Verify Student Academic Records

CIS 600 BlockChain and Cryptocurrencies

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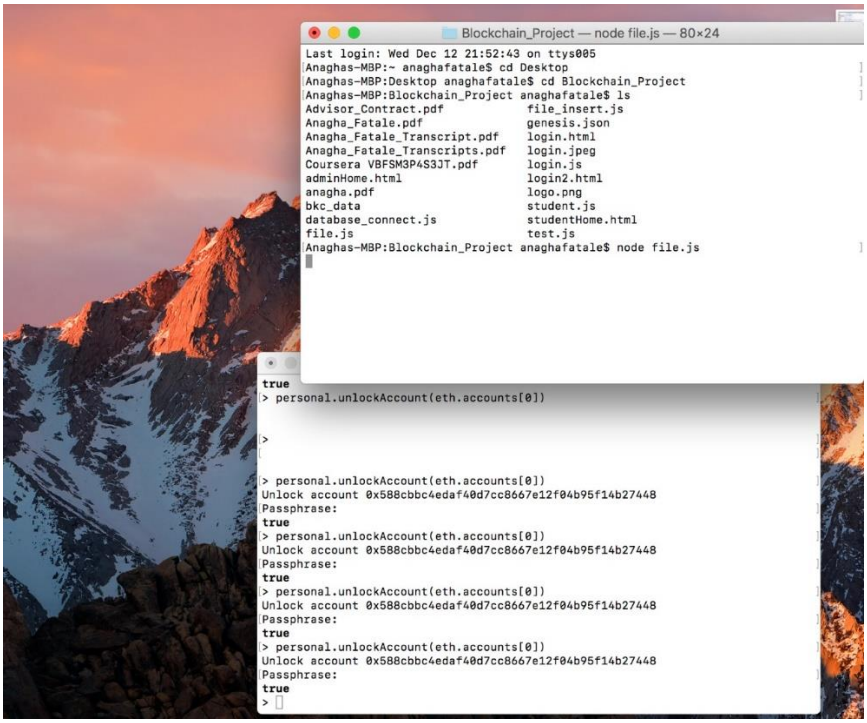
Steps to run the Project:

1. Educational institute adds academic records for a student. For this they will follow below steps:
   i. Open login.html file to login.
   ii. Enter credentials for admin login.
   e.g. username = "admin"
   password = "admin"
   iii. New page will open where you will have options to enter student first name, last name and upload the academic records for the student.
   iv. Enter these details and upload document and then click on submit.
   v. Certificate key will be created which can be used by others to access this file.

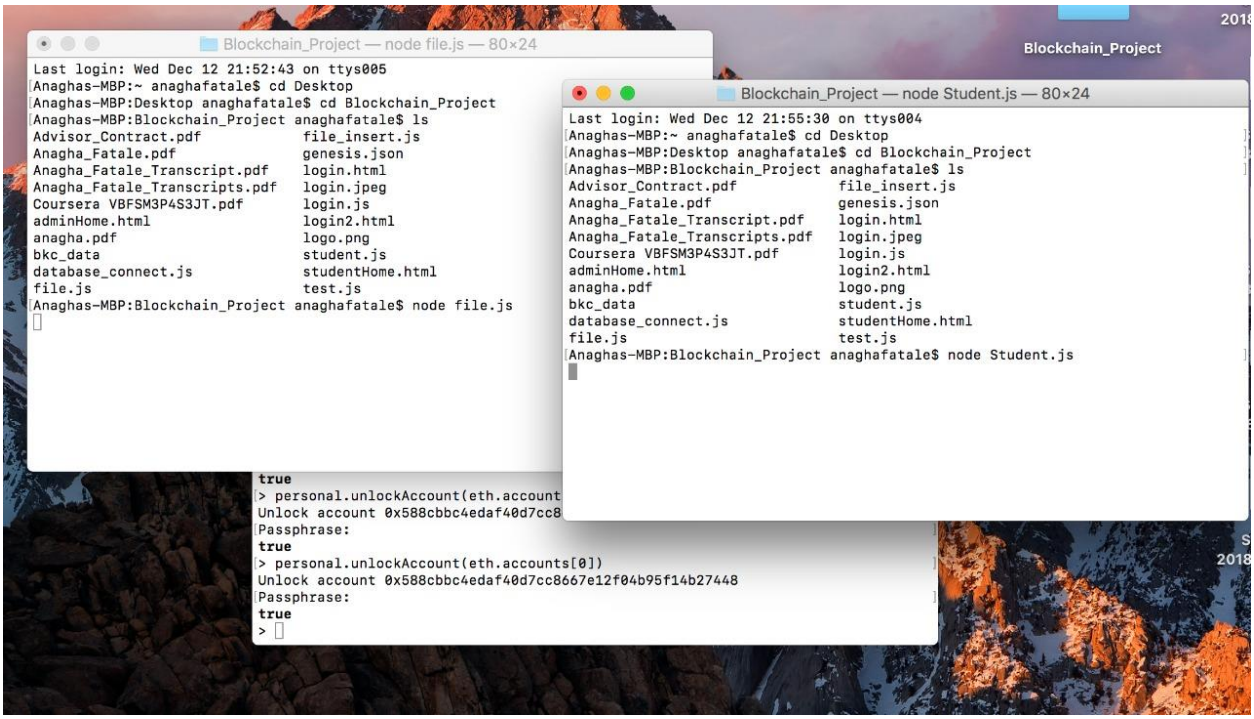
2. Student/another educational institute views the academic records added by educational institutes.
   i. Open login.html file to login.
   ii. Enter credentials for student/another educational institute login.
   e.g. username = " student"
   password == " student"
   vi. New page will open where you will have options to enter student first name, last name and certificate key for the document.
   vii. Enter these details and then click on submit.
   viii. The document will be available that can be downloaded.

Screenshots:

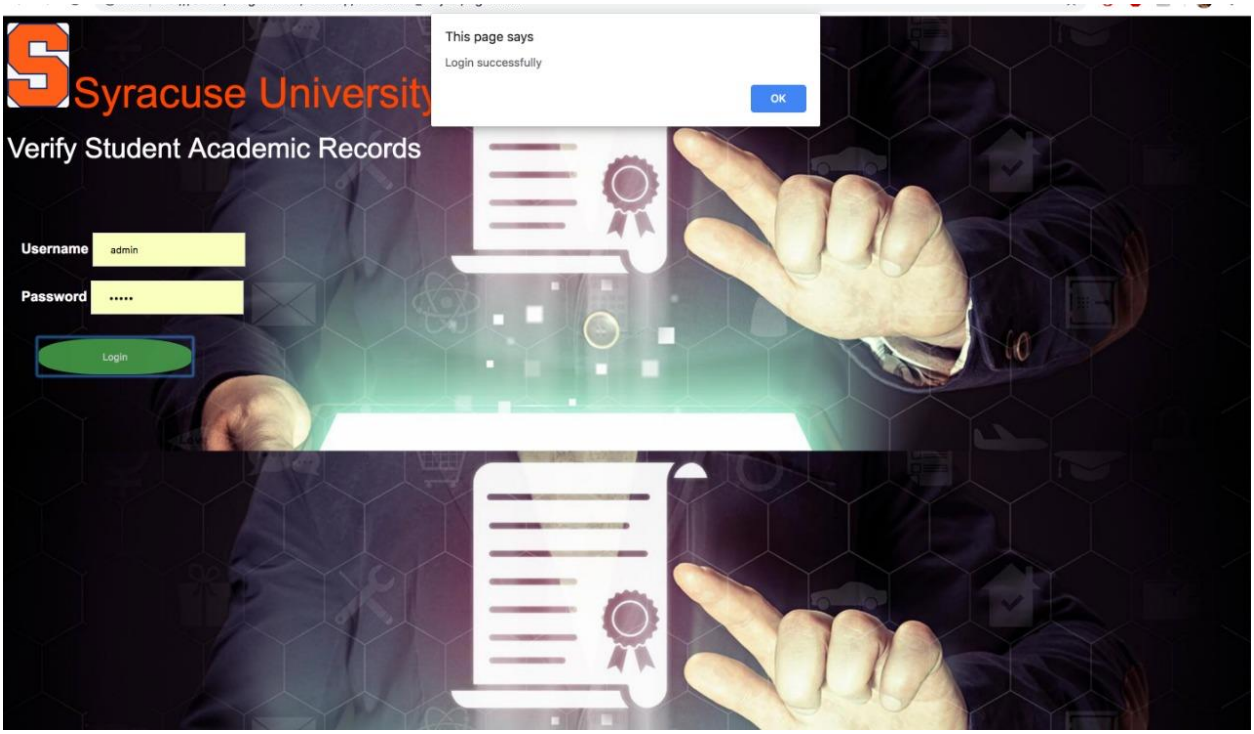
Unlocking the account and running the file.js script in command prompt:



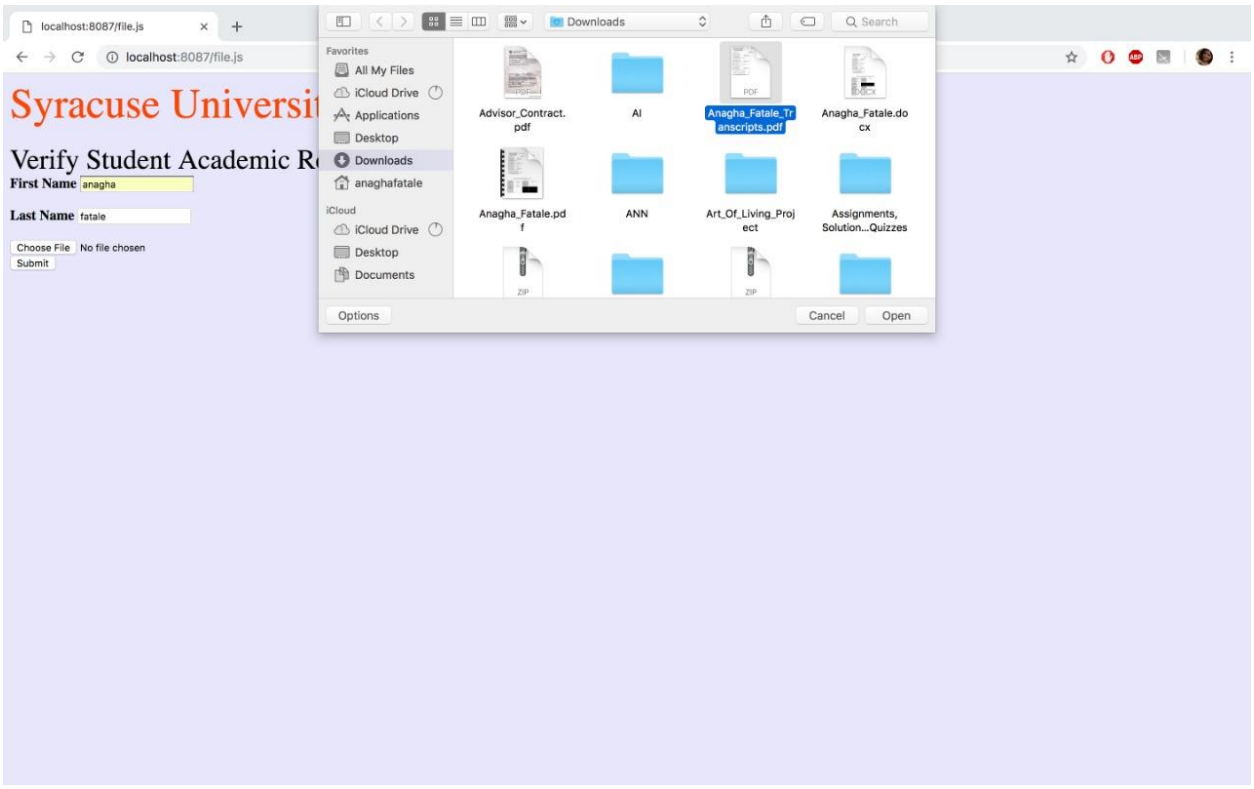
Running file.js and Student.js scripts to run admin and student login codes respectively:



Login page. Login successful for admin:

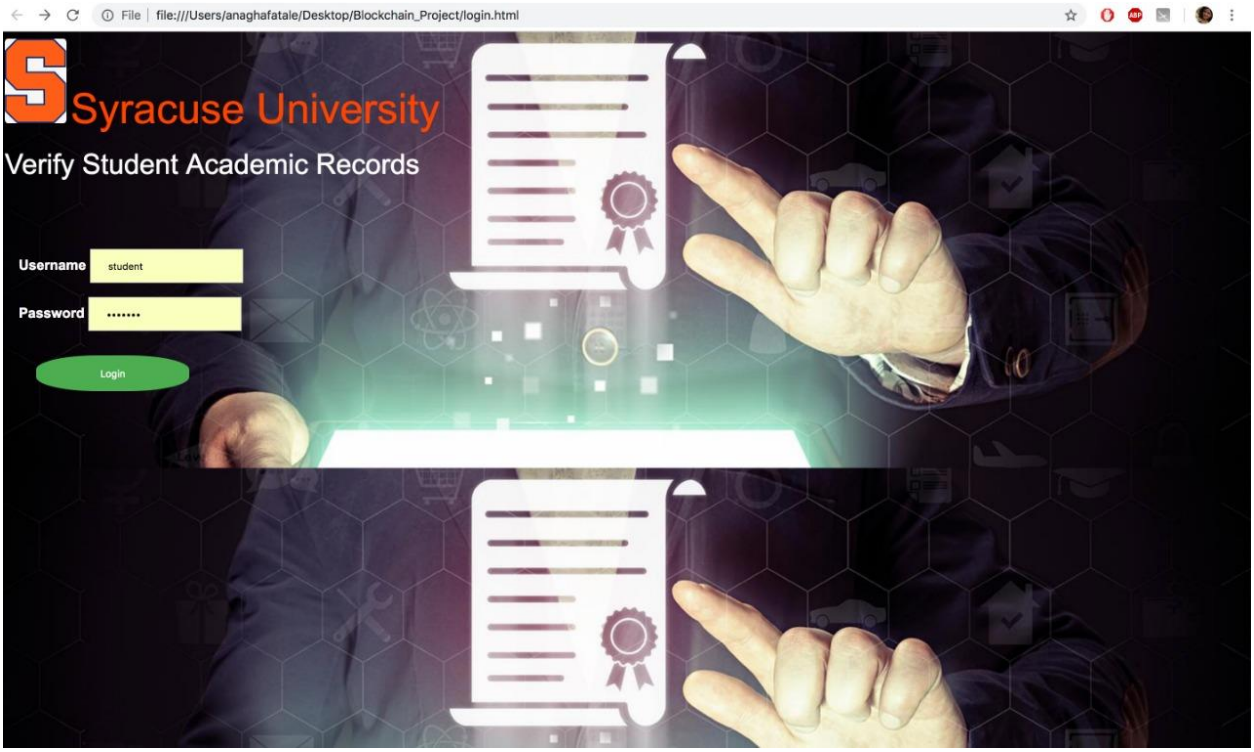


Uploading academic records for a student:



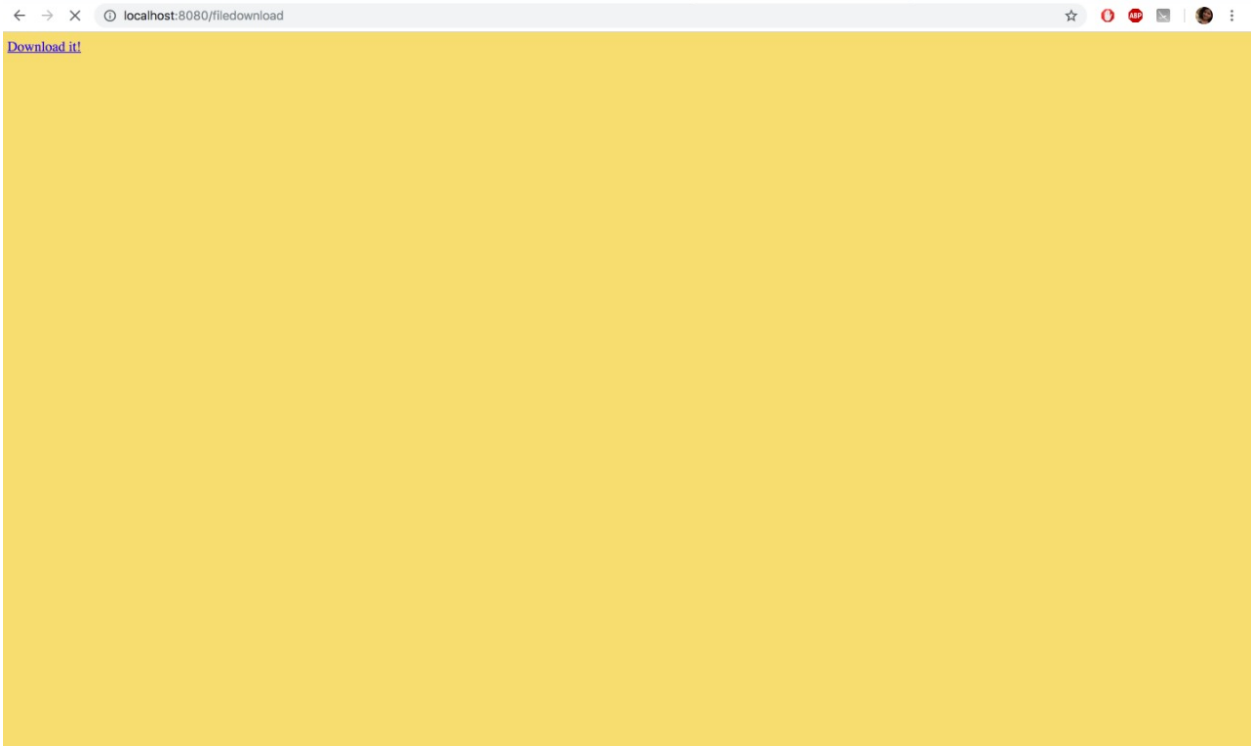
Upload successful and certificate key generated:

Login page. Login for student/another educational institute:

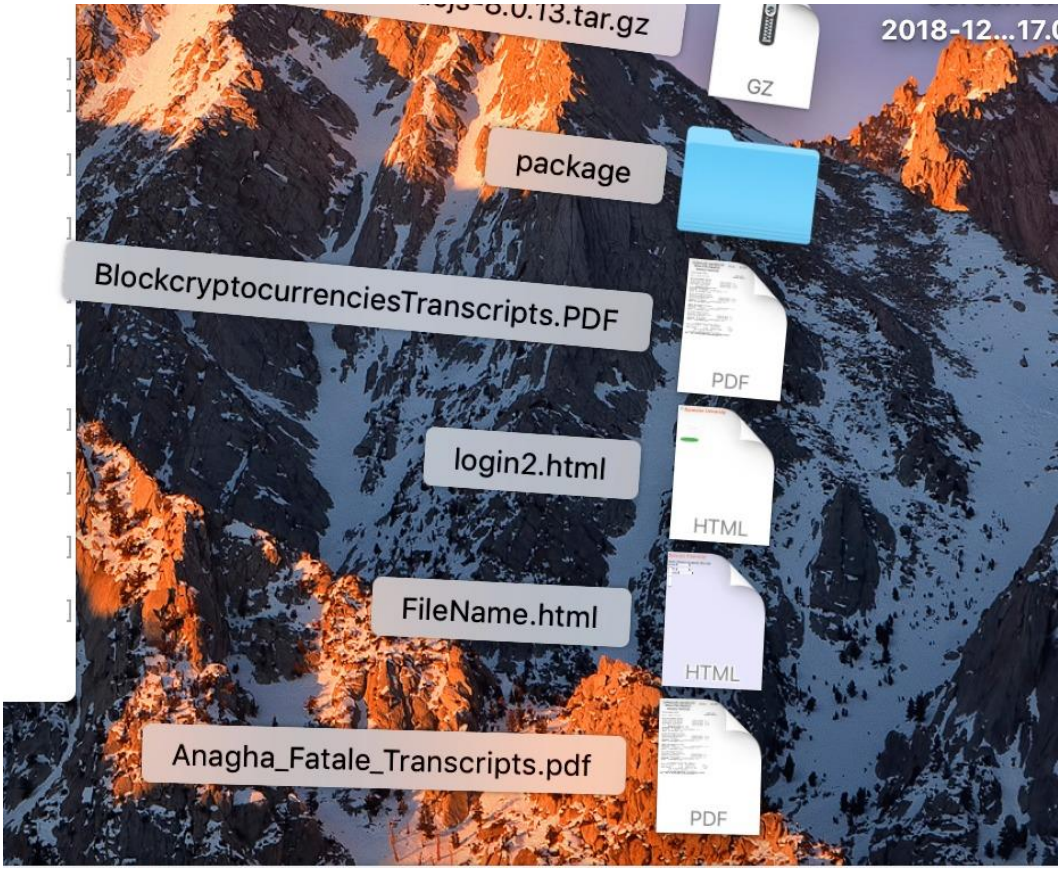


Entering first name, last name and certificate key for certificate file by student/another educational institute:

Downloadable certificate link for the academic record:



Certificate file Anagha_Fatale_Transcripts.pdf successfully downloaded:



Entry made in mysql database for file uploaded. File is saved certificate column as BLOB:

```sql
create database blockchain;

use blockchain;

ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'Anagha123#';

create table users ( username VARCHAR(25) not null,  password  varchar(25) not null);


create table student_data ( firstname VARCHAR(25) not null, lastname VARCHAR(25) not null, filename VARCHAR(100) not null,
hashvalue VARCHAR(500) not null, certificate BLOB not null);


select * from student_data;
```

Result Grid | Filter Rows: Search | Export:

firstname	lastname	filename	hashvalue	certificate
anagha	fatale	Anagha_Fatale_Transcripts.pdf	0x7b2274657374223a222f55736572732f616e616768616666174616c652f4465736b7...	BLOB

Entry made in blockchain for certificate file uploaded by admin:

```
> eth.getBlock('latest', true)
{
  difficulty: 751942,
  extraData: "0xd583010703846765746885676f312e39856c696e7578",
  gasLimit: 4712388,
  gasUsed: 0,
  hash: "0x692705e01b8559ac289151e79ab46e6a62c321d53cdd1e739931c934453c9d02",
  logsBloom: "0x00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000",
  miner: "0xab15c97e266ebe785241f5009cdada80f0d63fdd",
  mixHash: "0x6c6251dfa773706d7f968ea7a64c6aee969a59118c0c081a54ce1e6163005832",
  nonce: "0x7c53a46b697509a7",
  number: 407023,
  parentHash: "0x0ddf318ecbb67beb427986c3e23c418a7e601d0ff690b08290de6b88df64826c",
  receiptsRoot: "0x56e81f171bcc55a6ff8345e692c0f86e5b48e01b996cadc001622fb5e363b421",
  sha3Uncles: "0x1dcc4de8dec75d7aab85b567b6ccd41ad312451b948a7413f0a142fd40d49347",
  size: 536,
  stateRoot: "0xa76242c77cc37da60e1a1baa9fc83d77eb44c8ca2ecf2f3ec004747651aaf6c3",
  timestamp: 1544673176,
  totalDifficulty: 341438800207,
  transactions: [],
  transactionsRoot: "0x56e81f171bcc55a6ff8345e692c0f86e5b48e01b996cadc001622fb5e363b421",
  uncles: []
}
> 
```