

# CS 101

## Computer Programming and Utilization

**Puru**

with

several CS101 TAs and CSE staff

Course webpage: <https://www.cse.iitb.ac.in/~cs101/>

## **Lab1: Getting Started**

*Clip art and quote credits: Various sources found through Google  
Image Search*

# Getting started with using computers

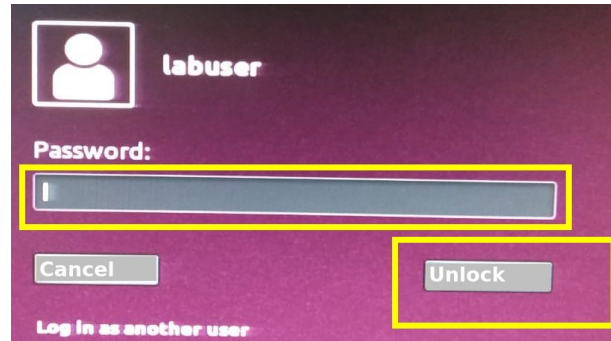
- This slide deck is specific to the CS101 offering and associated software setup
- Usage info of following items will be covered,
  - Login to lab machines, Ubuntu navigation
  - LDAP, Webmail, Bodhitree, moodle, ASC
  - Web browser, Text editor
  - Files, directories, web pages
  - Codeblocks, s++

# Login into Lab Machines

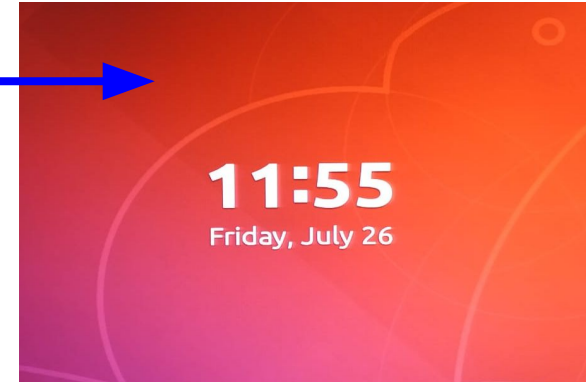
- You will see a screen similar to this
- Press enter key on your keyboard
- Enter the following password

**labuser**


- Click Unlock.



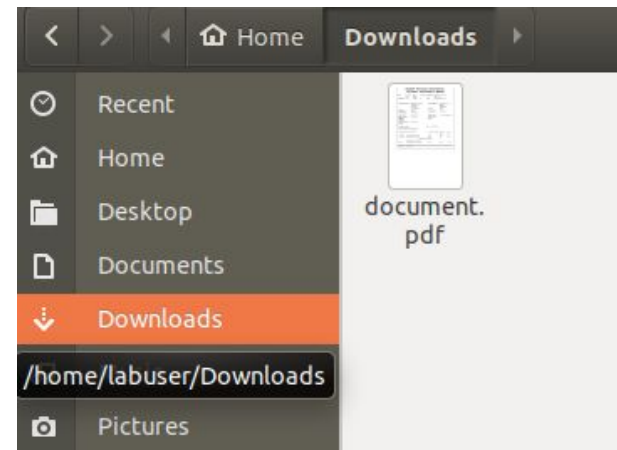
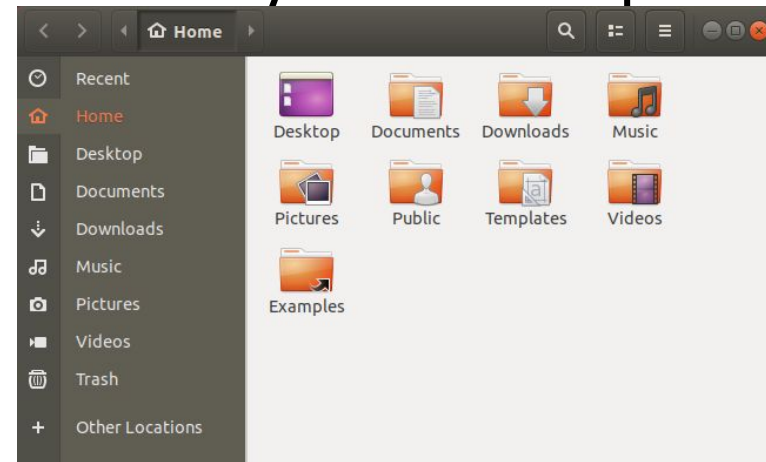
- You will see ubuntu desktop screen. Ubuntu is an operating system, an alternative to Windows and Mac



# Ubuntu Navigation and Directories

- You will see some icons on the left of your desktop
- Click on  'Files' icon.
- A window will open up.
- This shows 'Home' directory
- You can see some folders
- Currently, 'Home' is selected
- Click 'Downloads'
- All files that you download from the internet will go in this folder



 **Show Applications Icon**

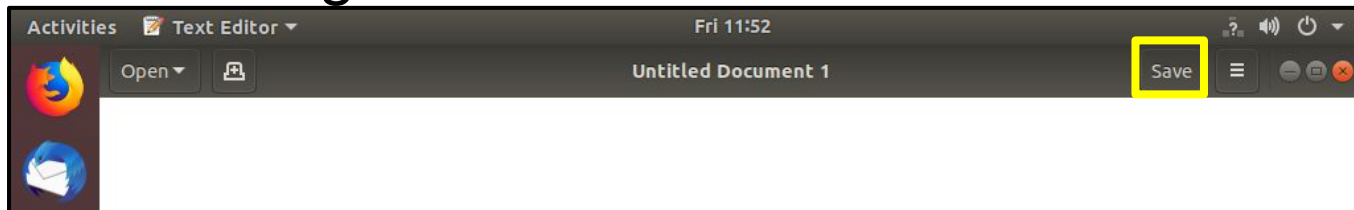


# Files

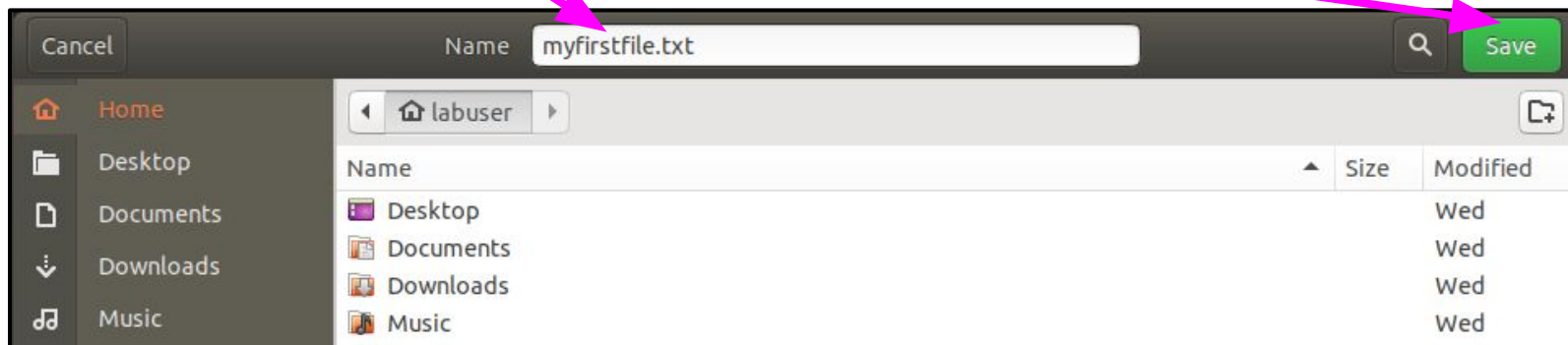
- Way of storing information in various formats
- Files are stored in a directory/folders
- Different file formats have different extensions
- Example
  - Text: .txt, .c, .cpp, .py
  - Word: .doc, .docx
  - Document: .pdf
  - Excel: .xls, .xlsx
  - Libre Writer: .odt
  - Libre Impress: .odp
  - Images: .png, .jpg, .bmp
  - Video: .mp4, .ogg
  - Audio: .wav, .mp3

# Text editor

- A software in which you are able to write, save, cut, copy, paste, etc. Examples (gedit, vi, etc.)
- Open gedit by clicking 'Show Applications icon', , type 'gedit', select.  You will see a new file opened up. Write something into the file. Click 'Save'

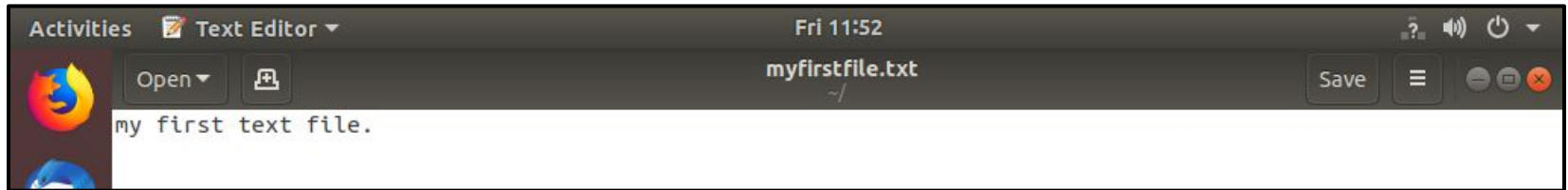


- Write your filename and click 'Save' (green button)

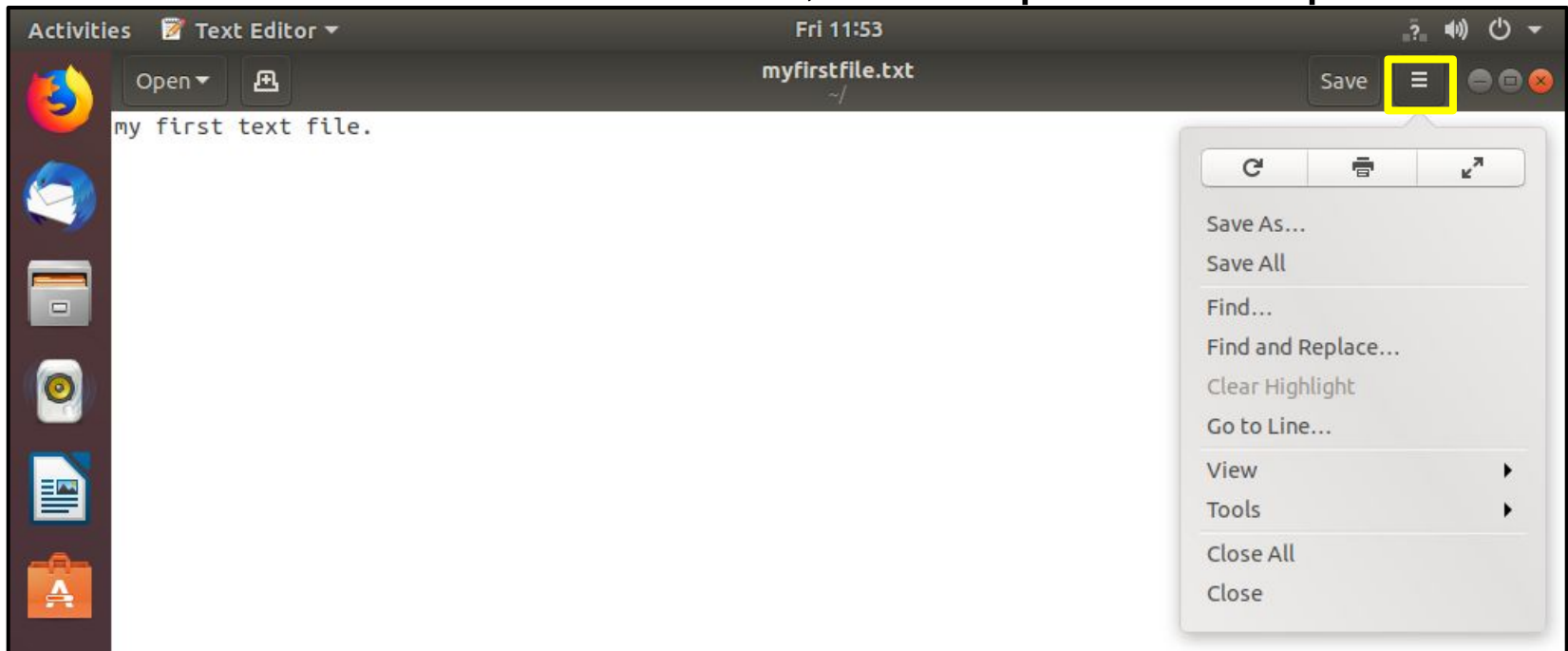


# Text editor


- The saved file will look like below



- Click on the **3 horizontal lines**, and explore the options





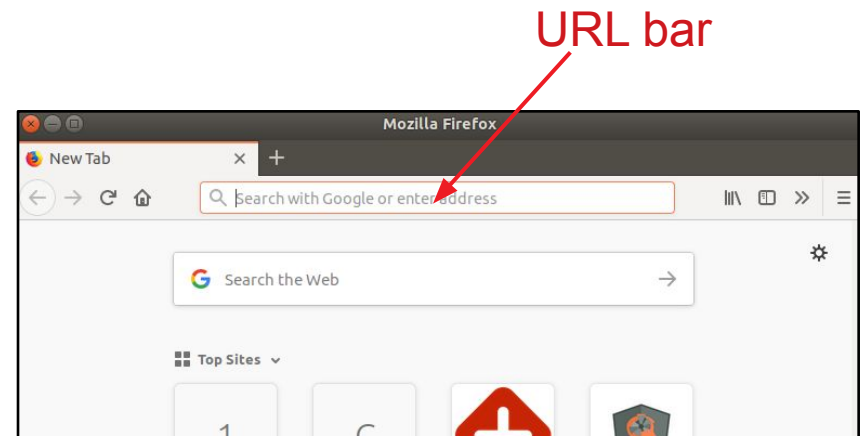
# Text editor

- Locate the file in the directory
- Click on **Files** folder 
- You will be in the home directory.
- **Select** the text file you just created, myfirstfile.txt
- Press **Ctrl + c**
- Press **Ctrl + v**
- A new file will be created
- **Double click** to open the new file
- You will see the same content that you wrote
- Change some text and **save** it
- Now **open** the original file (myfirstfile.txt)
- You will see that the original file is not changed



# Web browser

- An application using which we can view the information given on the web (news, sports, songs, movies, etc.)
- Google Chrome, Mozilla Firefox, Safari, etc.
- Click 'Show Applications' icon 
  - located in the bottom left
- Type Google chrome and click on the icon 
- The browser will open up
- It will look similar to this

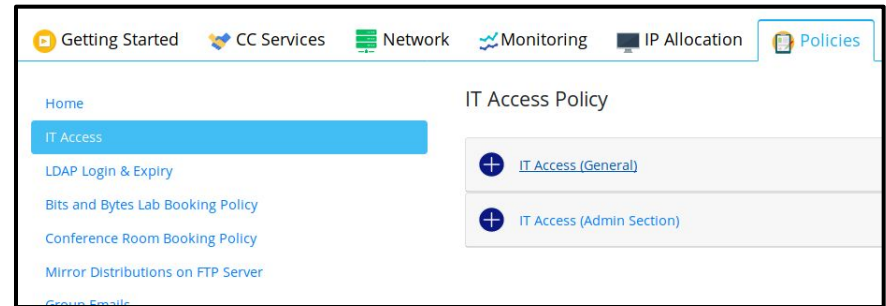


# IT Infrastructure Access Policy

- Please ignore if you have already done this
- You need to accept IT Access Policy of IIT Bombay in order to use your LDAP account. This policy outlines the responsible use of IT infrastructure at IIT Bombay

- Enter the following URL

— <https://www.cc.iitb.ac.in/>



- Scroll down and click

— Policies tab → IT Access → IT Access (General)

- Scroll and enter
- LDAP Username, Password
- Click Submit

A screenshot of a web form for LDAP authentication. It features two input fields: 'LDAP Username \*' with the value 'LDAP ID' and 'LDAP Password \*' with the value 'LDAP Password'. Below these fields is a section titled 'Operation (I Accept/Reject above policy). \*' with two radio buttons: 'Accept' (which is selected) and 'Reject'. At the bottom of the form is a blue 'Submit' button.

# LDAP

- Enter the following in the URL bar
  - [internet.iitb.ac.in](http://internet.iitb.ac.in)
- A new page opens up
- Enter the following
  - LDAP ID: [<Your roll number>](#)
  - Password:
- Click [Login](#)
- It will look similar to this

COMPUTER CENTER

LDAP-ID:  PASSWORD:

### Kindly use webmail.iitb.ac.in instead of gpo.iitb.ac.in ###

**BEWARE OF PHISHING ATTACKS:**  
- Do not give your LDAP USERID & PASSWORD to anyone.  
Do not enter LDAP login information in any suspicious window.

**ONLINE IT AGREEMENT/POLICY:**  
- All new students, staff & faculty members must read and accept the online IT agreement/policy.

COMPUTER CENTER

### Kindly use webmail.iitb.ac.in instead of gpo.iitb.ac.in ###

LDAP ID	IP ADDRESS	LOCATION	LOGIN AT	SELECT TO LOGOUT
[REDACTED]	10.100.100.166	IT	25-Jul-2019 12:48:50	<input checked="" type="radio"/>

# Web pages

- Please ignore if you have already done this
- In the URL bar type any web-page of your choice
- Some examples are
  - [www.google.com](http://www.google.com)
  - [www.gmail.com](http://www.gmail.com)
  - [www.cse.iitb.ac.in/~cs101](http://www.cse.iitb.ac.in/~cs101)
  - [asc.iitb.ac.in](http://asc.iitb.ac.in)
  - [moodle.iitb.ac.in](http://moodle.iitb.ac.in)

# Web mail

- Enter the URL: [webmail.iitb.ac.in](http://webmail.iitb.ac.in)
- Enter your LDAP Username and password
- Click [Login](#)
- You will see your mailbox
- Click [‘compose’](#) to Send an email to your friend/lab neighbour



Indian Institute of Technology Bombay  
भारतीय प्रौद्योगिकी संस्थान मुंबई

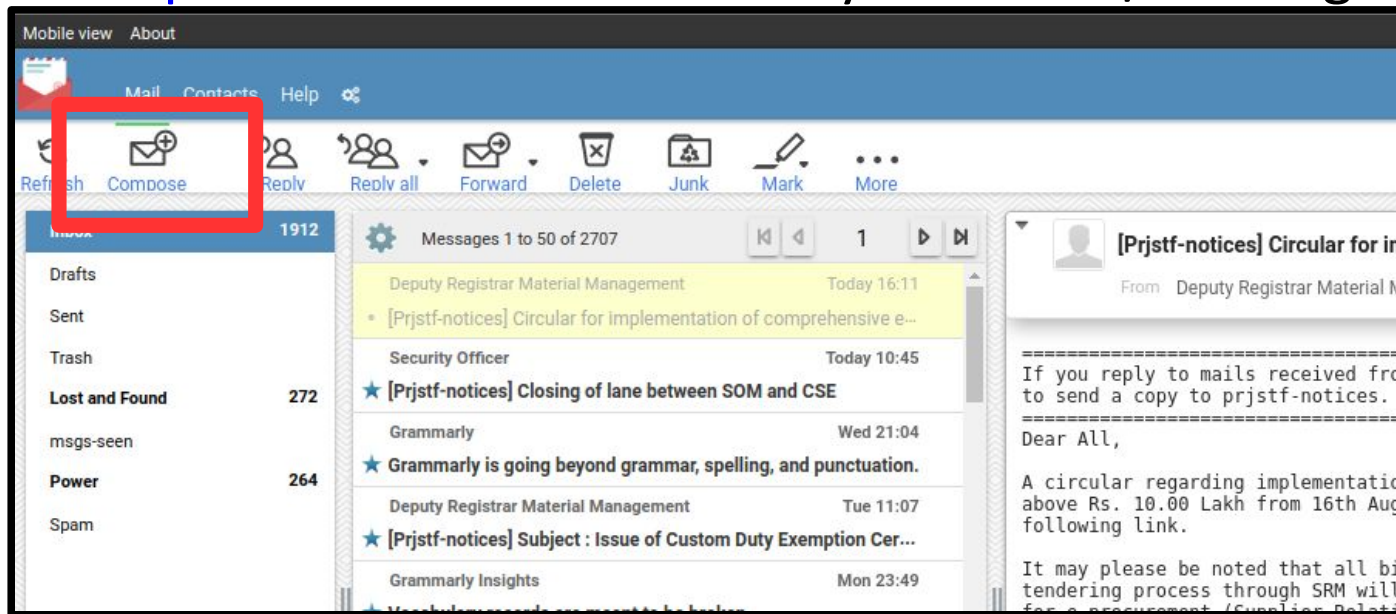
Webmail v2.0

Username \_\_\_\_\_

Password \_\_\_\_\_

Login

Powered by Roundcube





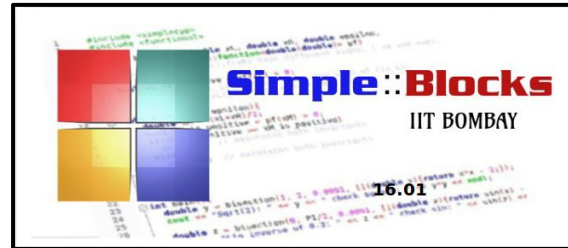
# Moodle

- URL: <https://moodle.iitb.ac.in>
- This portal will be used for uploading lecture material, uploading assignments, and asking question on the forum
- Login with your LDAP ID and password
- Feel free to browse the courses if you have already been registered.
- You will see something similar to this

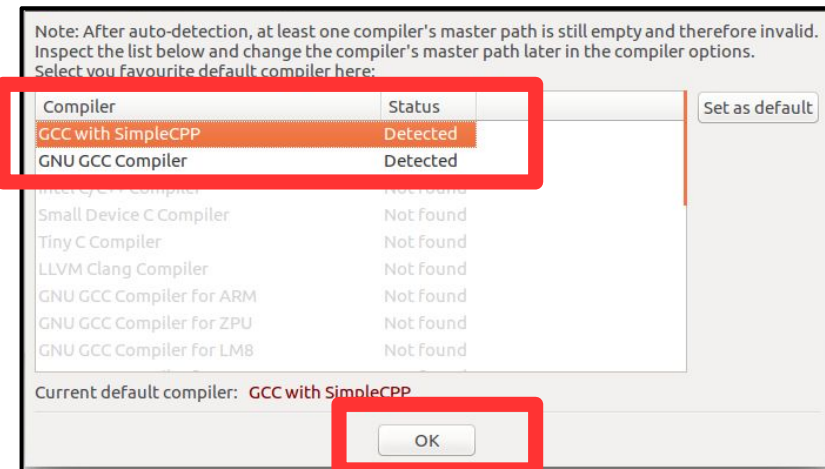


# Code::Blocks


- An IDE for compiling and executing C/C++ programs
- Click  and type codeblocks. Click 
- You will first see Simple::Blocks screen

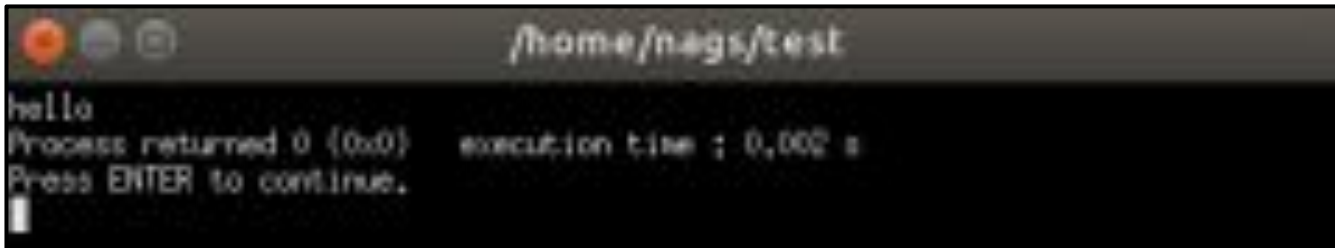
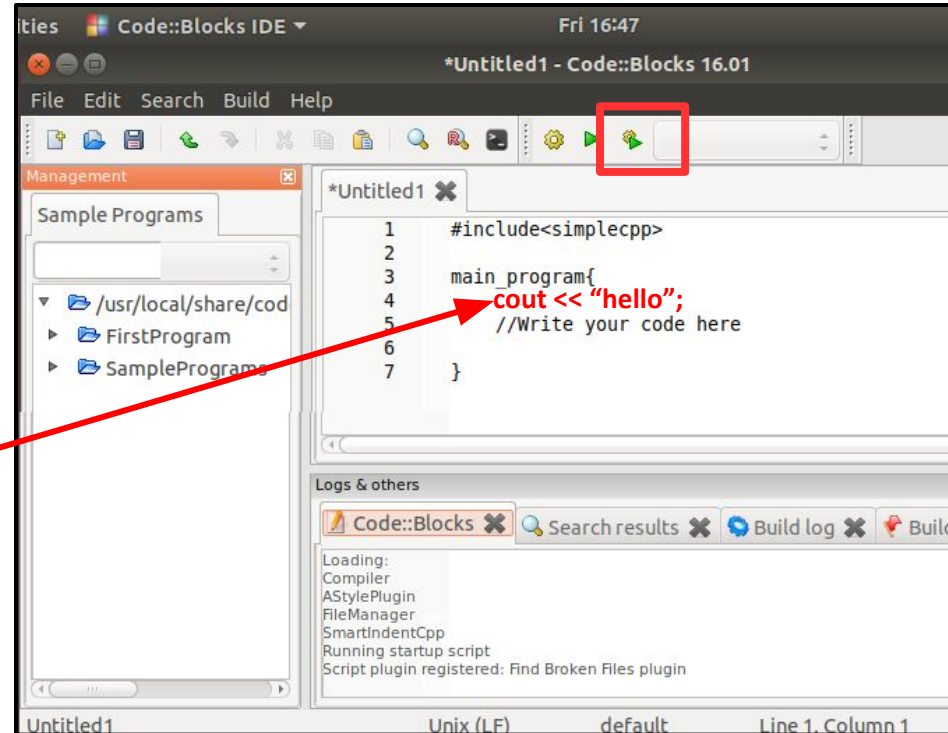


- A new window will open.
- Select **GCC with simpleCPP**
- Click Ok
- This screen appears only once
- You may or may not get this screen



# Code::Blocks (Basic Program)

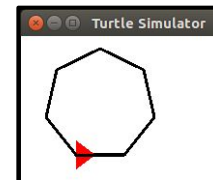
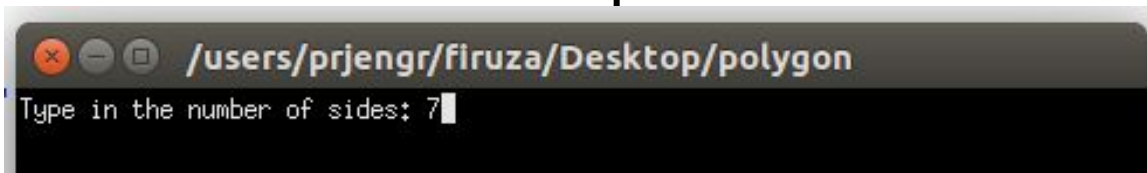
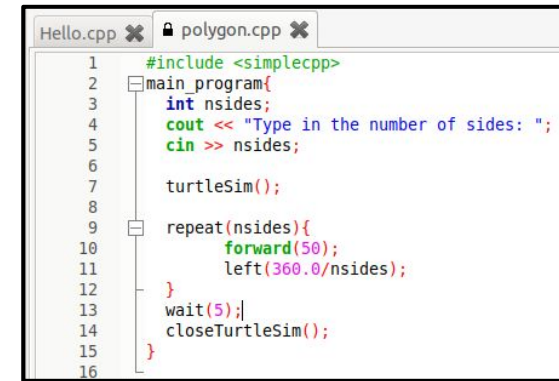
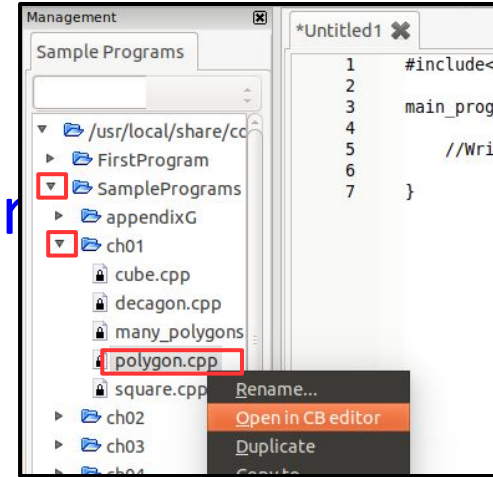
- Save the file
- as `hello.cpp`
- in your home directory
- Write the following after `main_program{`
  - `cout << "hello";`
- Click **Build and run** 
- A new window opens up





# Code::Blocks (Graphics Program)

- Sample graphic programs are available
- Expand **Sample Programs** → **ch01**
- Right click **polygon.cpp** → **Open in CEditor**
- Polygon.cpp file will open
- Save it in your home directory
  - Click **File** → **Save file as**
  - Choose **labuser** in the left pane
  - Click **Save**
- Click **Build and Run**
- A black window opens. Write **7** and **press enter**

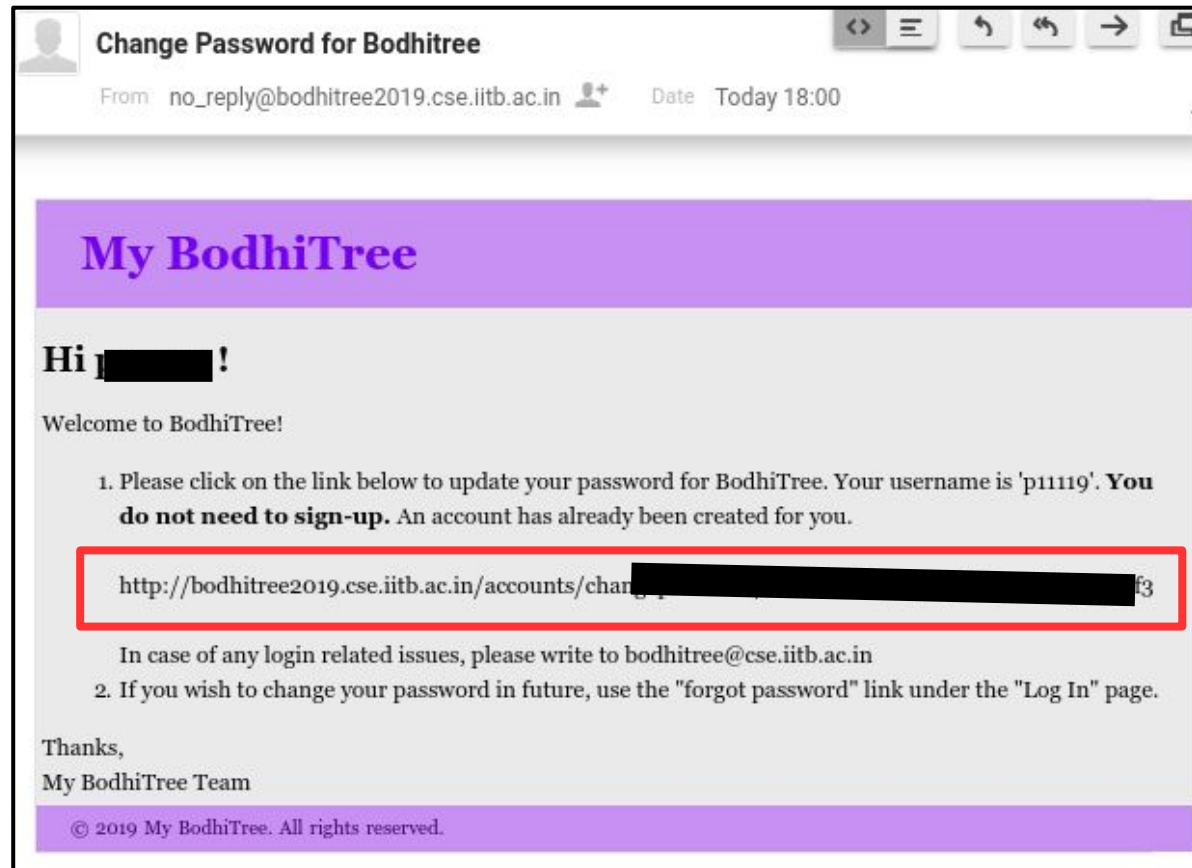


# s++ (Simplecpp)

- Press **Ctrl + Alt + t**. A terminal opens up
- Write **ls** and press enter
- You will see the file 'polygon.cpp'
- Write: **s++ polygon.cpp**
- Press enter. This will compile the program
- Write: **./a.out**
- Press enter.
- Write **5**
- Press enter
- The turtle simulator will open up showing a pentagon

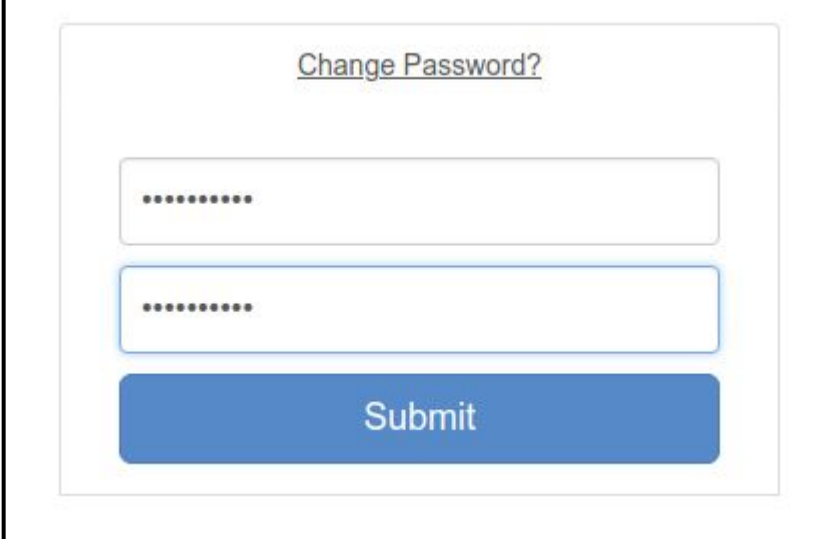
# Bodhitree (<http://bodhitree2019.cse.iitb.ac.in/>)

- You will get your lab assignments on this platform
- You will also have to submit your assignments here
- You would have received the email similar to this one.
- Click on the link given in the email

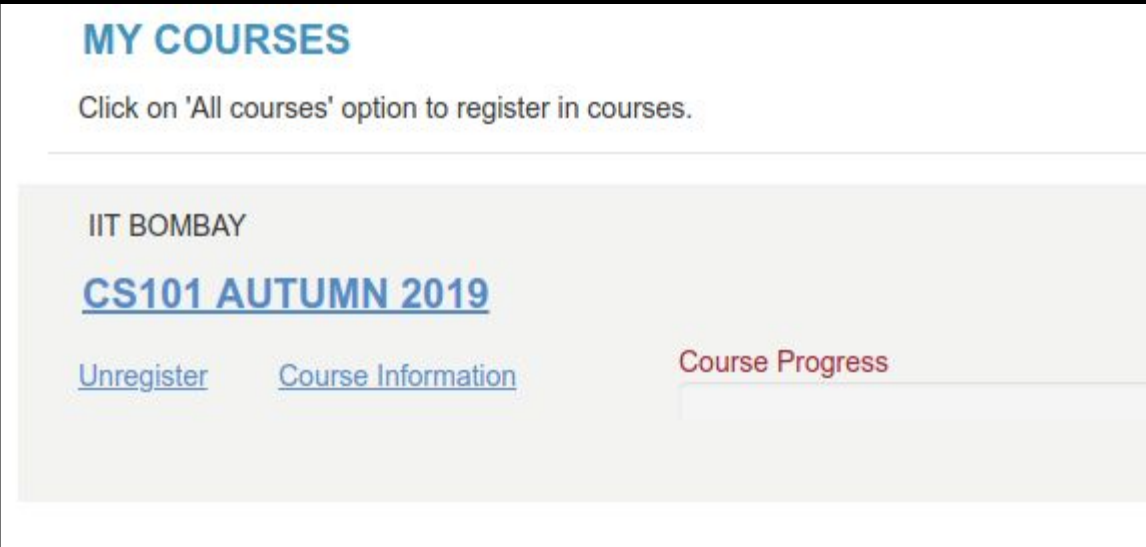


# Bodhitree

- Create a password for your account. Click **'Submit'**
- You will see CS101 course listed. Click on the link and explore



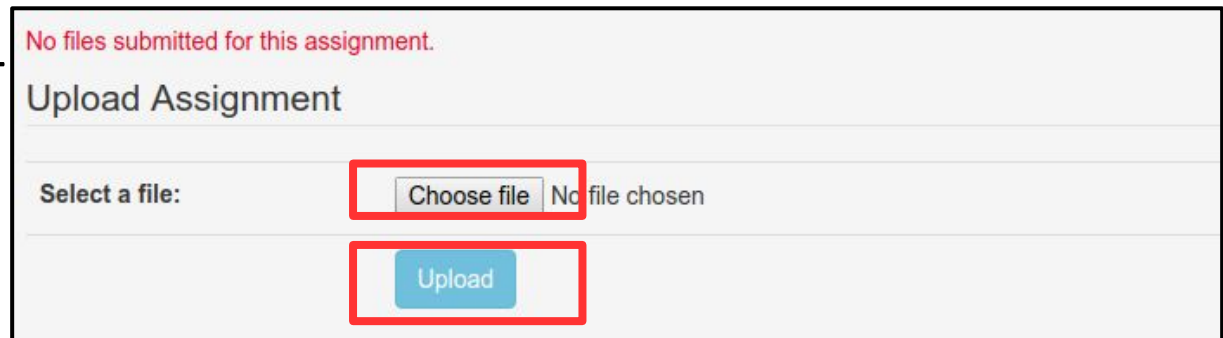
The screenshot shows a 'Change Password?' form with two password input fields and a 'Submit' button. The first input field contains a series of dots, and the second input field also contains a series of dots. The 'Submit' button is blue and located at the bottom of the form.



The screenshot shows the 'MY COURSES' page. It features a heading 'MY COURSES' and a sub-heading 'IIT BOMBAY'. Below this, there is a link for 'CS101 AUTUMN 2019'. Underneath the course name, there are three links: 'Unregister', 'Course Information', and 'Course Progress'. The 'Course Progress' link is highlighted in red.

# Assignments

- As a part of this lab, you need to
  1. Fill the google form
    - <https://tinyurl.com/cs101-a19>
  2. Submit your hello.cpp file on bodhitree
    - Login into <http://bodhitree2019.cse.iitb.ac.in/>
    - Select CS101 → Programming Assignments
    - Click Lab 1 Upload



No files submitted for this assignment.

Upload Assignment

Select a file:  No file chosen

# Homework / Extra work

- Try out simplecpp programs done in the class

## **ENDum**

1. Have you filled the feedback form?
2. Bodhitree *hello.cpp* submission is required.