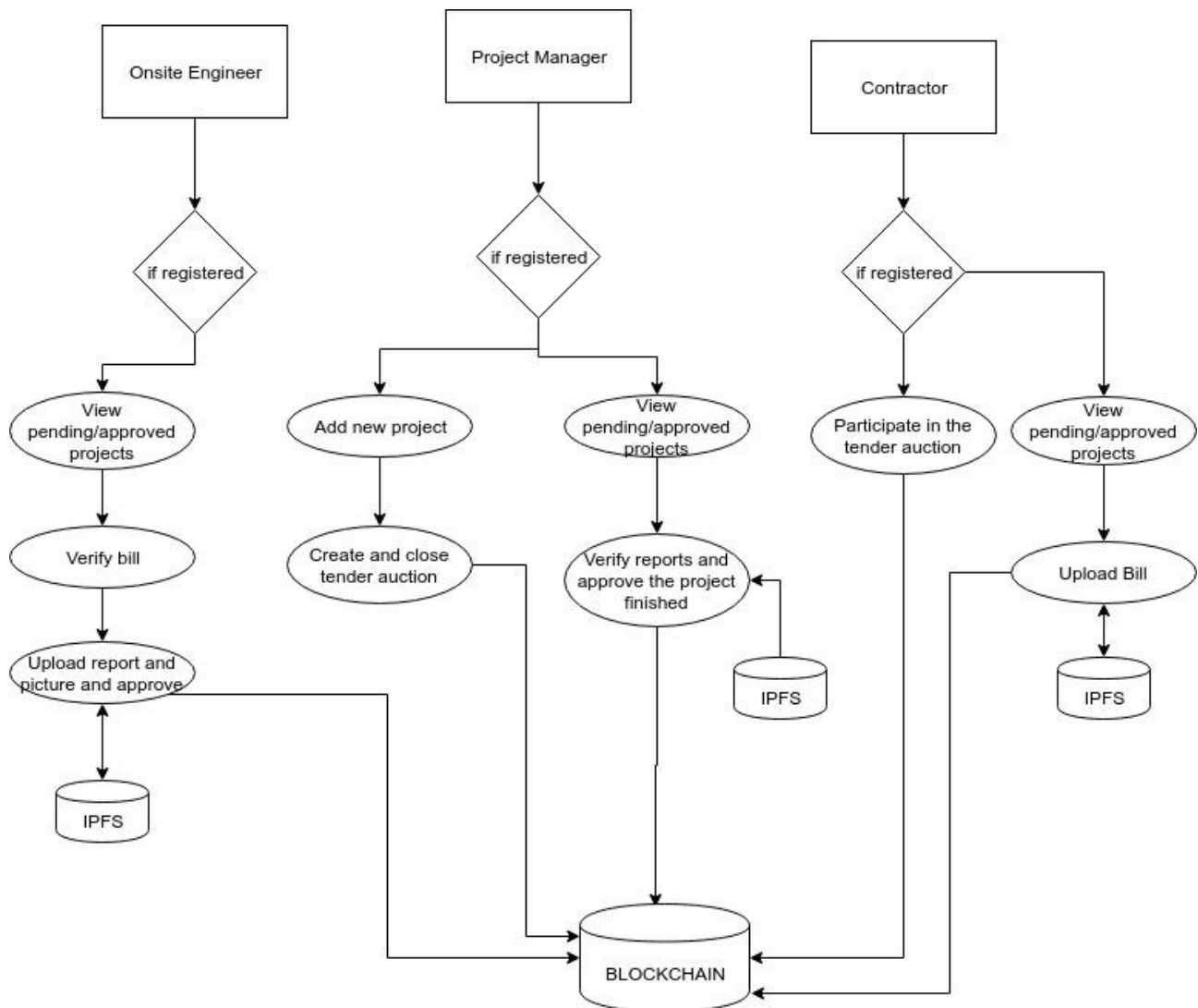# e-PROJECT

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DOCUMENTATION OF CODE FLOW

CLIENT SIDE

There are 3 modules in this application whose entry points are the same. They are 3 user modules all starting from the login() where the sawtooth system checks if such a user is registered in its system and whether such a key exist.

Project Manager Module

The project manager is able to perform
1)Add Project : add_project_tender()

 2)View Pending projects : approve_proj()

3)Approved Projects

4)Tender Auction : add_proj()

add_project_tender(): This functionality allows the manager to add project along with its bid amount and on-site engineer to be assigned by associating it to a unique id. Once the project is added its directly moved up for tender auction

approve_proj(): This function view the list of pending projects where he/she can approve it if he/she finds it completed. The reports and bills given by other users are dispayed here so that he can verify it before approving. He/she approves the projects as completed using this function.

Approved Project: Where he / she can see all the completed projects that he/she has ever issued.

add_proj(): Where the project is put for the auction.The auction ends when the button is clicked and the project will be assigned to the contrator.

On site Manager Module

Onsite Manager is able to perform
1)View approved projects :

 2)Approve Project :

3)Upload reports or photos : e_approve()

View approved projects : He is able to view the list of projects assigned to him and list of projects that he/she has approved of.

Approve Project: This is an action to be performed in the Pending Approvals page where all the projects with bill submitted by their corresponding contactor is displayed. The engineer can verify whether the contractor has uploaded the correct bill.

e_approve() : The onsite engineer will have to upload the site photos or work reports of the project before submitting it for final approval of completion by the project manager.

Contractor Module

The contractor is able to perform
1)View List

2)Upload Bills : uploaded()

3)Bidding : c_tender_bid()

View List : List of projects that he /she won in tender and list of projects that he / she has completed

uploaded(): Update the pending projects and send it for the approval from the onsite manager and project manager along with the bills that has been issued by the onsite engineer.

c_tender_bid(): Participate in the tender auction for the contract where he can place his bid.

logout(): The users are able to logout and clear all session data

TRANSACTION PROCESSOR SIDE

projectfortender() : This function is called when the project is added by the Project manager for tender. The details regarding esstimated amount and the onsite engineer assigned are taken here.

bidfortender() : This function fetches the bid amount from the contractor and stores it with its corresponding project's bids.

addnewproject() : This function is called when the project manager decides to close the auction down and assign the contract to the appropriate contractor.

contractor_uploaded_bill() : This function deals with the bill that is applied by the contractor. It is uploaded to ipfs and the hashvalue is stored in the blockchain network.

eapprove() : This function is called when the onsite engineer has decided to approve the bill uploaded by the contractor along with his own reports and site pictures. The data is uploaded to ipfs and hashvalue stored in the blockchain network.

project_approve() : This is the function that deals the final completion of the project. The project manager will verify the reports and bills and decide to finalize the project completion by calling this function.