

Build a university course on Hyperledger Fabric using Hyperledger Umbra

Title	Build a university course on Hyperledger Fabric using Hyperledger Umbra
Status	COMPLETED
Difficulty	HIGH

Description

A growing part of our community is our partnership with academia. Hyperledger Fabric and other Hyperledger projects are being incorporated in to research and education in universities more and more all over the world. Hyperledger can aid the growth by preparing study materials, sample lab experiments and quizzes and tests that teach computer science students about distributed systems and consensus algorithms and cryptography. Hyperledger Umbra has streamlined the process of setting up a full Hyperledger Fabric network running on a single computer. It provides an ideal environment for students to learn Hyperledger Fabric administration as well as use it for running lab experiments and learning exercises. This mentorship is focused on producing a "classroom-in-a-box" for an introductory computer science course on distributed systems and algorithms that can be offered to universities that wish to use Hyperledger Fabric in their curriculum.

Additional Information

This mentorship is largely focused on writing educational material, quizzes and labs. There will be very little programming, if any, but the mentee must be willing to learn about Hyperledger Fabric and Hyperledger Umbra to a degree that affords them the ability to teach it to students through their writing.

Learning Objectives

- First and foremost the mentee will learn how to be a positive collaborator and contributor in an active open source project.
- Learn how to work within the Hyperledger open source ecosystem and culture.
- Apply writing skills to design, develop, and package a university level course on distributed systems and algorithms.
- Gain a better understanding of Hyperledger Fabric and Hyperledger Umbra.

Expected Outcome

- The construction of a classroom-in-a-box that introduces core concepts of distributed systems and algorithms using Hyperledger Fabric and Hyperledger Umbra as the example systems.
- A report on the process of designing and implementing the course material.

Relation to Hyperledger

This is directly related to both Hyperledger Fabric and Hyperledger Ursa as well as our educational outreach programs.

Education Level

The ideal mentee would be a university student that is studying the intersection of technology and education and writing. Candidates with strong technical writing skills will be preferred.

Skills

- Technical writing
- Computer literacy, especially with Linux administration, Docker, and Hyperledger Fabric
- Experience developing educational materials

Future plans

This will be the first of our university courses with hopefully more in the future.

Preferred Hours and Length of Internship

Full-time or part-time.

Mentor(s) Names and Contact Info

David Huseby, dhuseby@linuxfoundation.org, dhuseby on chat.hyperledger.org

Mentee Name and Contact Info

[Rafael Belchior](#) , rafael.belchior@tecnico.ulisboa.pt

Project Results

A self-contained university course on Enterprise Blockchain Technologies, available at:

<https://github.com/hyperledger-labs/university-course>

Final Report

The project outcome is a self-contained course that universities can leverage. Future work is extending this course and communicating results.



Enterprise Bloc...ember 2020 .pdf

Lightening Talk Recording



Build a univers...edger Umbra.mp4