Hyperledger Mentorship Project Presentation

November 2020

Add interactive examples to Fabric Python SDK

- **Introduction**
  - **Name**: Rohan Shrothrium
  - **Location:** Bangalore, India
  - **University:** Indian Institute of Technology, Dharwad
  - **Mentor(s):** Dixing Xu , Baohua Yang, Guillaume Cisco, Wang Dong
  - **Hyperledger Project**: Hyperledger Fabric Python SDK

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- **Project Description**:

  The main objective of this project was to gain a deeper understanding about the python sdk framework, add some interactive examples using jupyter notebook and add the missing functionalities of fabric v1.0.

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- **Project Objectives**:
  - **Obj 1:** Implement the remaining features for the release of Fabric Python SDK 1.0.0 LTS.
  - **Obj 2:** Add interactive examples using Jupyter Notebook.
  - **Obj 3:** Complete other open objectives that align with the roadmap.
  - **Obj 4:** Document the newly implemented features.

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- **Project Deliverables:** The main deliverables of the project are as follows
  - **Deliverable 1:** Implement higher level APIs such as Gateway, Network and Contract in the fabric-network module.
  - **Deliverable 2**: Add interactive examples using jupyter notebook so that new developers can easily understand the usage of the APIs.
  - **Deliverable 3**: Make the fabric-sdk-py v1.0.0 LTS release which supports v1.4 of hyperledger fabric.
  - **Deliverable 4:** Complete implementation of the possible features for compatibility with 2.0.

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- **Project Execution & Accomplishments**:
  - Completed the implementation of all higher level APIs in the fabric_network module.
  - Added sample code for all APIs using jupyter notebook.
  - Was a part of the v1.0.0 release for the python SDK.
  - Could not start implementation of the features required for Fabric 2.0.
  - **Ongoing:** Change the unit tests from solo consensus to raft.

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- **Recommendations for future work:**
  - Implementation of features required for v2.0.
  - Changing all tests from solo ordering to raft.
  - Updating the jupyter notebook when new features are implemented will help developers understand the code in a better fashion.
  - The higher level APIs for invoking and/or querying the chaincode may have to be updated with during the release of v2.0 based on the implementation of the lower level APIs.

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- **Project Output or Results**:
  - The major output from this project would be the implementation of the higher level APIs started in January 2020.
  - A list of all my merged PRs can be found here.
  - Working on porting all the test cases from Solo ordering to Raft ordering services.

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- **Insights Gained**:
  - Major takeaway would be learning how to collaborate with mentors remotely over platforms like rocketchat, telegram and zoom.
  - Working on such a large scale project with multiple dependencies helped me improve my coding skills.
  - Being a part of such a large community helped as I could easily ask doubts on general channels and get responses very quickly.
  - Collaborated and interacted with other mentees.


THANK YOU!