

USING

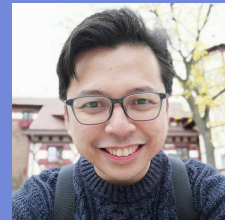


DISCORD

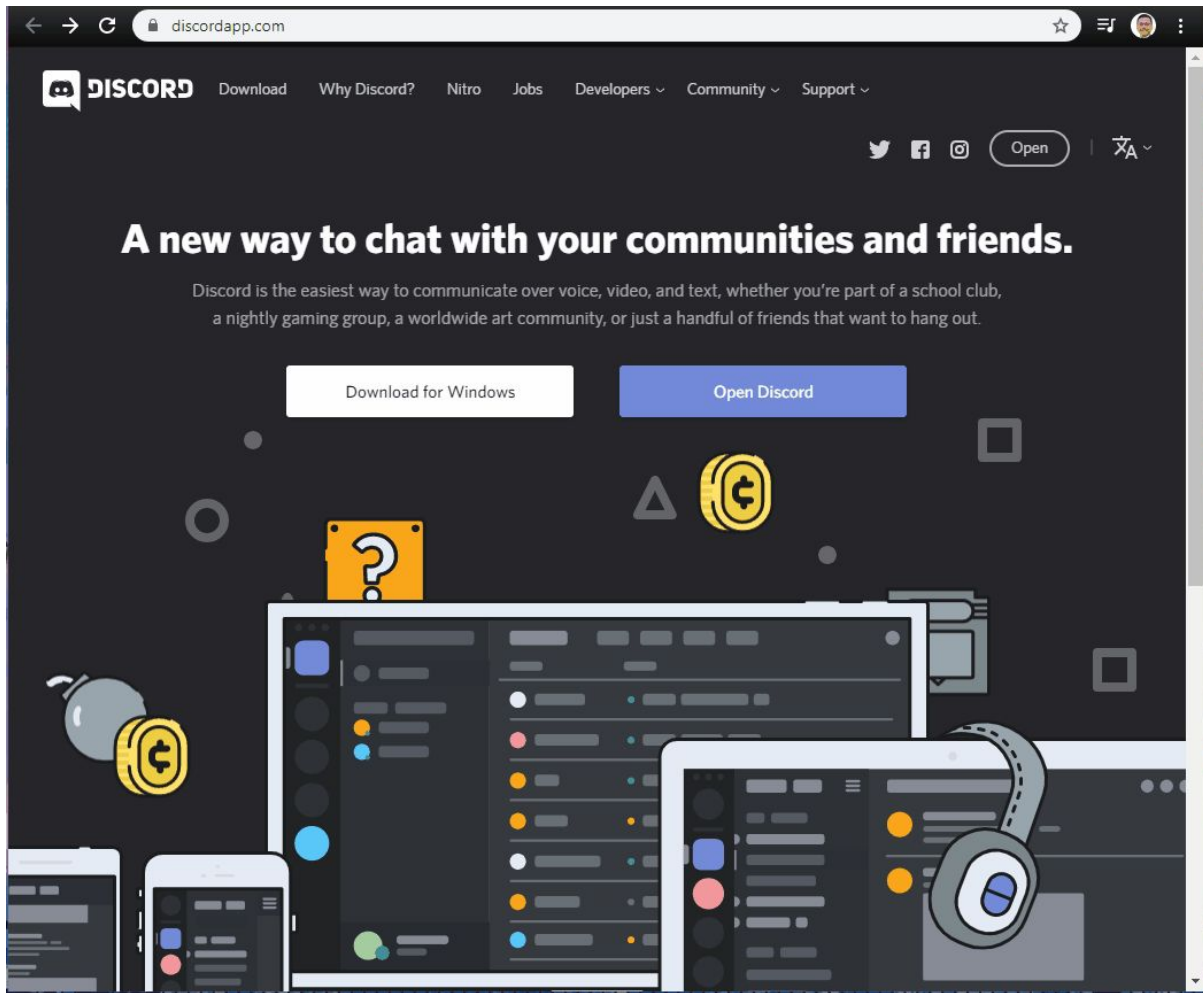
FOR ONLINE TEACHING

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Faculty of Engineering



UPM
UNIVERSITI PUTRA MALAYSIA
BERILMU BERAKTI



Go to:

discordapp.com

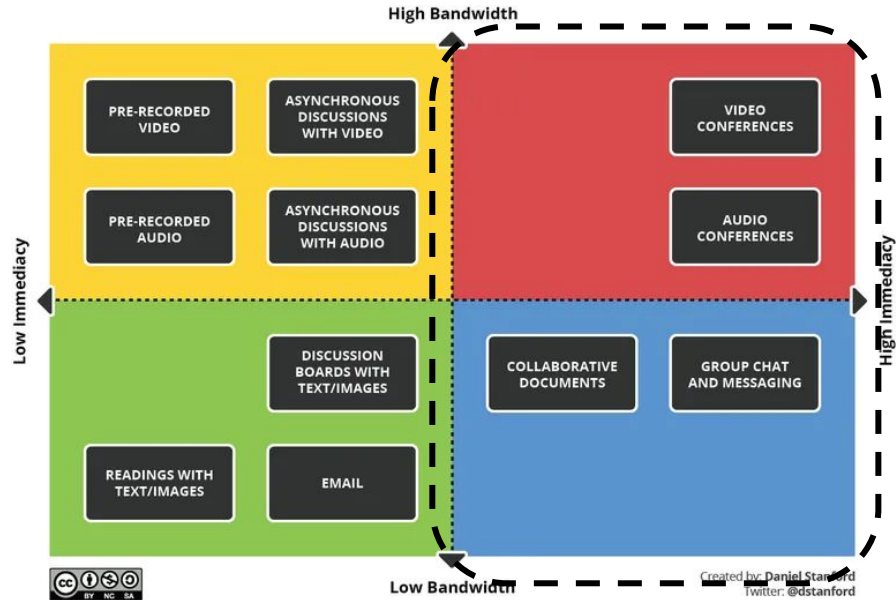
to download and install.
Only takes minutes!

What is Discord?

- Discord is a **group-chatting platform** originally built for gamers, but which has since become a general use platform for all sorts of communities.
- Discord is divided into **servers**, each of which has its own **members, topics, rules, and channels**.
- Discord also allows users to **voice- and video-chat**, as well as **livestream screens, webcams and other programs** from their computers.

Why Discord?

- It's **free, easy** to setup and use, and **lightweight**
- Many students probably already have it (*ask them!*)
- There is **no limit** to the number of users or usage time
- **Livestream screens, webcams and other programs from your desktop**
- Communicate with many students via **text, voice,** and **video**
- Allows uploads, share links/videos. Chats are saved.



For High- and Low-Bandwidth Teaching Red & Blue Zone

- Collaborative group work
- Screen-sharing
- Text communication and file-sharing
- Real-time or asynchronous

1. Setup

Create a server

Set teacher & students roles

Set up channels

2. Demo

Go Live!

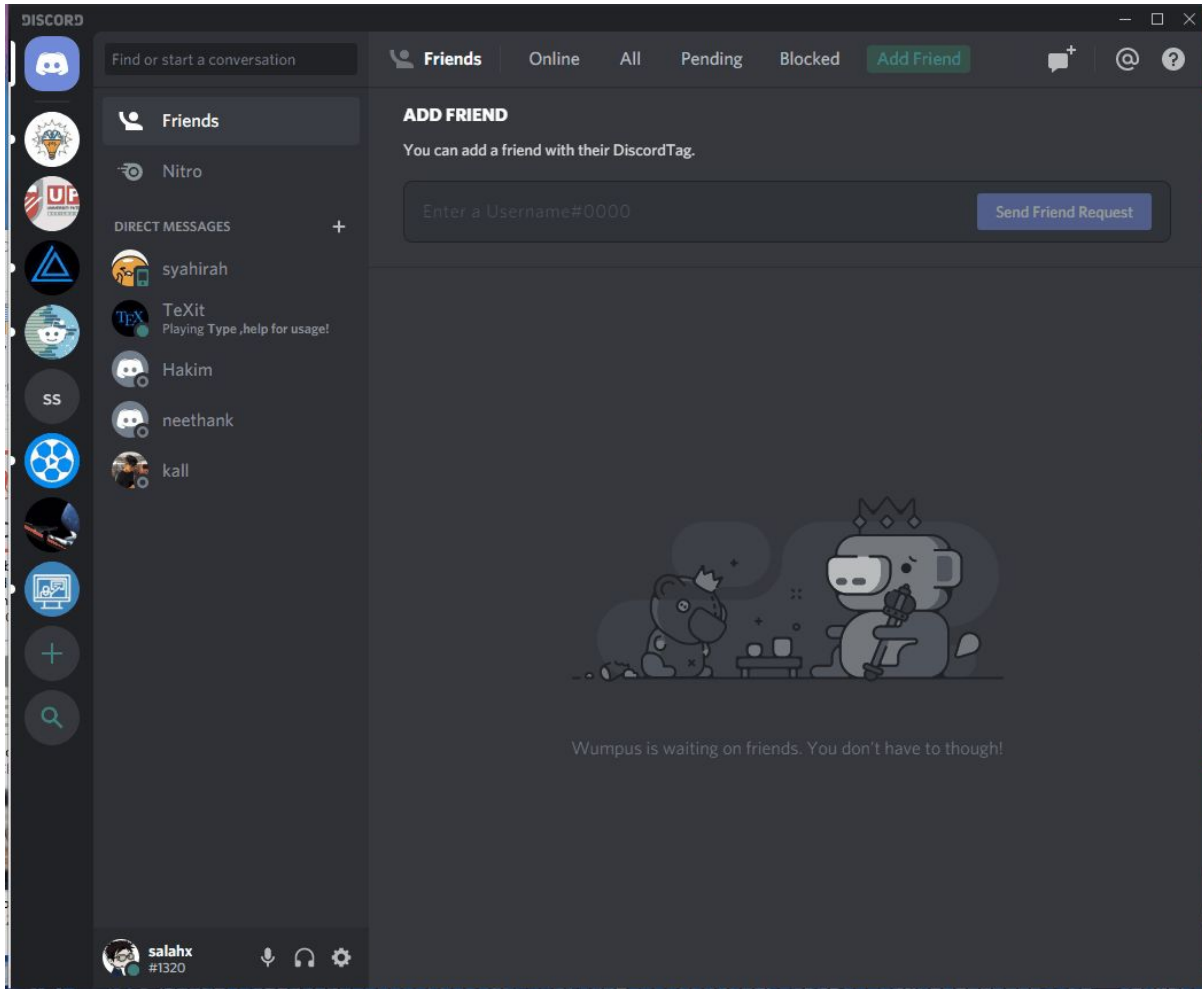
Live Demo

3. Extras

ScreenToGif

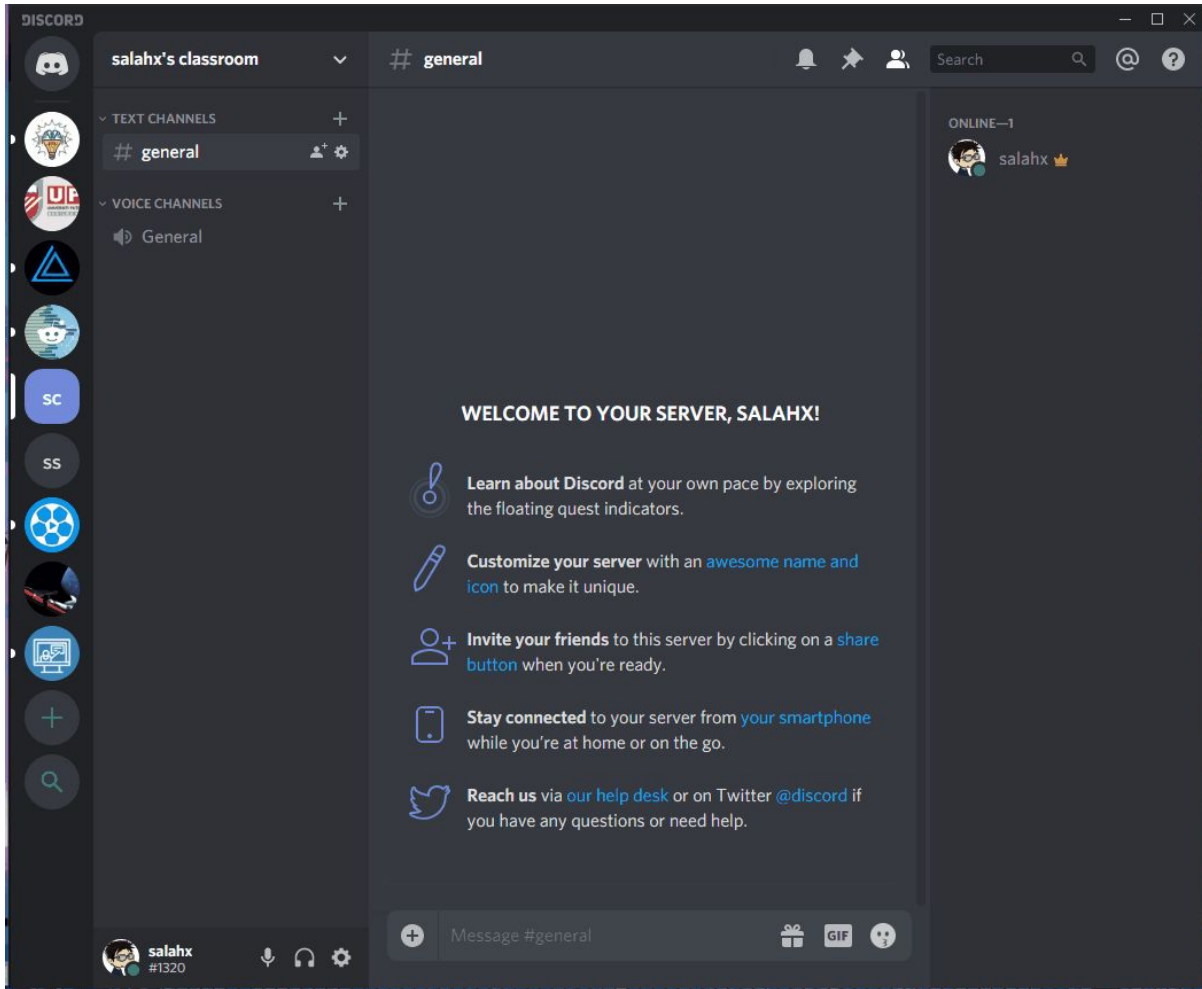
OBS - Screen Recording

TeXit Bot (for math)



First, create your classroom server

1. Click on the **'+' sign** at the left-hand menu
2. Click **'Create a server'**, give it a name
3. You'll be given an **invite link** for your students to join in. Keep this handy.
4. Voila! Your server is ready.

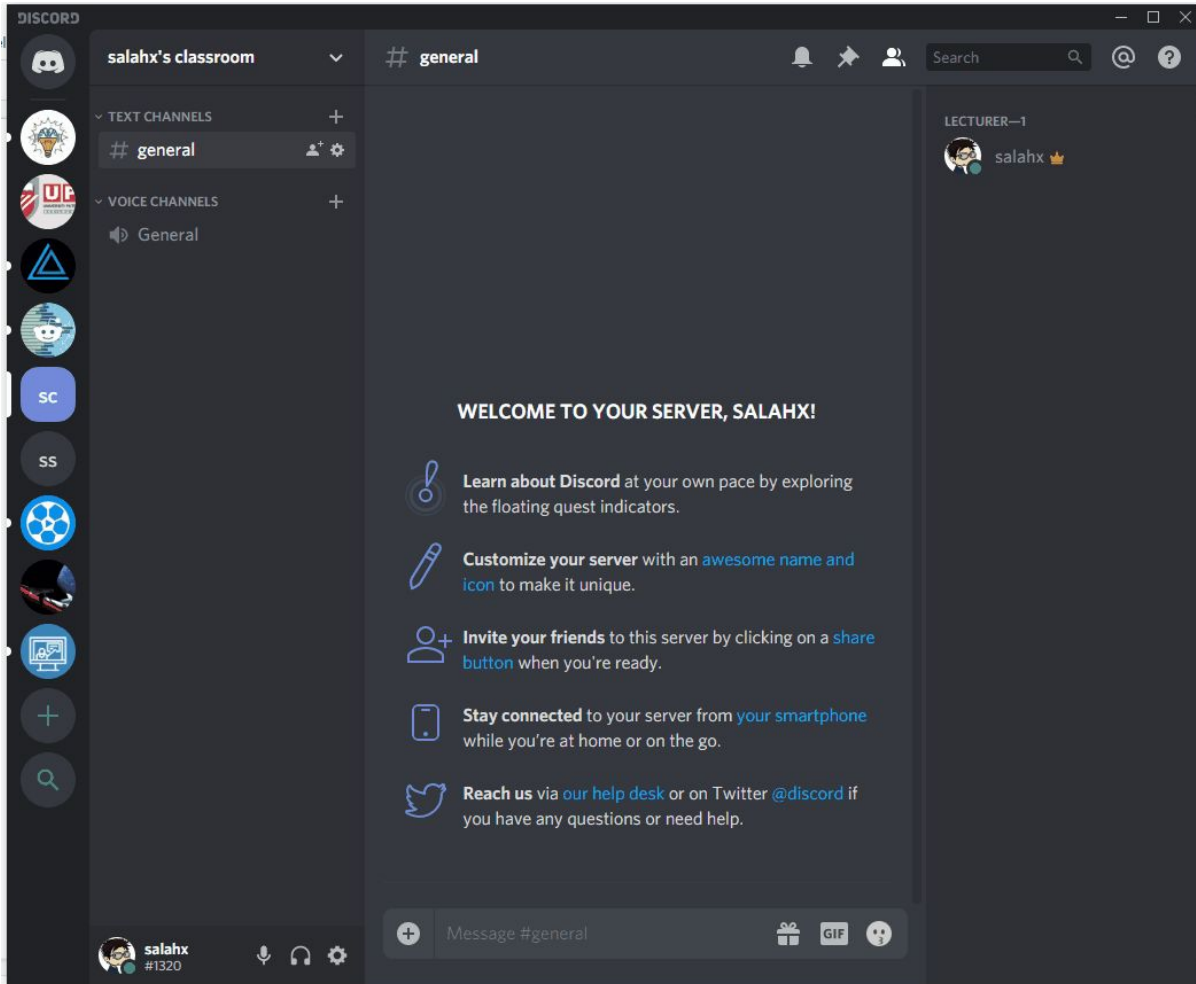


Second, let's do some Server Setting and Roles

1. Click your class' name on the top left. Click **Server Settings**
2. Choose **'Singapore'** as your server region for a more stable connection
3. **Create a new role 'Lecturer'** that has a complete control of the server.
4. Assign yourself the role as **'Lecturer'**.

Other Classroom Role Examples


- **@Class Rep** role - In order to make sure your Class Rep have the power to help manage and moderate the server, you can give them "*Administrator*" permissions (which will allow them to have all of the permissions in the permissions list)! With great power comes great responsibility, so make sure to choose wisely when deciding who you give this permission to!
- **@Student** role - On the other hand, in order to make sure that your students aren't editing the channels as well, make sure to *remove all Management related permissions (especially the dangerous "Administrator permission)*, and only enable the general Text and Voice permissions that you'd like!
- **@Team Leader** role - If your students are working together as a team on a project, and you want to be able to directly notify the team leader on updates for the group, you can also create a separate role and enable the "*Allow anyone to @mention this role*" permission! This way you can easily type **@Team Leader** within the chat to get their attention!



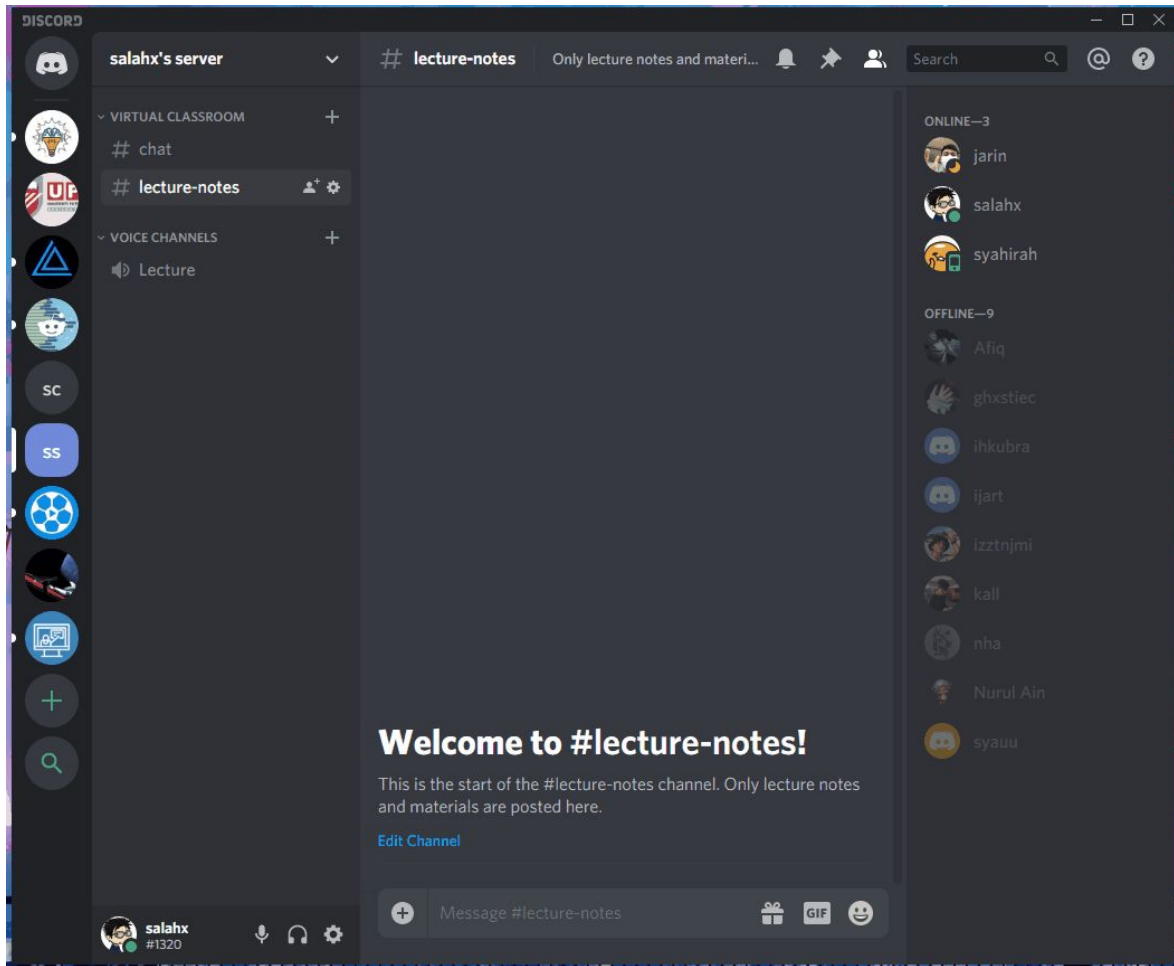
Third, setup new channels

1. A **Text Channel** will allow anyone to post messages, upload files and share images for others to read at any time.
2. A **Voice Channel** lets your students get together, talk and Go Live so others can share their screens and collaborate together.

Other Channel Examples

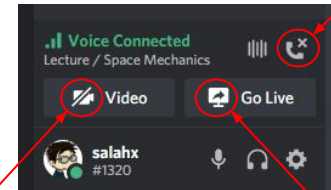
- **#Chat** A Text Channel for general discussion. This can be the place where students can communicate with you and the rest of the class. Important.
-  **Lecture** Another important one. A Voice Channel in which you can use your screen share or webcam and mics to conduct your class. Click on the selected voice channel and click the '**Go Live**' button at the bottom left corner to start broadcasting.
- **#lecture-notes** A Text Channel for lecturers to post lecture materials (pictures, videos, slides, etc). Only lecturers can have permission to post in this channel. No discussion here, only **@Lecturer** posts class materials.
- **#announcements** Another Text Channel for lecturers or admins to keep students up to date with class and server information. Only **@Lecturer** and **@Class Rep** can have permission to post in this channel.

Now you're all set!



To start screen-sharing/ lecturing

1. Click on a **Voice Channel** of your choice
2. Click '**Go Live**' (bottom left)
3. Choose '**Screens**' for screensharing
4. To include your webcam, click the '**Video**' icon
5. To disconnect click the 'Phone x' icon



to turn on webcam

to screen-share

Some tips during online lecturing

- Mute all microphones - use “Push to Talk”
- Control who can share screen
- Employ active learning!
- Keep your online session short. Keep your video even shorter. But you can still make the learning longer.

DISCORD

Space Mechanics

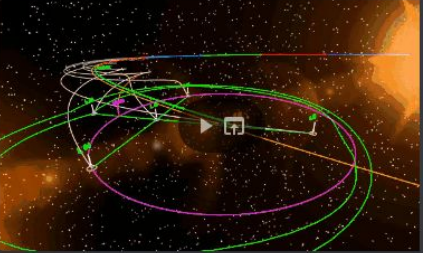
lecture-notes

Only lecture notes and materi...

salahx **Part 4: 3-body Problem**
Who doesn't love a good animation. This is an animation showing the Lagrange Points of Earth-Moon-Satellite system as it is going around the Sun.

<https://www.youtube.com/watch?v=z52WWLE8b8o>

YouTube
3D4U
lagrange points animation



7 April 2020

17:29 salahx How is it hanging?
Are you familiar with WolframAlpha? If not, get familiarize with it. It works a lot like a super advanced calculator.
Look at this page and you can find what you need in

Message #lecture-notes

SENSEI—1
salahx

SENPAI—1
wybie syahirah

ONLINE—6
asfeena
clenneth
najmehellme
Playing Dota 2
Rythm BOT
siputsedut
Playing Raft
TeXit BOT
Playing Type ,help for usage!

OFFLINE—59
Adam Buqhary
AddinieR
adeib
adlina nazri
aienuddin
aienuddin

Asynchronous T&L

You can leave your notes, video links, gifs, pictures for your students to access later.

You can also set a **text channel #assignment-help** for students seeking help on projects, HWs, etc.

Set up also a **voice channel #breakout-group** for students to have their own screen-session between them.

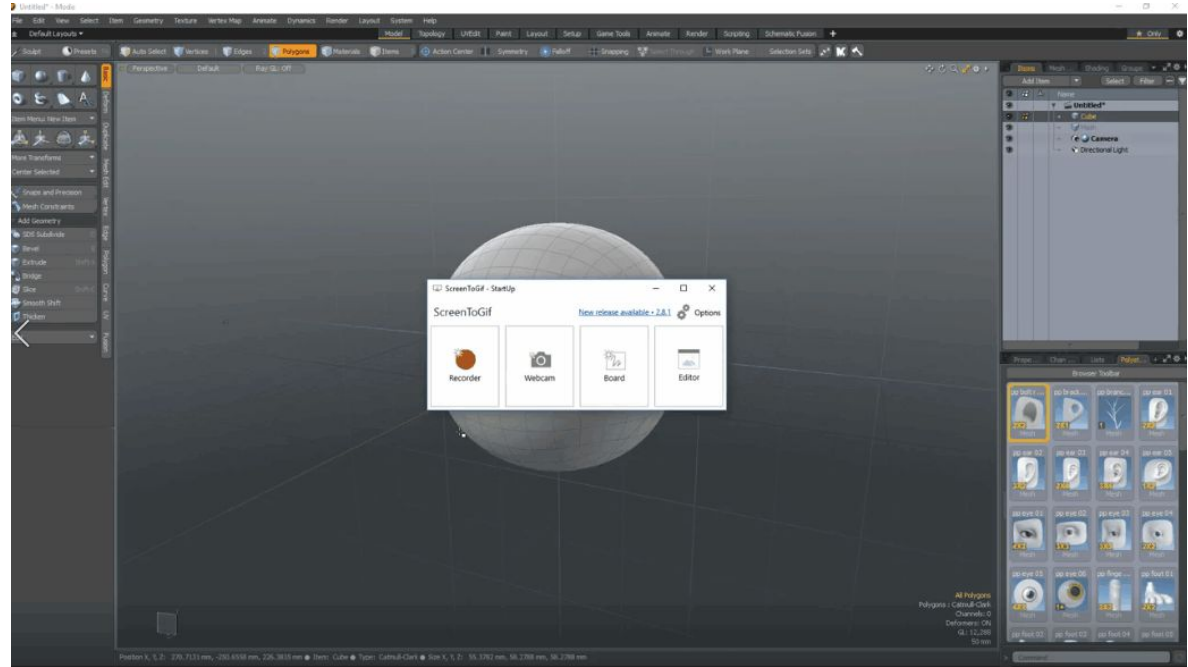
Cool stuff: **ScreenToGif**

<https://www.screentogif.com/>

A free tool that enables you to **record a selected area of your screen and save it to a GIF**

To use, simply click the record button and size the position of the frame to define the capture area push the record button record activity on your screen and then push the stop button. Comes with a built-in editor to adjust your recording to your liking

You now have a GIF ready to share.



A GIF is basically a series of images placed together to make a short, soundless video clip that plays on repeat. Great alternative to a video, especially for low-bandwidth online teaching and learning.

Cool stuff: **OBS (Open Broadcaster Software)**

<https://obsproject.com/>

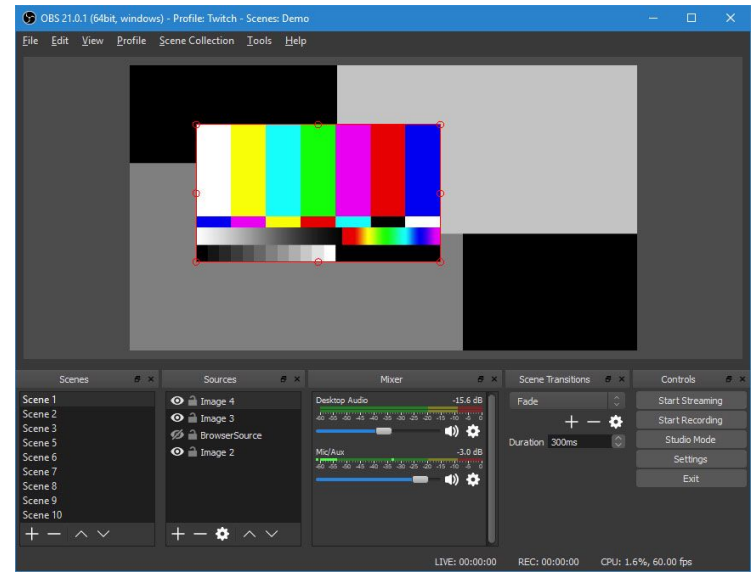
is a free and open source software for video recording, screen recording and live streaming. Stream to Twitch, YouTube and many other providers.

Can record your screen, windows and your webcam, including audio in and out.

Easy and very straightforward to use. Perfect for a quick screen recording your live lecture. My personal choice.

Watch

https://www.youtube.com/watch?v=DTk99mHDX_I
for a quick (8-mins) beginner guide on using OBS.



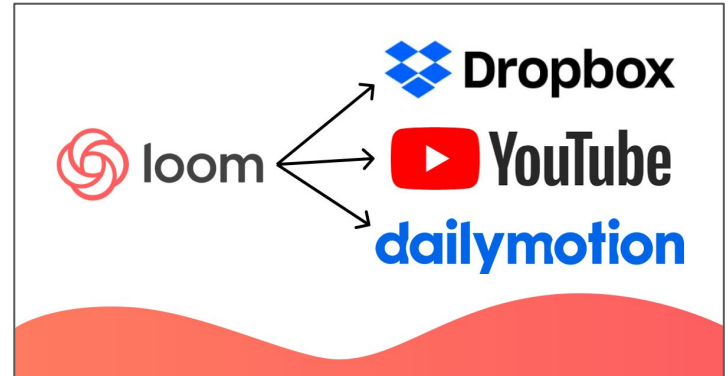
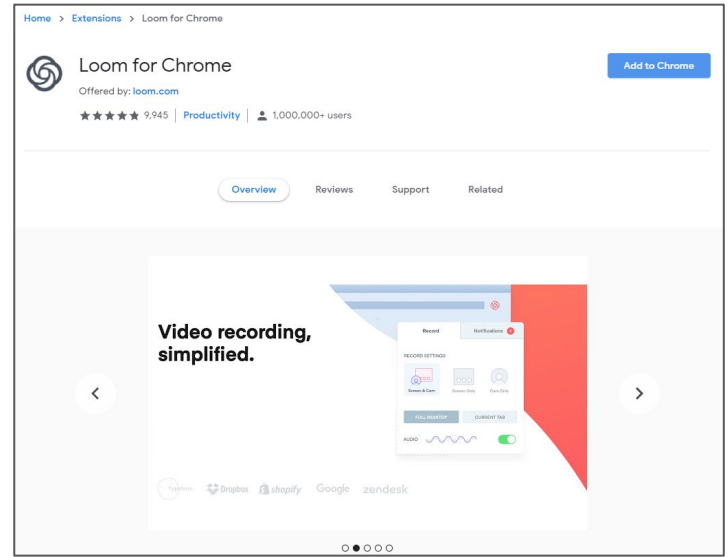
Cool stuff: **Loom**

Loom is a platform that allows you to make quick videos using a lightning-fast video recorder capable of capturing your screen, webcam, and microphone.

Very user friendly. Also integrates really well with G Suite.

Add it to your Chrome extension
<https://chrome.google.com/webstore/detail/loom-for-chrome/liecbddmkiihnedobmlmillhodjkdmb>

Watch
<https://www.youtube.com/watch?v=jwZfGlaF3rY>
(4+ minutes)



Cool stuff: TeXit Bot (a Discord bot)

<https://top.gg/bot/510789298321096704>

A **discord bot** is something that'll help you make do things in your server easier.

TeXit Bot can be used for enhancing mathematical communication.

Its features include:

- High quality configurable **LaTeX** rendering
- **Wolfram Alpha** integration, with both image and plaintext output.
- **Nlab** search, a calculator command

```
00:47 salahx $M= \frac{\sqrt{mu^2}\{h^3\}t(1-e^2)^{3/2}}{h^3}
```

00:47 BOT TeXit salahx:

$$M = \frac{\mu^2}{h^3} t (1 - e^2)^{3/2}$$

```
01:12 salahx $\mathcal{S}(x) = \begin{cases} \frac{\sqrt{x} - \sin \sqrt{x}}{x^{3/2}}, & \text{if } x > 0. \\ \frac{\sinh \sqrt{-x} - \sqrt{-x}}{(-x)^{3/2}}, & \text{if } x < 0. \\ 1/6, & \text{if } x = 0. \end{cases}

01:12 BOT TeXit salahx:


$$S(x) = \begin{cases} \frac{\sqrt{x} - \sin \sqrt{x}}{x^{3/2}}, & \text{if } x > 0. \\ \frac{\sinh \sqrt{-x} - \sqrt{-x}}{(-x)^{3/2}}, & \text{if } x < 0. \\ 1/6, & \text{if } x = 0. \end{cases}$$

```

```
22:06 salahx ,w plot cos(x), x=-3pi..3pi
```

22:06 BOT TeXit

Input interpretation

plot cos(x) x = -3π to 3π

Plot

```
salahx ,w {1/4, -1/2, 1} cross {1/3, 1, -2/3}
```

17:31 salahx Click "MORE" to display more results from Wolfram|Alpha

17:31 BOT TeXit

Input interpretation

$$\left(\frac{1}{4}, -\frac{1}{2}, 1\right) \times \left(\frac{1}{3}, 1, -\frac{2}{3}\right)$$

Result

$$\left(-\frac{2}{3}, \frac{1}{2}, \frac{5}{12}\right)$$

BOT TeXit

Vector plot

(axes not equally scaled)

BOT TeXit

Vector length

$$\frac{5\sqrt{5}}{12} \approx 0.931695$$

Normalized vector

$$\left(\frac{8}{5\sqrt{5}}, \frac{6}{5\sqrt{5}}, \frac{1}{\sqrt{5}}\right)$$

Spherical coordinates

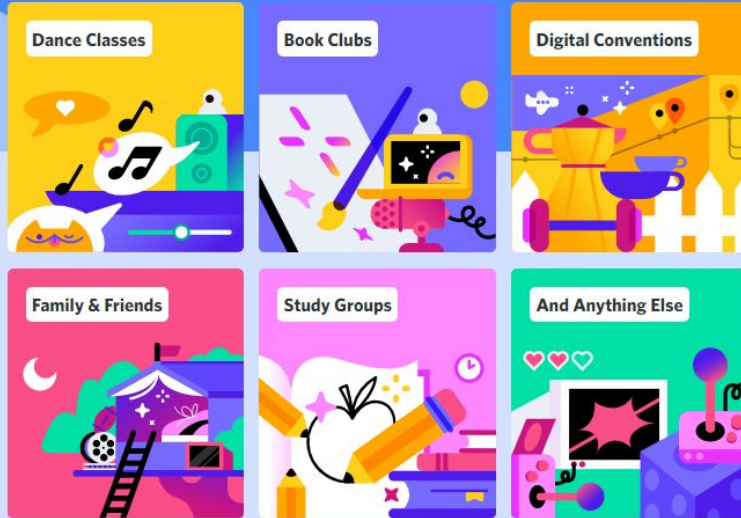
$r \approx 0.931695$ (radius),
 $\theta \approx 63.4349^\circ$ (polar angle), $\phi \approx 143.13^\circ$ (azimuthal angle)

Corresponding line segment

$$x = -\frac{2t}{3}, y = \frac{t}{2}, z = \frac{5t}{12} \text{ for } 0 \leq t \leq 1$$

How People are Using Discord to Keep in Touch

We created Discord to bring people together around games. We're humbled every day to learn how you use it for more.



Here are some helpful templates for keeping you and your communities close.



You've been invited to join
Global Trombone Players Unite



You've been invited to join
English 101 and 102



You've been invited to join
Art Community



You've been invited to join
Na'Vi Language Learners

You've been invited to join
Got Turnips?



You've been invited to join
Overwatch B Squad



You've been invited to join
Mechanical Keyboards Fans



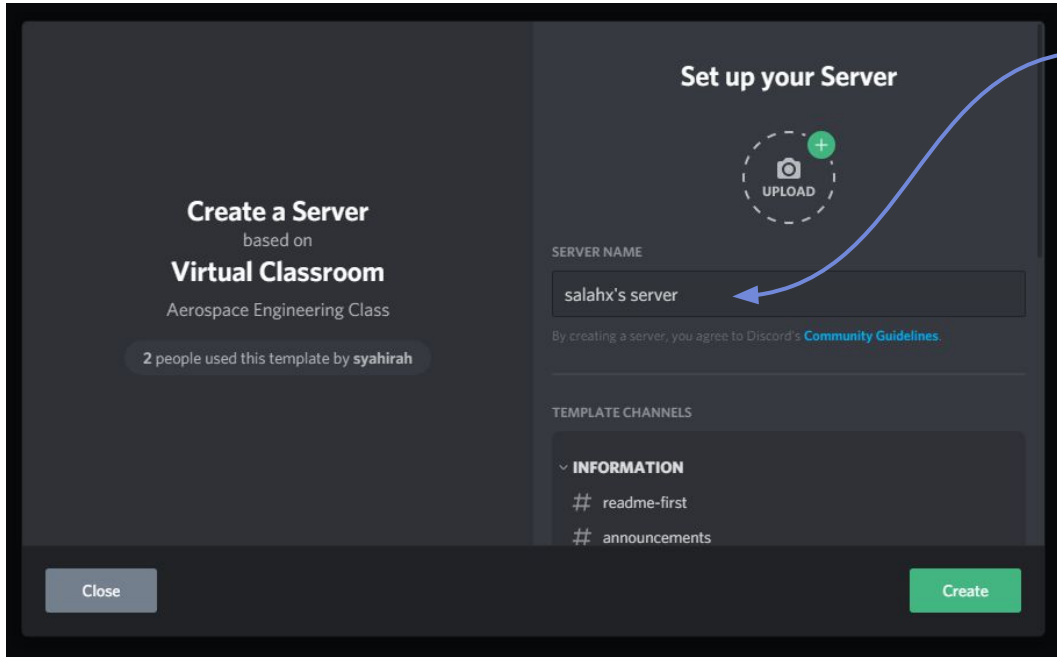
You've been invited to join
Subaru Fans



Go to:

**[discordapp.com/
why-discord](https://discordapp.com/why-discord)**

for a quick server setup
using existing
templates!

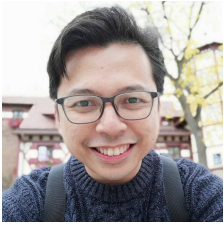


*Set your own
classroom server
name!*

Go to:

[https://discord.new/
XPvDarVGbDb7](https://discord.new/XPvDarVGbDb7)

for a ready made Virtual
Classroom template made by
us!



Dr. Salah



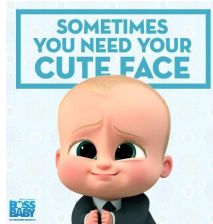
Nurul Ain



Afiq



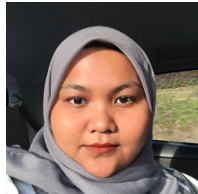
Izzat



Ijart



Faqihah



Alia



Wawa



Eimam



Kall.

Thanks to my super cool

← **Discord Team**

Aerospace Engineering
*EAS3811 Space Mechanics and
EAS3812 Satellite Technology*

Need more support?
Join the JKIPP UPM server at
<https://discord.gg/M3e4dwq>