for CAN201

CAN201

Dr. Wenjun Fan

Outline

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- Coursework
- In-class Test
- TA Information
- Lab Disclaimer

Lab Syllabus

| Lab | Week | Content | Lecturer |
|--------|---------|--|----------------|
| Lab 1 | Week 1 | Linux OS, Virtual Machine and Mininet | Wenjun Fan, TA |
| Lab 2 | Week 2 | Wireshark and Tcpdump | Wenjun Fan, TA |
| Lab 3 | Week 3 | Python 1: IDE and Interpreter | Fei Cheng, TA |
| Lab 4 | Week 4 | Python 2: Basic syntax and Data structure | Fei Cheng, TA |
| Lab 5 | Week 5 | Python 3: Network programming (Socket) (In-class test) | Fei Cheng, TA |
| Lab 6 | Week 6 | Python 4: Modules, Pypi, OOP and parallel computing | Fei Cheng, TA |
| | Week 7 | No lab | N/A |
| Lab 7 | Week 8 | Building network topology using Mininet (In-class test) | Wenjun Fan, TA |
| Lab 8 | Week 9 | SDN controller application with Mininet | Wenjun Fan, TA |
| Lab 9 | Week 10 | DoS attack on SDN (In-class test) | Wenjun Fan, TA |
| Lab 10 | Week 11 | TCP connection analysis | Wenjun Fan, TA |
| Lab 11 | Week 12 | Scanner and Firewall | Wenjun Fan, TA |
| Lab 12 | Week 13 | Intrusion Detection System | Wenjun Fan, TA |

Notice: Week 7 has no lab (may be used for a coursework tutorial).

Coursework

- Coursework – Networking Project (40%)
 - Part I (20%): Application-layer Socket programming for file uploading/downloading.
 - Release date: 2024 Oct.07
 - Due date: 2024 Nov.15
 - Part II (20%): SDN-based network traffic control.
 - Release date: 2024 Nov.04
 - Due date: 2024 Dec.13
 - Group work: each group to complete the entire project.
 - 4-5 students teamed up for per group using the following link.
 - <https://group.feimax.com>
 - CW Submission: ZIP file including report + code.
 - More details will be in the CW specification document on LMO.

In-class Test

- In-class Test (15%)
 - 3 in-class test, and each counts 5%
 - Each in-class test needs individual submission.
 - Every lab group will have its own in-class test.
 - Test due is the end of each lab.
 - Test cut-off time is in one week after the due time.
 - Submission before due time can get up to 5%.
 - Submission after due time but before cut-off time will incur a penalty of 1 point (meaning upto 4%).
 - Details of the In-class test will be released at the beginning of each lab.

Introduction

- Lab and TA information

| Day | Time | Room | Group | TA1 | TA2 |
|----------|----------|-------|-------|-------------|---------------|
| Thursday | 9–11 am | SC464 | D1/1 | Yuwen Zou | Zhiqi Wu |
| Thursday | 11–13 am | SC464 | D1/3 | Yuli Zhang | Aocheng Zhang |
| Thursday | 14–16 pm | SC464 | D1/5 | Yuxin Xia | Danxiang Xue |
| Friday | 9–11 am | SC464 | D1/2 | Haotian Yin | Jingyu Cheng |
| Friday | 11–13 am | SC464 | D1/4 | Pengfei Fan | Derong Wang |
| Friday | 14–16 pm | SC464 | D1/6 | Jia Liu | Dekun Peng |

- Every student should refer to LMO to know which group you belong to.
- Please also refer to the module handbook to find certain TA's email.

Lab Disclaimer

- **Backup Your Work:** Please save and backup your homework or task files on your own device before you shut down or leave the computer. All files stored on these computers will be permanently removed upon reboot.
- **Security and Conduct:** Do not engage in any malicious activities or violate the security policies while using these computers. Any individual found responsible for such actions will be held accountable for their behaviour and subject to disciplinary actions.
- **Respect Shared Resources:** Please be considerate of other users. Do not install unauthorized software, alter system settings, or use excessive bandwidth.
- **Privacy Notice:** Be aware that this is a shared environment. Avoid storing sensitive personal information on these computers as it may not be secure.
- **Report Issues:** If you encounter any technical problems or notice any suspicious activity, please report it to the lab administrator immediately.

By using the computer lab facilities, you fully understand and agree to comply with all the guidelines mentioned above.

Legal Notice: The SC464 Computer Lab reserves the right to take appropriate disciplinary or legal action against users who violate any terms of this disclaimer. Users shall bear any loss or liability resulting from a breach of this statement.