

Overview

IP or intellectual property refers to anything created using one's intellect such as a poem, an art, a business plan, inventions and so on. IP is protected by law in the form of patents, trademarks, and copyrights, which help the owner to earn recognition and financial benefits from their creations. With the ease of availability of the Internet, it has become very easy to copy digital assets. In our project, we use blockchain(Hyperledger Fabric) to verify the ownership of intellectual property and provide the facility of transaction of these IP between users.

Product Description

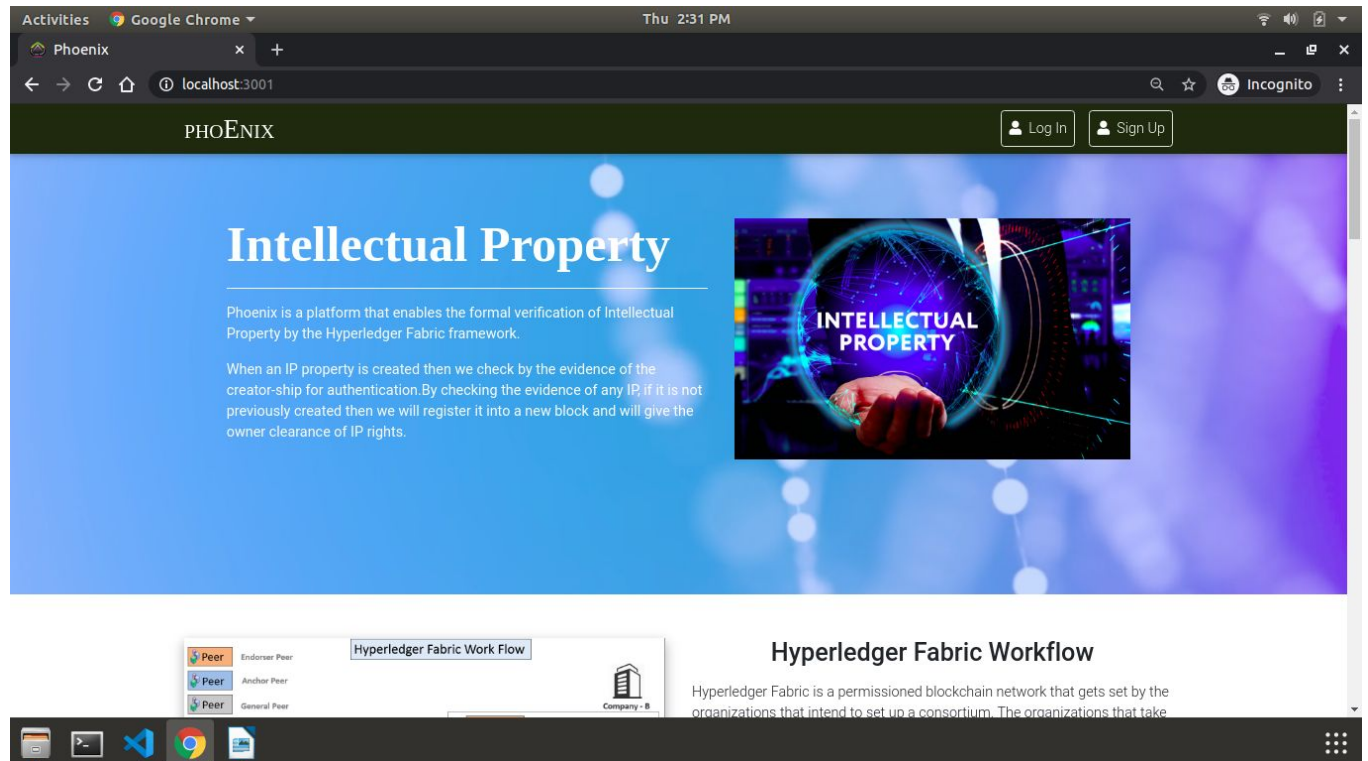
This section points out the functions and facilities provided by our project

1. One can upload two types of intellectual property
 - a. Image
 - b. Document
2. There's a homepage showing uploaded IP (like Instagram, Facebook)
3. One can react on another person's IP
4. Two lists are provided in the UI
 - a. Top Influential People - Sorts all the registered users by the no. of IP they uploaded.
 - b. Popular Intellectual Property - Shows a list with the users whose IP have received most reactions from other users.
5. If a user tries to upload an intellectual Property which has already been uploaded by another user, the system shows error and shows the name of the owner.
6. One can buy or sell an intellectual property from/to another user.
7. A user can search intellectual properties by the name of their owner.
8. There's a feed which is distinct for every user. Because it only shows one's own intellectual property.
9. A log is maintained for each intellectual property to keep track of from which user one has bought the IP.
10. A profile is maintained for every user where
 - a. The no. of owned Intellectual Property
 - b. User's balance (only shows for logged in user)
 - c. Public Key is provided

User Manual

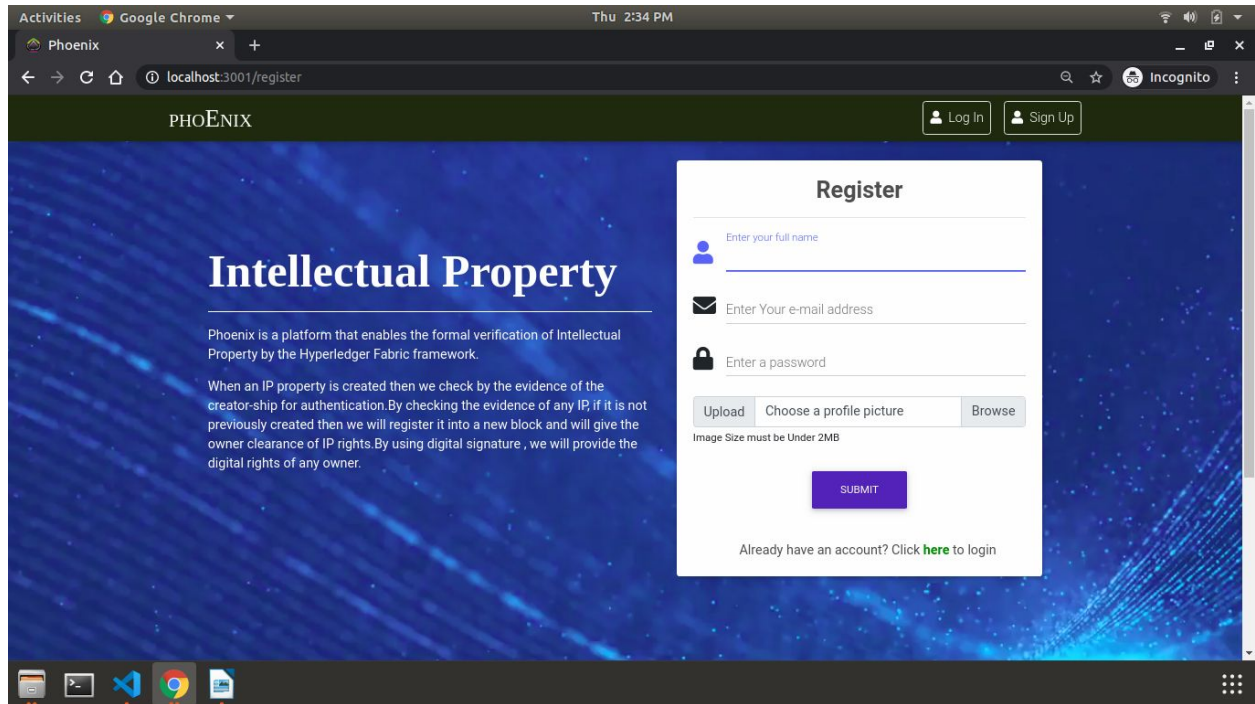
Index Page

This is our index page. A user can go to sign-up or log-in page from here.



Sign-up Page

This is our sign-up page. The user must submit his/her name, email, password and a profile photo(which must be less than 2 mb) to register in the system.



The screenshot shows a web browser window with the URL `localhost:3001/register`. The page has a dark green header with the "PHOENIX" logo and "Log In" and "Sign Up" buttons. The main content area has a blue background with a grid pattern. On the left, the heading "Intellectual Property" is followed by a paragraph: "Phoenix is a platform that enables the formal verification of Intellectual Property by the Hyperledger Fabric framework. When an IP property is created then we check by the evidence of the creator-ship for authentication. By checking the evidence of any IP, if it is not previously created then we will register it into a new block and will give the owner clearance of IP rights. By using digital signature, we will provide the digital rights of any owner." On the right, a white "Register" form contains input fields for "Enter your full name", "Enter Your e-mail address", and "Enter a password". Below these is a profile picture section with "Upload", "Choose a profile picture", and "Browse" buttons, and a note "Image Size must be Under 2MB". A purple "SUBMIT" button is at the bottom of the form. A link "here" is provided for users who already have an account.

Activities Google Chrome Thu 2:34 PM

Phoenix localhost:3001/register Incognito

PHOENIX Log In Sign Up

Intellectual Property

Phoenix is a platform that enables the formal verification of Intellectual Property by the Hyperledger Fabric framework.

When an IP property is created then we check by the evidence of the creator-ship for authentication. By checking the evidence of any IP, if it is not previously created then we will register it into a new block and will give the owner clearance of IP rights. By using digital signature, we will provide the digital rights of any owner.

Register

Enter your full name

Enter Your e-mail address

Enter a password

Upload Choose a profile picture Browse

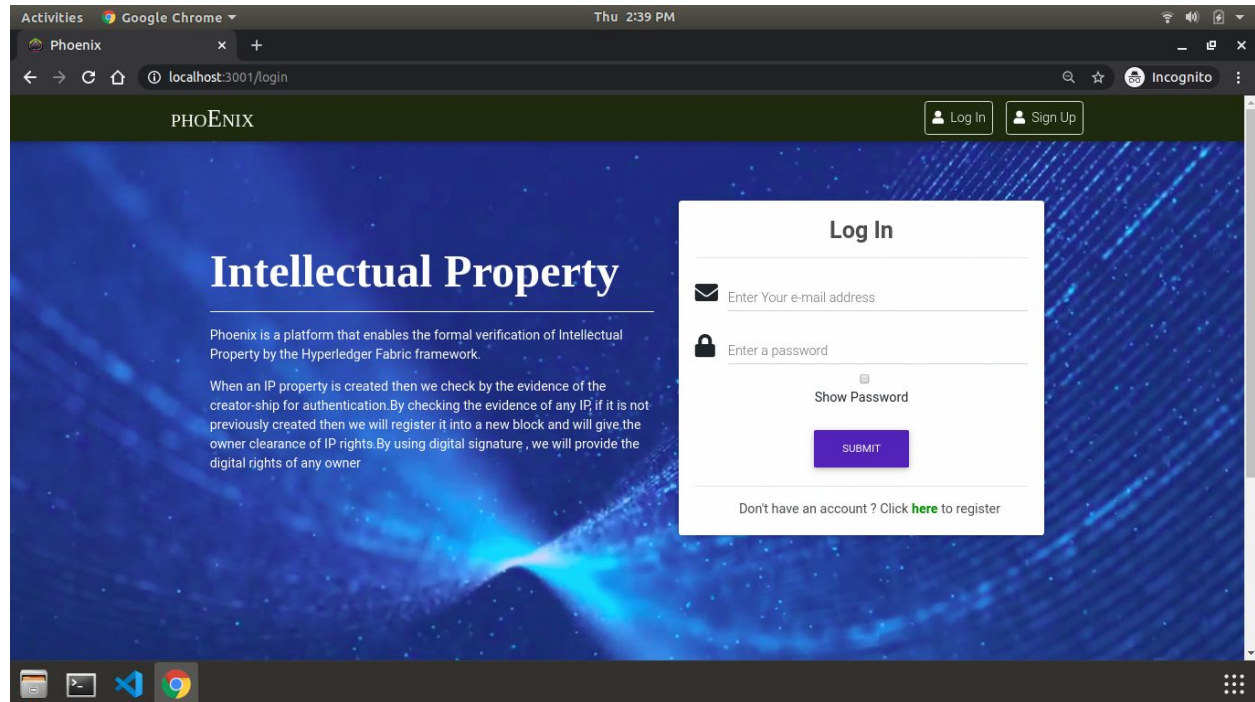
Image Size must be Under 2MB

SUBMIT

Already have an account? Click [here](#) to login

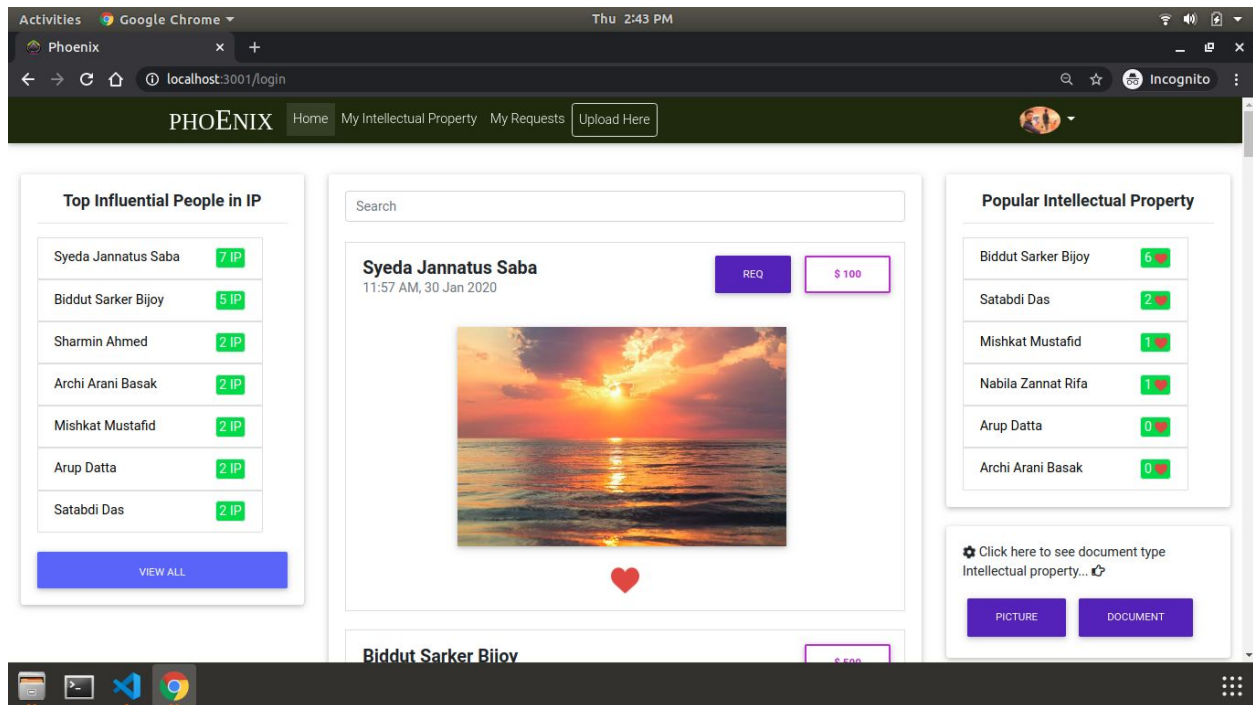
Log-in Page

The user must submit his/her email and password to log in to the system.



Home Page

After a user is logged in, he/she is redirected to the home page, where the uploaded IP are shown as news feed. If the user wants to



Home Page (Document)

If the user presses the 'DOCUMENT' button on the lower right corner of the screen all the documents uploaded by the registered users are shown in a scrollable manner.

The screenshot displays the PHOENIX web application interface in a Google Chrome browser window. The browser's address bar shows the URL `localhost:3001/homeDocument`. The application's header includes the logo 'PHOENIX' and navigation links: 'Home', 'My Intellectual Property', 'My Requests', and 'Upload Here'. A user profile icon is visible in the top right corner.

The main content area is divided into three sections:

- Top Influential People in IP:** A list of users with their IP counts:

Syeda Jannatus Saba	7 IP
Biddut Sarker Bijoy	5 IP
Sharmin Ahmed	2 IP
Archi Arani Basak	2 IP
Mishkat Mustafid	2 IP
Arup Datta	2 IP
Satabdi Das	2 IP

 A 'VIEW ALL' button is located at the bottom of this list.
- Search Results:** A search bar at the top leads to a result for 'Biddut Sarker Bijoy' dated '9:56 PM, 29 Jan 2020'. The result features a document thumbnail titled 'Task#3 System Study' and 'Modern Health Service System'. Below the thumbnail, the group name is 'SUST_DuBhMaSh' and the date is '17/02/19'. A table lists stakeholder information:

Stakeholder's Information		
1. Lecturer	Summit Haque	CSE
2. Medical Officer	Dr. Krishnapada Acharyee	Chief Medical Officer
3. Student	Nahidul Islam	Sociology (4/4)
4. Student	Rezaul Haque	Sociology (5/1)
- Popular Intellectual Property:** A list of users with their IP counts:

Biddut Sarker Bijoy	6 IP
Satabdi Das	2 IP
Mishkat Mustafid	1 IP
Nabila Zannat Rifa	1 IP
Arup Datta	0 IP
Archi Arani Basak	0 IP

At the bottom right, there is a section with a gear icon and the text 'Click here to see document type Intellectual property...'. Below this text are two buttons: 'PICTURE' and 'DOCUMENT'.

User List

A list of all the registered users are provided which is sorted according to number of no. of Intellectual property owned by the user.

The screenshot shows a web browser window with the URL `localhost:3001/viewAllPeople`. The page has a dark green header with the logo "PHOENIX" and navigation links: "Home", "IntellectualProperty", "My Requests", and "Upload Here". A zoom level of 90% is shown in the top right corner of the browser window.

The main content area displays a box titled "Top Influential People in IP". Inside this box is a search bar and a table listing users and their number of Intellectual Properties (IP).

Top Influential People in IP	
Syeda Jannatus Saba	7 IP
Biddut Sarker Bijoy	5 IP
Sharmin Ahmed	2 IP
Archi Arani Basak	2 IP
Mishkat Mustafid	2 IP
Arup Datta	2 IP
Satabdi Das	2 IP
Nabila Zannat Rifa	1 IP
Dipto Dey	0 IP

My Intellectual Property

Shows a list of the current user's own intellectual property. If the intellectual property is bought from another user, it also shows the name of previous owner and provide a link to his profile.

The screenshot shows the Phoenix web application interface. The browser address bar indicates the URL is localhost:3001/myIP. The navigation bar includes links for Home, My Intellectual Property, My Requests, and Upload Here. The main content area is divided into three sections:

- Top Influential People in IP:** A list of users with their IP counts: Syeda Jannatus Saba (7 IP), Biddut Sarker Bijoy (5 IP), Sharmin Ahmed (2 IP), Archi Arani Basak (2 IP), Mishkat Mustafid (2 IP), Arup Datta (2 IP), and Satabdi Das (2 IP). A 'VIEW ALL' button is at the bottom.
- Biddut Sarker Bijoy:** A central card showing a sunset image. It includes the name 'Biddut Sarker Bijoy', the time '8:55 PM, 29 Jan 2020', and a 'Previous Owner' button labeled 'BIDDUT SARKER BIJOY'.
- Popular Intellectual Property:** A list of items with their counts: Biddut Sarker Bijoy (6), Satabdi Das (2), Mishkat Mustafid (1), Nabila Zannat Rifa (1), Arup Datta (0), and Archi Arani Basak (0). Below this list is a link to 'Click here to see document type Intellectual property...' and buttons for 'PICTURE' and 'DOCUMENT'.

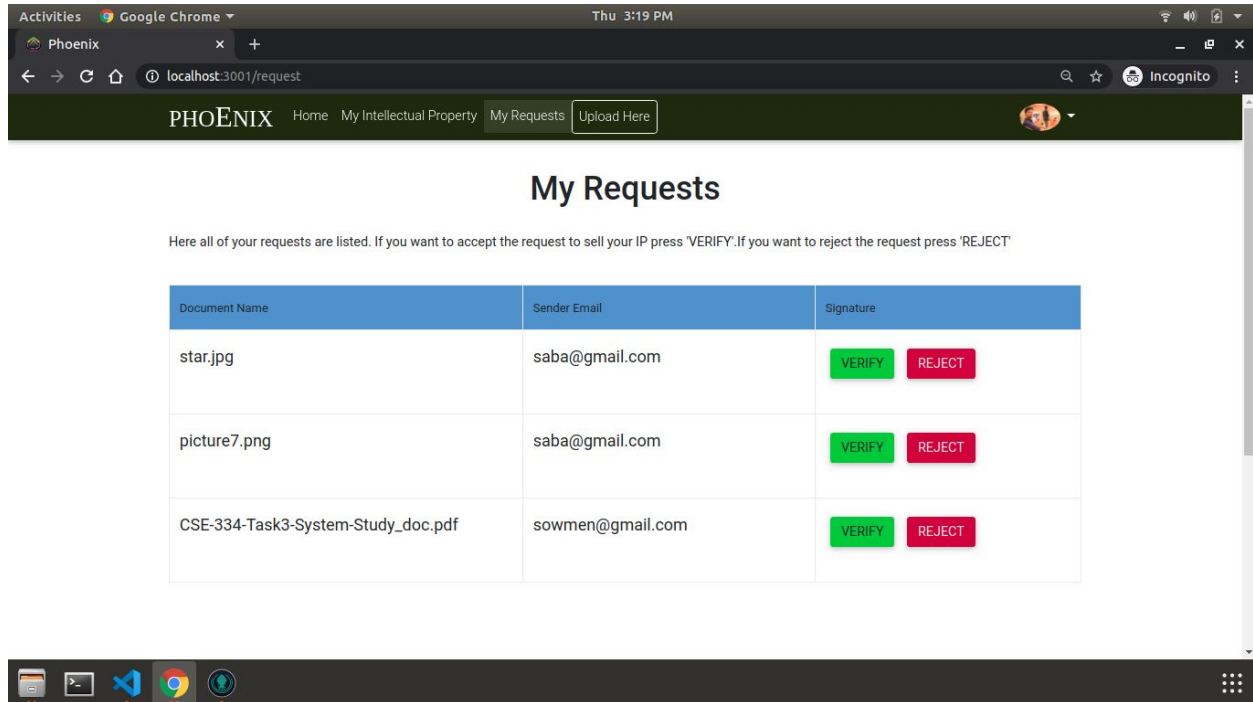
The screenshot shows the Phoenix web application interface with a document preview. The browser address bar indicates the URL is localhost:3001/myIPDocs. The navigation bar is the same as the previous screenshot. The main content area is divided into three sections:

- Top Influential People in IP:** A list of users with their IP counts: Syeda Jannatus Saba (7 IP), Biddut Sarker Bijoy (5 IP), Sharmin Ahmed (2 IP), Archi Arani Basak (2 IP), Mishkat Mustafid (2 IP), Arup Datta (2 IP), and Satabdi Das (2 IP). A 'VIEW ALL' button is at the bottom.
- Biddut Sarker Bijoy:** A central card showing a document preview. It includes the name 'Biddut Sarker Bijoy', the time '9:56 PM, 29 Jan 2020', and a 'Previous Owner' button labeled 'BIDDUT SARKER BIJOY'. The document preview shows a title 'Modern Health Service System', a group name 'SUST_DuBhMaSh', a date '17/02/19', and a table of stakeholder information.
- Popular Intellectual Property:** A list of items with their counts: Biddut Sarker Bijoy (6), Satabdi Das (2), Mishkat Mustafid (1), Nabila Zannat Rifa (1), Arup Datta (0), and Archi Arani Basak (0). Below this list is a link to 'Click here to see image type Intellectual property...' and buttons for 'PICTURE' and 'DOCUMENT'.

Stakeholder's Information		
1. Lecturer	Summit Haque	CSE
2. Medical Officer	Dr. Krishnapada Acharyee	Chief Medical Officer
3. Student	Nahidul Islam	Sociology (4/2)
4. Student	Rezaul Haque	Sociology (3/1)
5. Student	Dolan Boiragi	CSE (4/1)
6. Lecturer	Mogadur Rahman	CSE

My Requests Page

Here all the requests to buy a user's Intellectual property is listed. If a user wants to sell the IP, he should press "Verify". If the user doesn't want to sell the IP to the requester, he should press "Reject".



The screenshot shows a web browser window with the address bar displaying 'localhost:3001/request'. The page title is 'My Requests'. Below the title, there is a message: 'Here all of your requests are listed. If you want to accept the request to sell your IP press 'VERIFY'. If you want to reject the request press 'REJECT''. Below this message is a table with three columns: 'Document Name', 'Sender Email', and 'Signature'. The table contains three rows of requests.

Document Name	Sender Email	Signature
star.jpg	saba@gmail.com	<input type="button" value="VERIFY"/> <input type="button" value="REJECT"/>
picture7.png	saba@gmail.com	<input type="button" value="VERIFY"/> <input type="button" value="REJECT"/>
CSE-334-Task3-System-Study_doc.pdf	sowmen@gmail.com	<input type="button" value="VERIFY"/> <input type="button" value="REJECT"/>

Upload Page

A user can upload his/her Intellectual Property here. Two types of Intellectual Property can be uploaded. They are image and document. The image may have any available image extension like: jpg, png, jpeg. But the extension of a document should be of a specific type, which is 'PDF'.

The screenshot shows a web browser window with the URL `localhost:3001/upload`. The page has a dark green header with the 'PHOENIX' logo and navigation links: 'Home', 'My Intellectual Property', 'My Requests', and 'Upload Here'. Below the header, a message states: 'Please upload your Intellectual Property here. You can upload two types Intellectual Property. They are image and document. The image may have any available image extension like: jpg, png, jpeg. But the extension of a document should be of a specific type, which is 'PDF'.'

The main content area contains a white box with the following form elements:

- An 'Upload' button.
- A 'Choose file' text input field with a 'Browse' button to its right.
- A 'Price' label and a text input field with the placeholder text 'Enter Price of the Intellectual Property(in Dollars)'.
- A large blue 'UPLOAD IP' button at the bottom.

Profile Page

A profile page is maintained for each registered user where The no. of owned Intellectual Property, user's balance (only shows for logged in user), public key of the user is shown.

Activities Google Chrome Thu 3:30 PM

Phoenix localhost:3001/profile

PHOENIX Home My Intellectual Property My Requests Upload Here

Biddut Sarker Bijoy
 Department of Computer Science & Engineering
 Shahjalal University of Science and Technology, Sylhet.

Total Intellectual Property : 5
Total Balance (In Dollars) : 5600

Public Key

---BEGIN PUBLIC KEY---
 MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEA2XvZxxVNiNEMwmKk017
 L08qHB6qbGZpHaDoDJOS3+ksTSusdUsSaHg7ru9r7U67/a50bidp5rDpj1rzDlbp
 NrWHua8NwJ07RhKoejk2/F39L/GIOB9iJrR2K69HA8+c+Xzb3N+NcZaYBiMb2Gou
 +JV/0BoZiYk8uV/ZhFucpBhQGnavwFA3W8DI87RkUBPGTgStcvwbDdCwumcfmDi
 IhAYmuUkW6/J/8BycxssPPgs82FF8NFgytTlUeXbAzfZLYj1TKCplpjRAZdWPp
 G0xnqc2stzuD/rKlFh6ZdVqVZNV8jz3N6/g0UtA8NpznNEMZhr6WbFnDTHEI30s 0wIDAQAB ---END
 PUBLIC KEY---

CONTACT INFO
 bijoy@gmail.com

SOCIAL LINK
 Facebook Instagram
 Twitter LinkedIn

Activities Google Chrome Thu 5:00 PM

Phoenix localhost:3001/otherProfile

PHOENIX Home IntellectualProperty My Requests Upload Here

Syeda Jannatus Saba
 Department of Computer Science & Engineering
 Shahjalal University of Science and Technology, Sylhet.

Total Intellectual Property : 7

Public Key

---BEGIN PUBLIC KEY---
 MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAphq00SjSN3x/Wph8uoXF
 veb5kEHCReD76nKTumh6vuzqlHWNlpYnDY7+sxAJ7lqq/zm6bvq3Q/plvi3pDE4B
 1zsyA5UULyZeBwHWcgP7o0BsWCQZYjnuorkXXGUgfoeZwy9icXolmFr3ZuGFIPNU
 uplyWth+PskbtuKV11TV6v72MEDa1yVZbqVx0m37fh+vMLfrlicDVcmiiYFLtdn7
 xcKq9Jx4nOqVxFe0hfnLyI2NY8BNf/k9hbcuLJrDxzUkYUVRvnmky4C9MQWNRLi
 IWW3ROQJ2u9spNu8V2ddiAQc+7Vn9D6aNI3Q0+2xBsrwF1000aZTIK/bviSPTvmv iQIDAQAB ---END
 PUBLIC KEY---

CONTACT INFO
 saba@gmail.com

SOCIAL LINK
 Facebook Instagram
 Twitter LinkedIn