

Configuration Manual

MSc Research Project
MSc Cloud Computing

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MSc Project Submission Sheet
School of Computing



Student Name: Vinay Ranganath
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Programme: MSc Cloud Computing **Year:** 2021 - 2022
Module: MSc Research Project
Supervisor: Dr. Majid Latifi
Submission Due Date: 16/12/2021
Project Title: Cloud Data Security through Hybrid Verification Technique Based on Cryptographic Hash Function
Word Count: 690 **Page Count:** 7

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Signature:



Date:

16/12/2021

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Configuration Manual

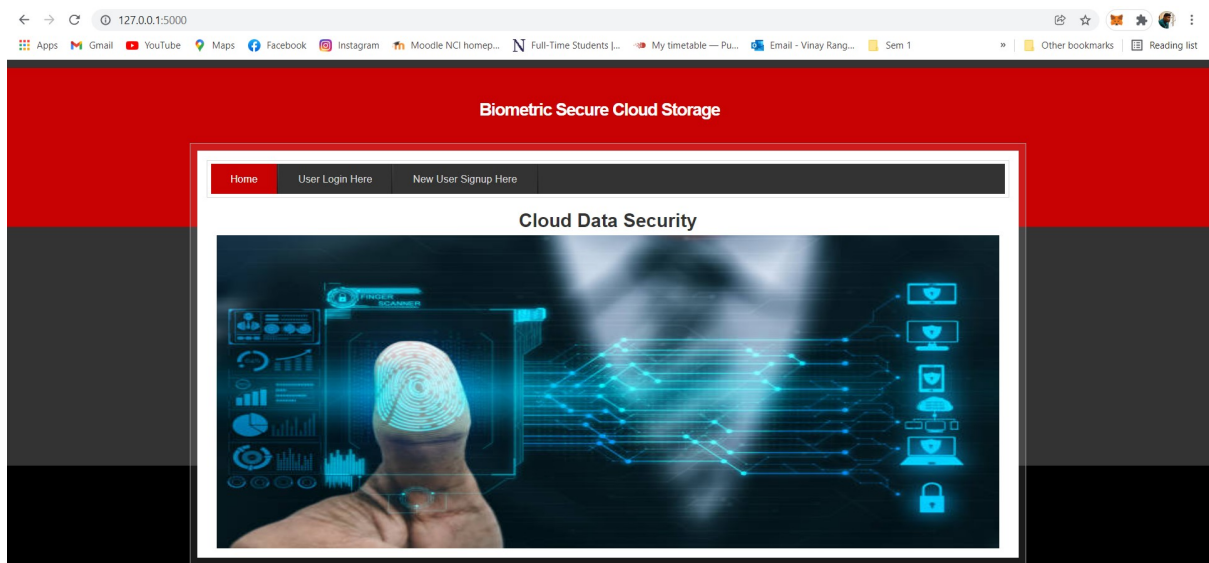
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1 Running the Python Application

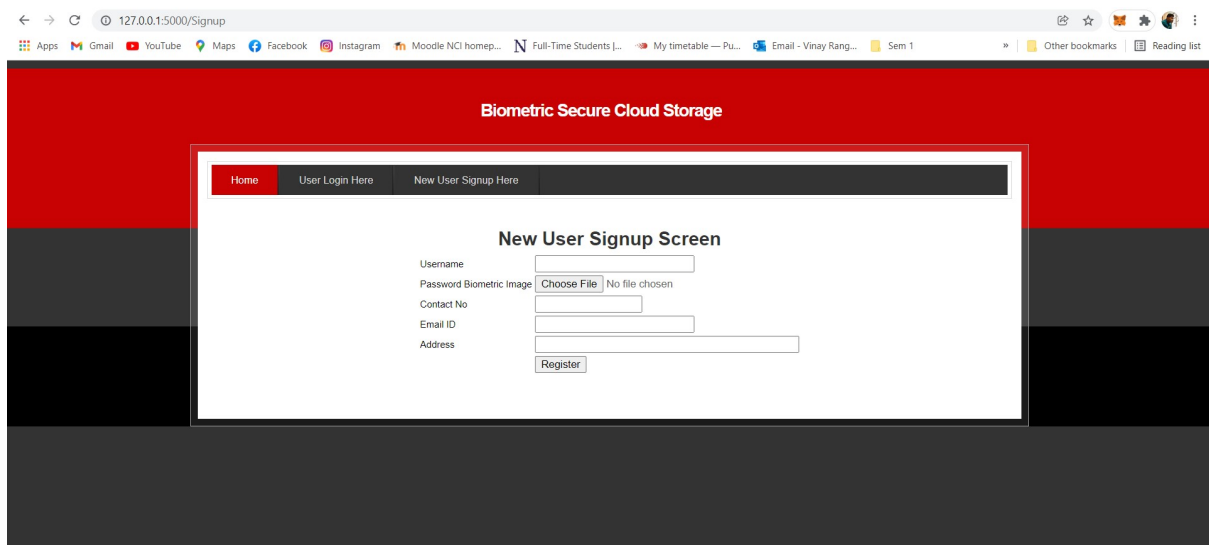
To run project double click on 'run.bat' file to start cloud server and to get below screen.

```
cmd: C:\WINDOWS\system32\cmd.exe
Config {'ENV': 'production', 'DEBUG': True, 'TESTING': False, 'PROPAGATE_EXCEPTIONS': None, 'PRESERVE_CONTEXT_ON_EXCEPTION': None, 'SECRET_KEY': 'cloudsecurity', 'PERMANENT_SESSION_LIFETIME': datetime.timedelta(days=31), 'USE_X_SENDFILE': False, 'SERVER_NAME': None, 'APPLICATION_ROOT': '/', 'SESSION_COOKIE_NAME': 'session', 'SESSION_COOKIE_DOMAIN': None, 'SESSION_COOKIE_PATH': None, 'SESSION_COOKIE_HTTPONLY': True, 'SESSION_COOKIE_SECURE': False, 'SESSION_COOKIE_SAMESITE': None, 'SESSION_REFRESH_EACH_REQUEST': True, 'MAX_CONTENT_LENGTH': None, 'SEND_FILE_MAX_AGE_DEFAULT': None, 'TRAP_BAD_REQUEST_ERRORS': None, 'TRAP_HTTP_EXCEPTIONS': False, 'EXPLAIN_TEMPLATE_LOADING': False, 'PREFERRED_URL_SCHEME': 'http', 'JSON_AS_ASCII': True, 'JSON_SORT_KEYS': True, 'JSONIFY_PRETTYPRINT_REGULAR': False, 'JSONIFY_MIMETYPE': 'application/json', 'TEMPLATES_AUTO_RELOAD': None, 'MAX_COOKIE_SIZE': 4093, 'CSRF_ENABLED': True, 'MAIL_ENABLED': True, 'MAIL_PASSWORD': 'vaexjgoiyjlhxrkh', 'MAIL_PORT': 587, 'MAIL_SERVER': 'smtp.gmail.com', 'MAIL_USERNAME': 'vinay210@gmail.com', 'MAIL_USE_SSL': False, 'MAIL_USE_TLS': True}>
* Serving Flask app 'CloudSecurity' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Restarting with stat
Config {'ENV': 'production', 'DEBUG': True, 'TESTING': False, 'PROPAGATE_EXCEPTIONS': None, 'PRESERVE_CONTEXT_ON_EXCEPTION': None, 'SECRET_KEY': 'cloudsecurity', 'PERMANENT_SESSION_LIFETIME': datetime.timedelta(days=31), 'USE_X_SENDFILE': False, 'SERVER_NAME': None, 'APPLICATION_ROOT': '/', 'SESSION_COOKIE_NAME': 'session', 'SESSION_COOKIE_DOMAIN': None, 'SESSION_COOKIE_PATH': None, 'SESSION_COOKIE_HTTPONLY': True, 'SESSION_COOKIE_SECURE': False, 'SESSION_COOKIE_SAMESITE': None, 'SESSION_REFRESH_EACH_REQUEST': True, 'MAX_CONTENT_LENGTH': None, 'SEND_FILE_MAX_AGE_DEFAULT': None, 'TRAP_BAD_REQUEST_ERRORS': None, 'TRAP_HTTP_EXCEPTIONS': False, 'EXPLAIN_TEMPLATE_LOADING': False, 'PREFERRED_URL_SCHEME': 'http', 'JSON_AS_ASCII': True, 'JSON_SORT_KEYS': True, 'JSONIFY_PRETTYPRINT_REGULAR': False, 'JSONIFY_MIMETYPE': 'application/json', 'TEMPLATES_AUTO_RELOAD': None, 'MAX_COOKIE_SIZE': 4093, 'CSRF_ENABLED': True, 'MAIL_ENABLED': True, 'MAIL_PASSWORD': 'vaexjgoiyjlhxrkh', 'MAIL_PORT': 587, 'MAIL_SERVER': 'smtp.gmail.com', 'MAIL_USERNAME': 'vinay210@gmail.com', 'MAIL_USE_SSL': False, 'MAIL_USE_TLS': True}>
* Debugger is active!
* Debugger PIN: 105-496-196
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

In above screen cloud server has started and running on URL 'http://127.0.0.1:5000/' and enter this URL in browser to get below cloud server home page.

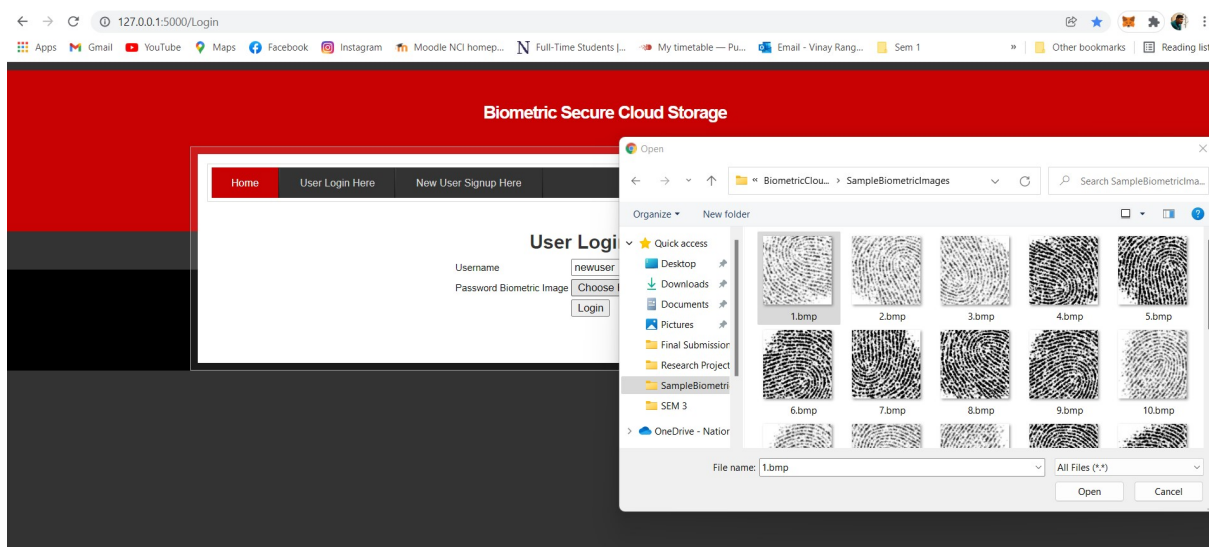


In below screen click on ‘New User Signup Here’ link to get below signup screen



In this screen user can signup by uploading password as finger image and in above screen select image and click ‘Open’ button to load image and then fill the other details and click on ‘Register’ button to complete signup process.

Once the Signup process is completed successfully, now click on ‘User Login Here’ link to get below screen

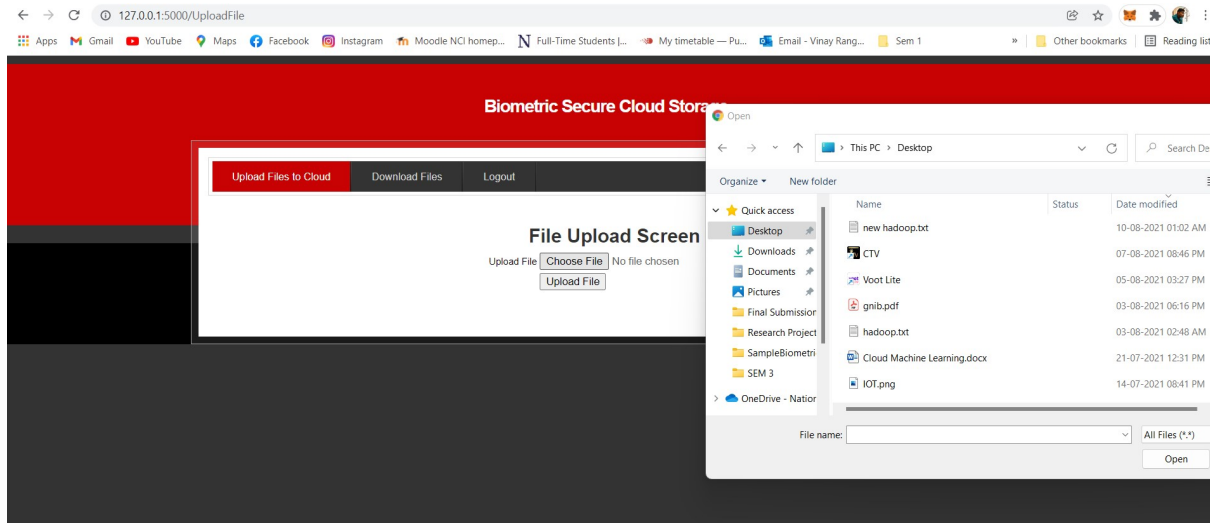


Once the correct biometric image is selected for the user login, then click on the “login” button. Once the correct image is selected, the login will be successful, and the below screen will appear.



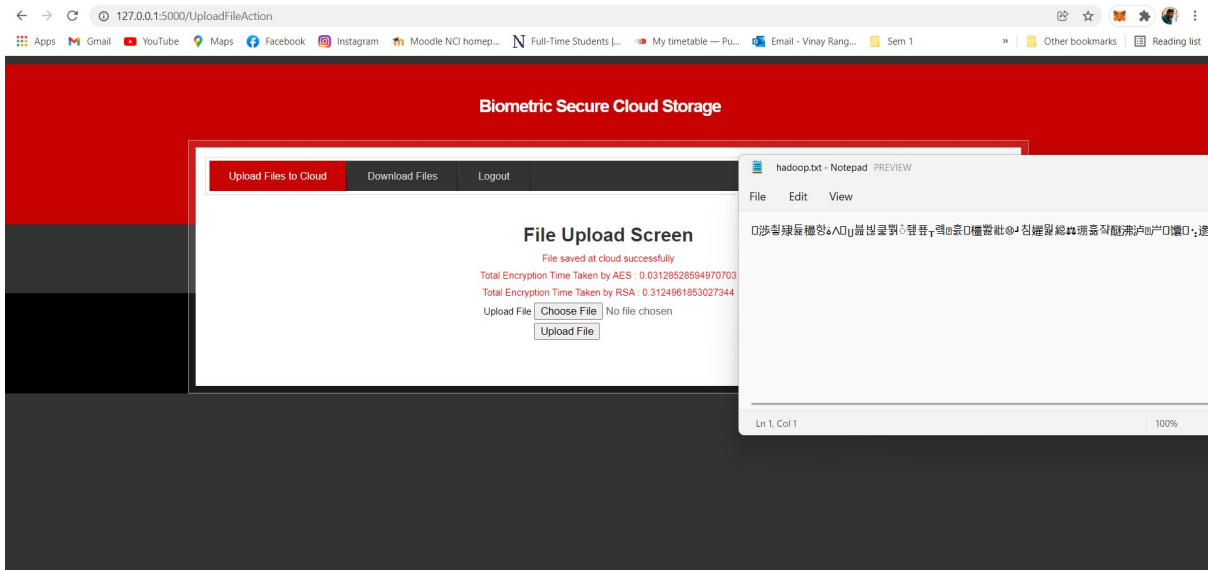
2 Uploading Files to Cloud

Once the login with the correct biometric image is successful, click on 'Upload Files to Cloud' button in order to upload user data to the cloud.



In the above screen I will be uploading Hadoop.txt to the cloud and the file will be saved in encrypted format.

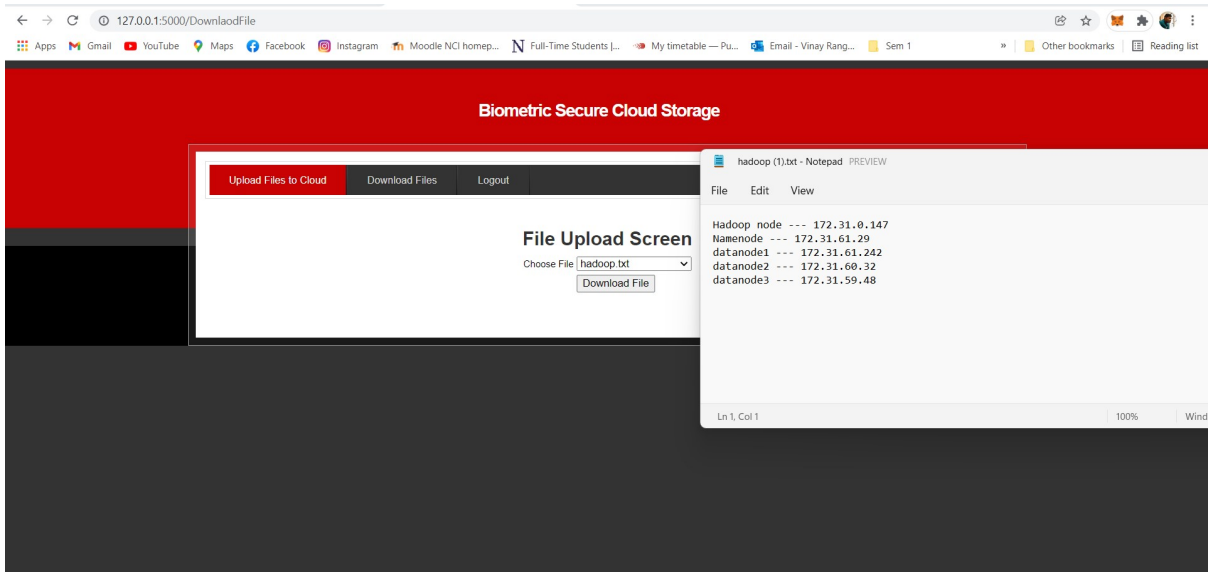
As soon as the files are uploaded, we can see the files saved in 'static/users' and we can see the file in the encrypted format.



3 Decrypting the Files

Once the files are encrypted, we can proceed to click on the ‘Download Files’ button to download the decrypted file.

As soon as the file is downloaded, we can view and read the file which has been decrypted successfully.



References

Python (2019). *Welcome to Python.org*. [online] Python.org. Available at: <https://www.python.org/>.

Matplotlib (2012). *Matplotlib: Python plotting — Matplotlib 3.1.1 documentation*. [online] Matplotlib.org. Available at: <https://matplotlib.org/>.

Craggs, I. (n.d.). *Eclipse Paho | The Eclipse Foundation*. [online] www.eclipse.org. Available at: <https://www.eclipse.org/paho/index.php?page=clients/python/index.php> [Accessed 16 Dec. 2021].