- How is your project architecture related to the theory taught in the lecture?

  Project architecture is Client – Server.

  While the user send message via Line Apps to Line Server, and Line Server forwards the request to our cloud server. User enquiries through the Line Apps as user interface, it passes the message to Line Server, and Line Server pass the message to our cloud Server to respond the enquires from different clients. Our cloud server would grab or update the relevant information from or to database, such as Redis and MongoDB. Actually, it works as remote invocation, Line and our cloud server work two-way communication, and Line Apps and Line server work two-way communication as well.

  Our server is also hosting an VM, from private cloud environment, multiple servers creating an OpenStack platform, allows, to create various virtual machines, Virtualization.

  For architecture pattern, it works as layering.

  Application: Line App is the application to allow the client enquire questions

  Middleware: Python is the middleware to trigger the event from Line server to our cloud server to grab or update the relevant information from the database or to the database.

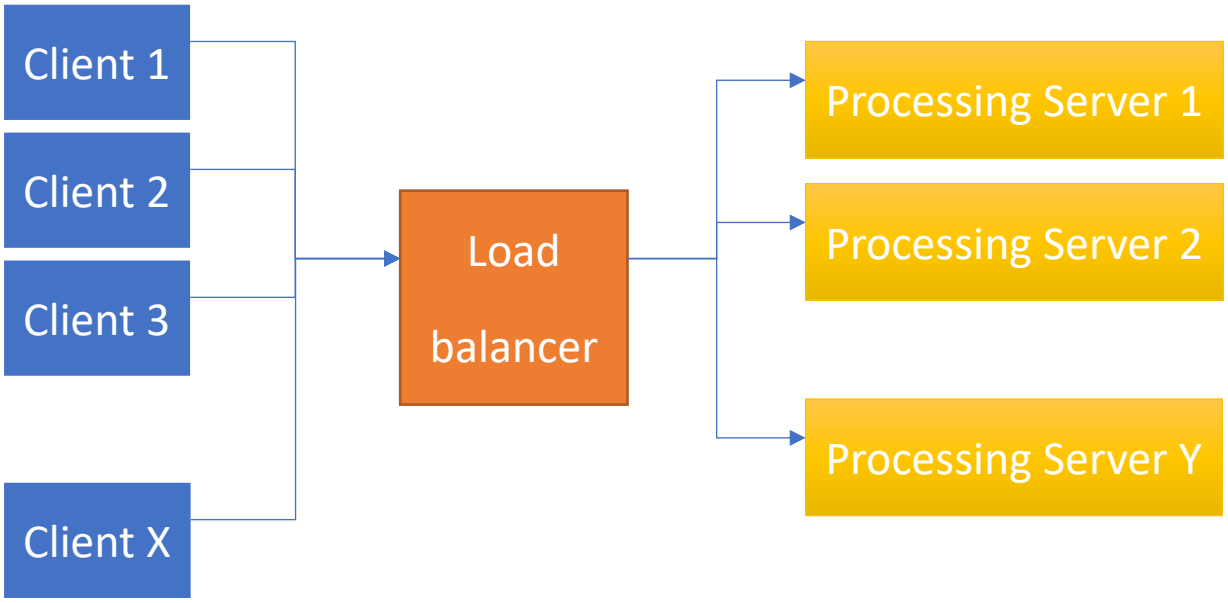
  Operating System: The Line App is working on iOS or Android

  Network and hardware: User can enquire question through their mobile devices via the WIFI or mobile networks to reach our server

- Can you demonstrate, with some screen cap, how to increase capacity of your chat bot service?

  Add a load-balancer before the processing server(s), and duplicate the processing server(s) as much as necessary, also it depends on the budget and cost effective. The load-balancer allocates the client requests to processing server according to number of requests are

processing by different servers. The traffic from users will be served by multiple servers like below diagram.



- Can you identify if you bot is one of the example of PaaS, IaaS, SaaS? Explain your answer.

  Our bot belongs to PaaS, because we can just need to develop the application and deploy the application to server. And then provide the url to Line. Not need to maintain database and operation system, software update, etc.

  By the way, we are using private cloud, and the private cloud environment, the hardware and software are maintained by ourselves. It can also be called On-Premises, instead of Paas , Iaas or Saas.