

Configuration Manual

MSc Research Project
MSc Cybersecurity

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MSc Project Submission Sheet
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Programme: MSc Cybersecurity **Year:** 2023
Module: MSc Research Project
Lecturer: Michael Prior
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Project Title: Enhancing the security of cloud data through the use of biometrics and encryption technology

Word Count: 600 **Page Count:** 5

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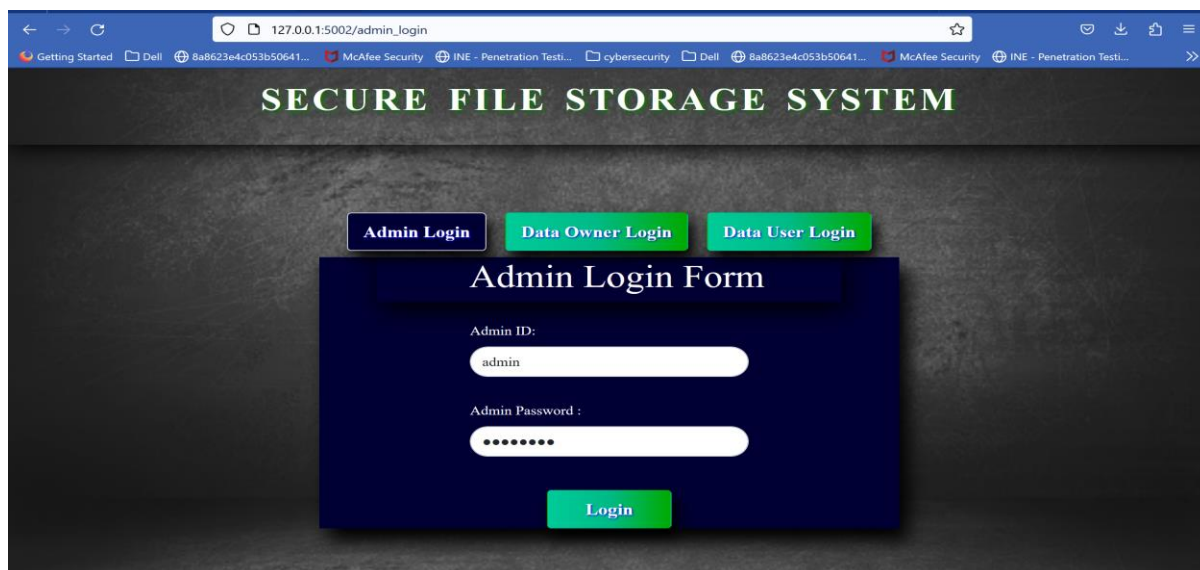
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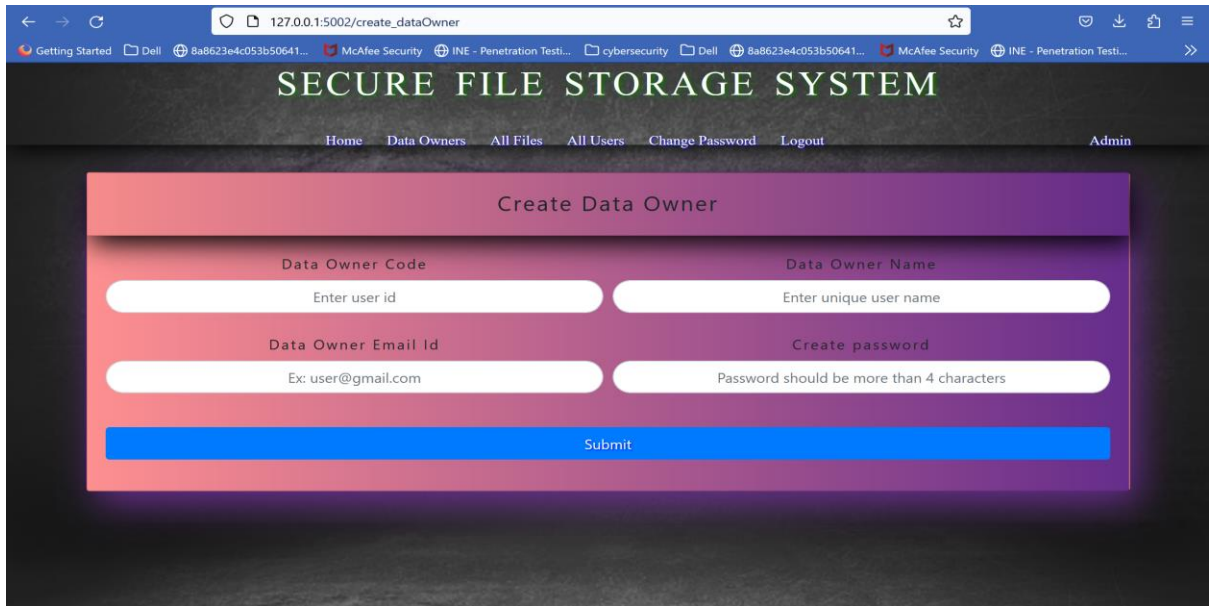
1 Running the web application

To begin we start the server on Anaconda Prompt and open the given URL <http://127.0.0.1:5002> which redirects to the home page.

```
Anaconda Prompt - python a x + v
ation for host: DESKTOP-VM43HEE
2023-08-14 09:50:58.835276: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:176] hostname: DESKTOP-VM43HEE
2023-08-14 09:50:58.835631: I tensorflow/core/platform/cpu_feature_guard.cc:151] This TensorFlow binary is optimized with
h oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-critical operations:
AVX AVX2
To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5002
Press CTRL+C to quit
* Restarting with stat
2023-08-14 09:50:59.210335: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic libra
ry 'cudart64_110.dll'; dLError: cudart64_110.dll not found
2023-08-14 09:50:59.210657: I tensorflow/stream_executor/cuda/cudart_stub.cc:29] Ignore above cudart dlerror if you do n
ot have a GPU set up on your machine.
2023-08-14 09:51:00.547412: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic libra
ry 'nvcuda.dll'; dLError: nvcuda.dll not found
2023-08-14 09:51:00.547920: W tensorflow/stream_executor/cuda/cuda_driver.cc:269] failed call to cuInit: UNKNOWN ERROR (
303)
2023-08-14 09:51:00.548281: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:169] retrieving CUDA diagnostic inform
ation for host: DESKTOP-VM43HEE
2023-08-14 09:51:00.548627: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:176] hostname: DESKTOP-VM43HEE
2023-08-14 09:51:00.549016: I tensorflow/core/platform/cpu_feature_guard.cc:151] This TensorFlow binary is optimized with
h oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-critical operations:
AVX AVX2
To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
* Debugger is active!
* Debugger PIN: 123-951-905
```

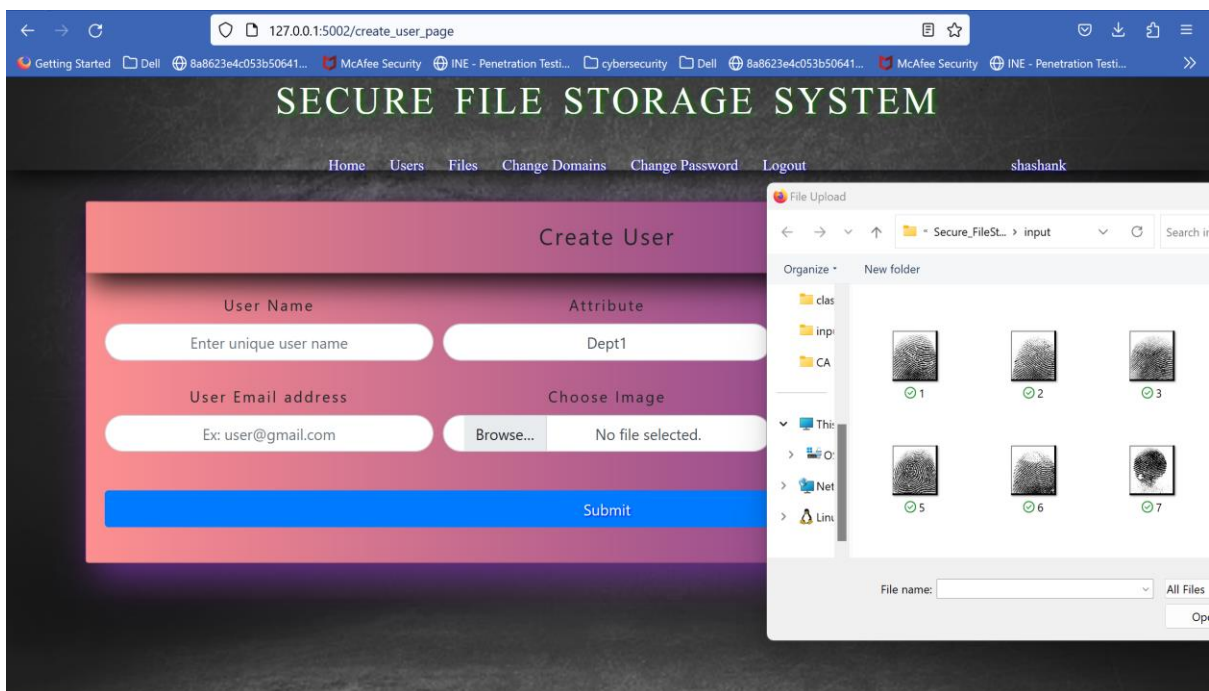


The above figure shows the home page/ login pages for Admin, Data Owner and Data User Login.

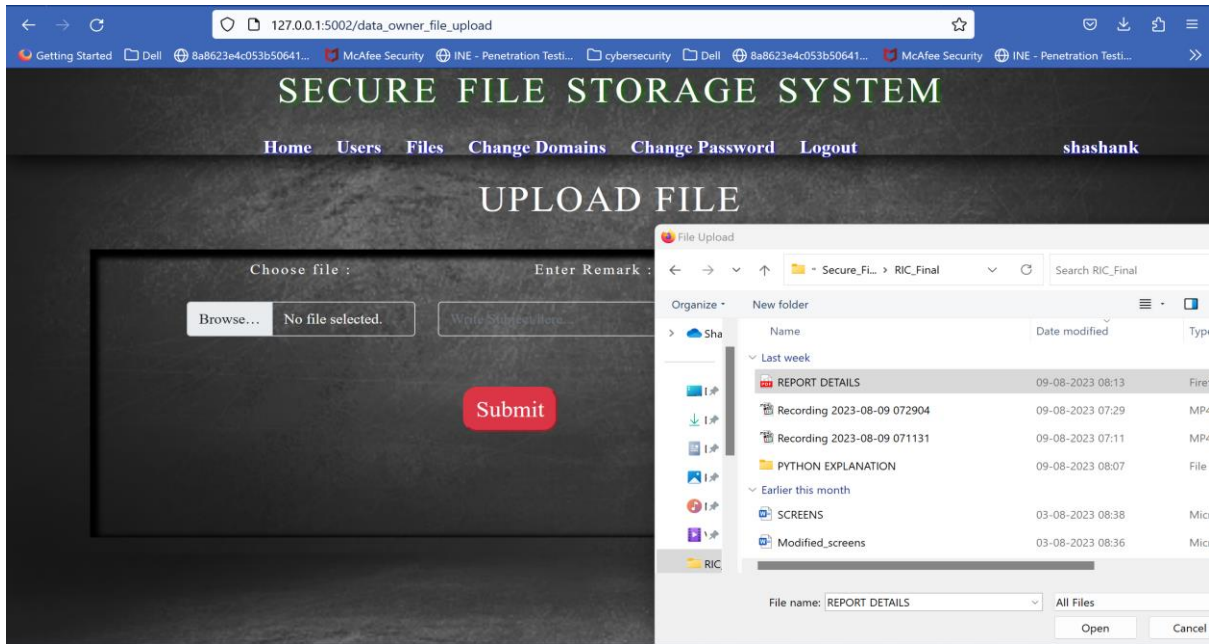


The Admin can create Data Owners, view all the data Users created by the Data owner and view the file details uploaded by the Data owner for different Domains for different users to access.

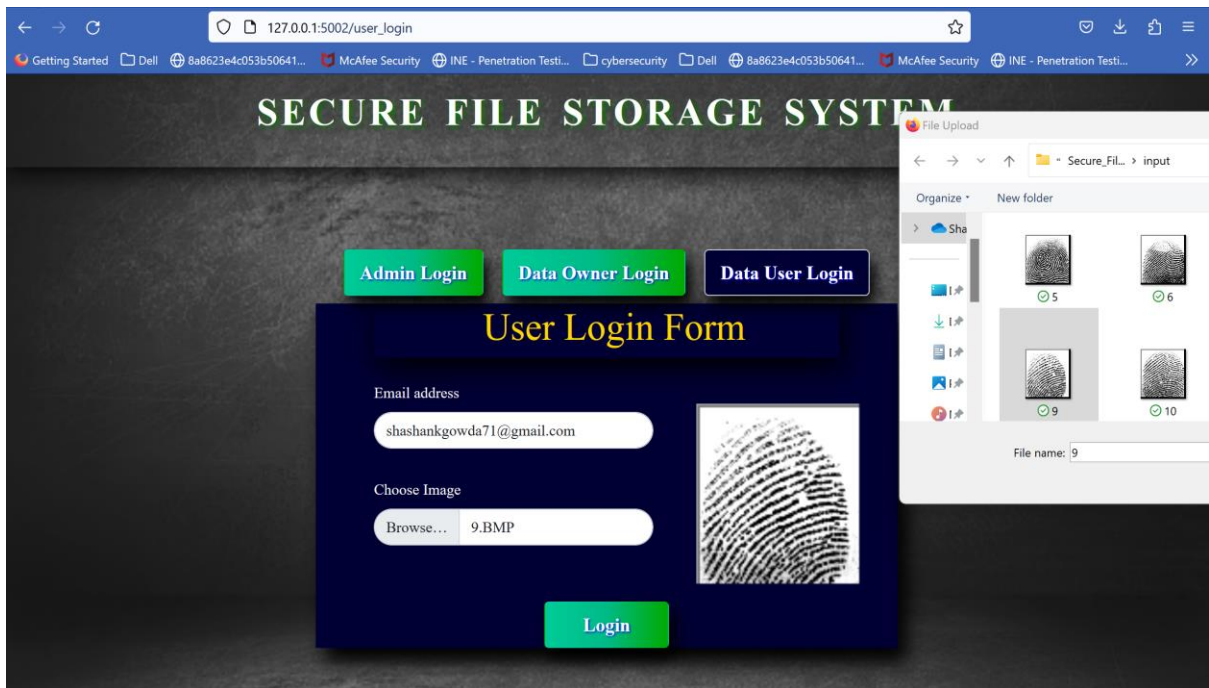
Once the Data Owners are created, they can login to their profile to add users and upload files to the cloud storage for the users to access.



The figure shows the creation of data users by the data owner giving the appropriate fingerprint image to store in the cloud storage as an encrypted file for the user to login



The Data owner uploads files to the cloud for the Users to access



User login using the appropriate user email and fingerprint to login. The finger print is verified by the trained model, if the fingerprint is similar the acccec would be given.



The user can download the files uploaded by the data owner for the domain user can access. Different users could have different domain access.

2 Hardware Requirements

- System Processor: core i5
 - ROM: 250 GB and
 - RAM: 4 GB and
- Any desktop / Laptop system with above configuration or higher level.

3 Software Requirements

- Operating system: Windows 8 /10/11 64Bit
- Coding Language: Python
- Framework: Flask
- Language: HTML, CSS, JS
- Tools: Anaconda and MySQL workbench
- Storage: Drive HQ and MySQL
- IDE: Jupyter Notebook and visual code

4 References

- Anaconda*. (2023, july 26). Retrieved from Anaconda: <https://www.anaconda.com/>
- DriveHQ*. (2023, june 28). Retrieved from DriveHQ: <https://www.drivehq.com/>
- flask*. (2023, july 28). Retrieved from Flask: <https://flask.palletsprojects.com/en/2.3.x/>
- jupyter notebook*. (2023). Retrieved from jupyter: <https://jupyter.org/>
- mysql*. (2023, july 26). Retrieved from mysql: <https://www.mysql.com/products/workbench/>
- python*. (2023, july 24). Retrieved from python: <https://www.python.org/>