CS101 Autumn 2023
Lab - 01

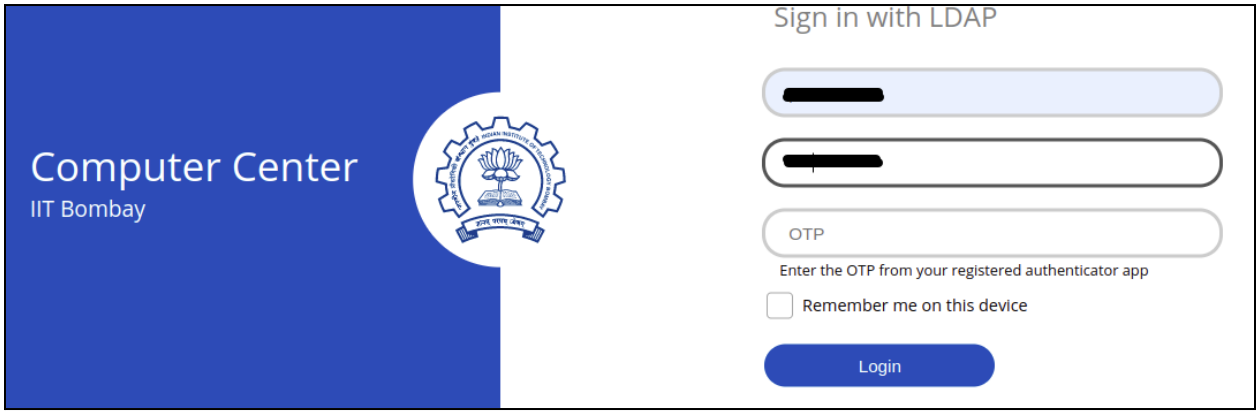
Welcome all to the first lab of CS101. Today, let's look at the various tools and software that we will be using throughout the course. However, before going into the details first, let's get started with introducing yourselves to your group members.

1. **Introduction**
   All of you have been divided into groups, where each group has roughly 12 to 14 students and a group ID is assigned for that group. If all of you are seated according to the seating plan, then your group members should be very close to the row that you are seated at. Give hi-fi to them and get to know each other. Do not talk for a long time 😀. Each group has been assigned a TA. He/She will guide and help you throughout this course. Treat them like your friends but with respect. Feel free to ask them anything related to the technical doubts that you have. Again, if you are seated according to the seating plan, your TA will be somewhere around you (non-seated). Say hello to him/her.

   You are seated in a lab having computers/laptops, hence, please do not unplug any existing equipment i.e. power cables, LAN cable, keyboard, mouse, etc. Also, handle/use the lab equipment and furniture with care.

   If you do not have a laptop and are using the desktop/laptop of the lab and you are facing some issues with the machine, please contact your TA first. If you are not able to locate your TA, just raise your hand; a nearest TA will help you.

2. **IITB SSO**
   Browse https://sso.iitb.ac.in/ and enter your LDAP id, password, and OTP. Click Login. For more information, please visit: https://www.cc.iitb.ac.in/page/services-sso



3. **Survey Form**
   If you have not filled up the google form shown by Prof Suyash Awate (CS101 Course Instructor) in the class then, please fill it up: https://bit.ly/a23-cs101-survey

Note: If you are using your **own laptop**, please follow either step 4 or step 5 (based on the OS), else go to point 6.

4. **Installation of Ubuntu App and s++ (Windows users)**
    - Skip this part if you are using the machine provided by IIT, as simplecpp is already installed.
    - https://docs.google.com/document/d/1fm56Il7kiywy7jkSLOLprs1fx0b7nApW1DsOzd1imO0/edit?usp=sharing

5. **Installation of s++ (Linux/Ubuntu/Mac Users)**
    - Skip the installation point if you are using the machine provided by IIT, as simplecpp is already installed.
        - Mac or Linux: Click on the link given below. https://drive.google.com/drive/folders/1oSJ1nW2tNlxi18ecq0gqTNwC87xmHwKM?usp=sharing
        - Based on the operating system that you use, view the video and follow the instructions to install simplecpp.

6. **Writing and Executing a Simple Program (Windows/Linux/Ubuntu/Mac Users)**
    - Refer to the link given below on how to write and compile programs using simplecpp:
    - https://docs.google.com/document/d/13DsrlOISzGDD91LOaShuDEHPCt8k0yhm80kRqLx2Yv4/edit

7. **Basic Linux Commands for practice**
    - **Note**:
        - These are to be executed on the command line. Open the terminal as usual.
    - Commands
        - **`pwd`**
          Print working directory. This command prints the path of your current directory. Type **`pwd`** and press enter and observe what it prints.
        - **`ls`**
          List files. Type **`ls`** and press enter. This command will display all the files and folders present in your directory
        - **`mkdir`**
          Make/Create directory. Type **`mkdir <yourname>`** and press enter.
          E.g. **`mkdir amita`** This will create a directory with the name 'amita' that you gave. Type **`ls`** and press enter. Check if you see the directory that you just created
        - **`cd`**
          This refers to changing the directory. This command allows us to navigate into a certain directory. Type **`cd <DirectoryName>`**. E.g. **`cd amita`** and press enter. To confirm the path type **`pwd`**.
        - **`cd ..`**
          This command takes us one level up in the directory. Type **`cd ..`** and press enter. Check the path by typing **`pwd`**

8. **Basic usage of vi editor**
    - Refer to the video given below and practice the commands as mentioned
    - How to use vi editor - YouTube
    - For a text based version use https://www.cs.colostate.edu/helpdocs/vi.html

9. **Submit programs**
    - Finally, to complete this lab, upload the program on moodle that you wrote in Point No. 6.
    - Go to the link: https://moodle.iitb.ac.in/course/view.php?id=2276
    - Under the current week, choose the Lab0 assignment and upload mysquare.cpp file

~~~ That's it for today's lab. See you all next week ~~~

~~~ Happy coding and All the best ~~~