National College of Ireland

Configuration Manual

MSc Research Project
Cyber Security

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MSc Project Submission Sheet

School of Computing

Student Name:	C Chandana	
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Programme:	MSc. Cyber Security	**Year:** **2024**
Module:	MSc Research Practicum	
Lecturer:		
Submission Due Date:	Eugene Mclaughlin 12/08/2024	
Project Title:	Blockchain-Enhanced Personal Health Records Sharing with Integrity Verification	
Word Count:	**843**	**Page Count: 10**

I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.
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Configuration Manual

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1 Introduction

This document is used for the configuration manual. This document consists of the step-by-step instructions including screenshots and versions of the software that has to be installed on the system to implement the code. It consists all the information that is needed to execute the research model.
Research work: Blockchain-Enhanced Personal Health Records Sharing with Integrity Verification.

2 System Configuration

The development is done on the windows laptop with the hardware list below.

Feature	Description
Operating System	Windows 11 Home version 23H2
System information	64-bit
Processor	12th Gen Intel(R) Core(TM) i5-12450H 2.00 GHz
Memory	16.0 GB

2.2. Software configuration and requirements

To run the EHR model the anaconda has to be installed in the system to run the code. Some pre-requisites are also needs to be installed in the system before running the code.

Following are the details about what all software has to be installed with their versions.

Software Configuration

Software	Version
Anaconda	**24.5.0**
Python	**3.9.7**

3. System Configuration

1. Anaconda can be downloaded from the below link:
https://www.anaconda.com/download

2. once the anaconda is installed, open anaconda prompt.

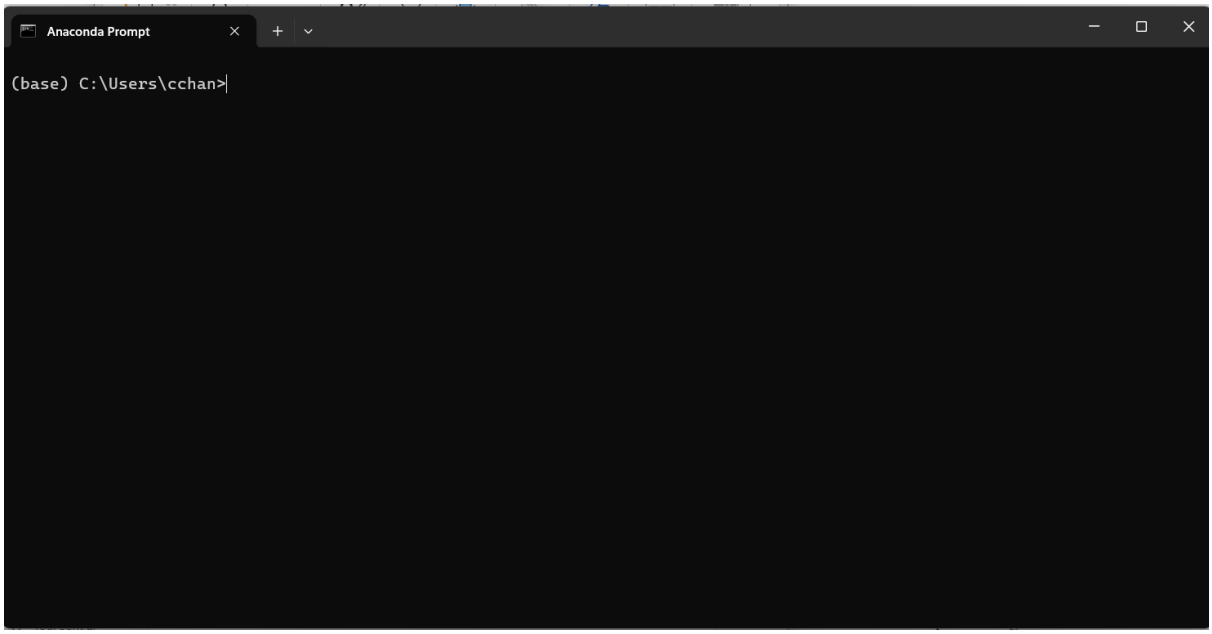

Figure – 1 Anaconda prompt

3. Create a new environment below code has to be run
   conda create --name environment_name python=3.9.7

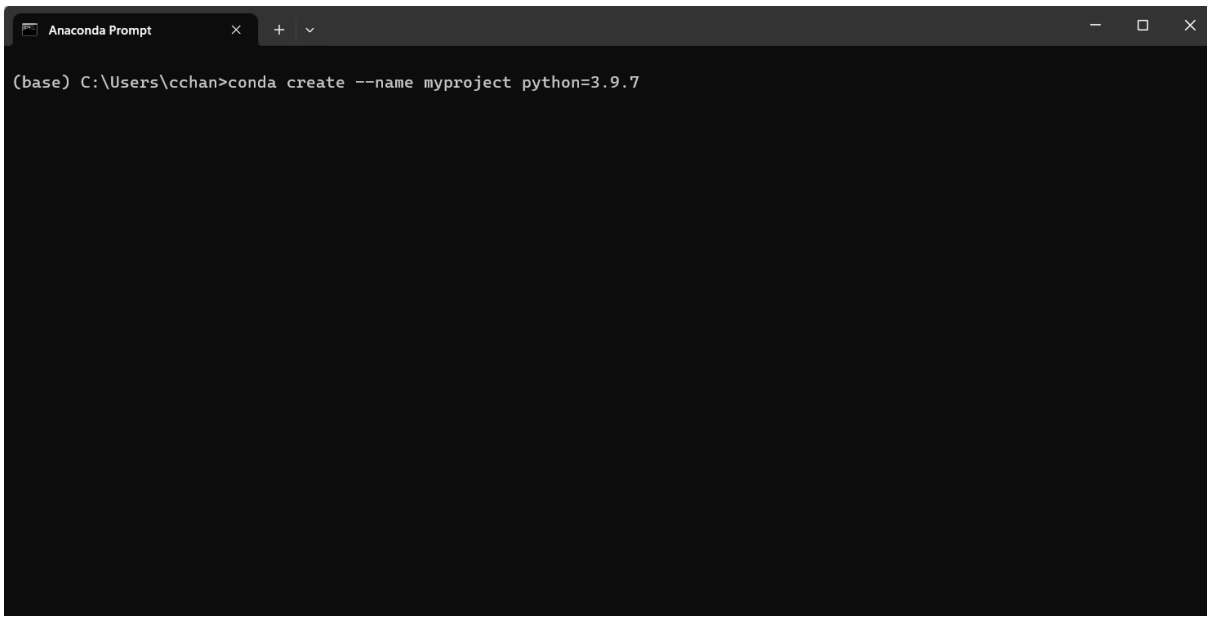

Figure 2 creating a new variable

4. Activate the new environment with the below code
   conda activate environment_name

5. To run the code we have to go inside the folder that can be executed using the below code.
   cd path of the file

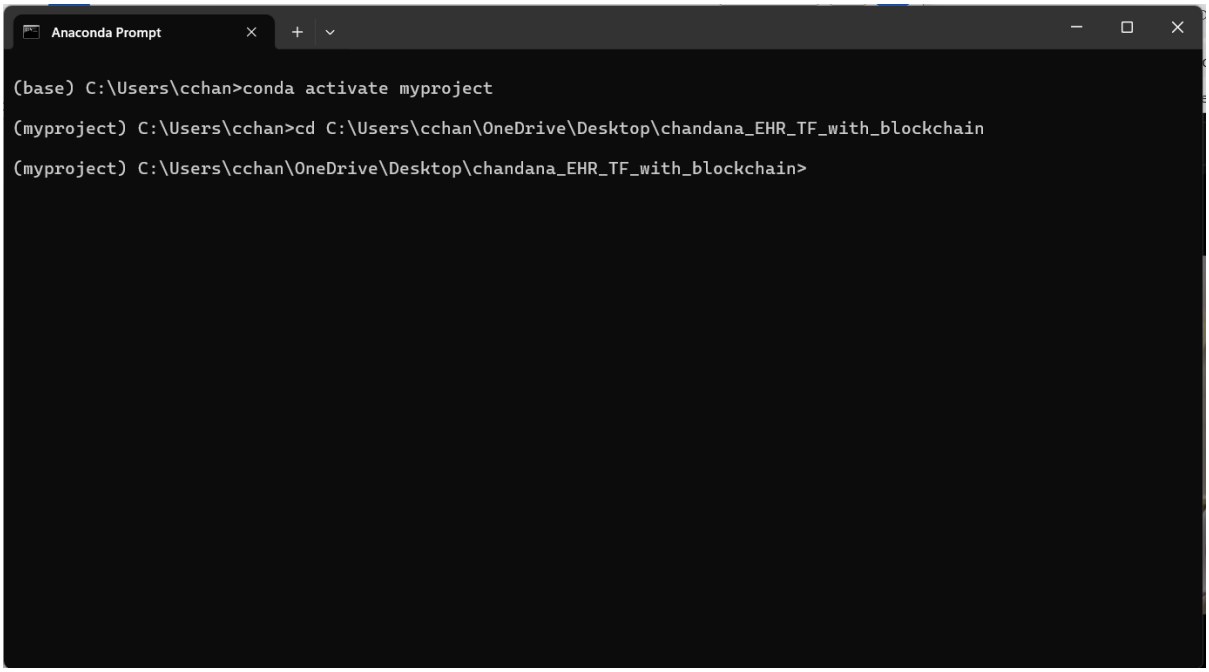

Figure 3 opening the folder

6. There are some pre-requisites that has to be installed in the anaconda these package is the requirement to run the code. The code folder consist of requirement.txt file which has the list of pre required packages. Following code has to be executed in anaconda to install the requirements.
   pip install -r requirements.txt

7. The folder containing the main file has to be executed in terms of executing the model. The following code has to be run in the anaconda prompt.

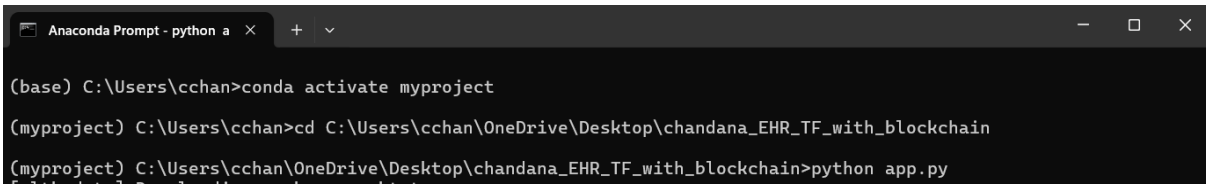

Figure 4 Executing the main file.

8. Once app.py code is executed in the prompt will runn and gives the domain of the website.

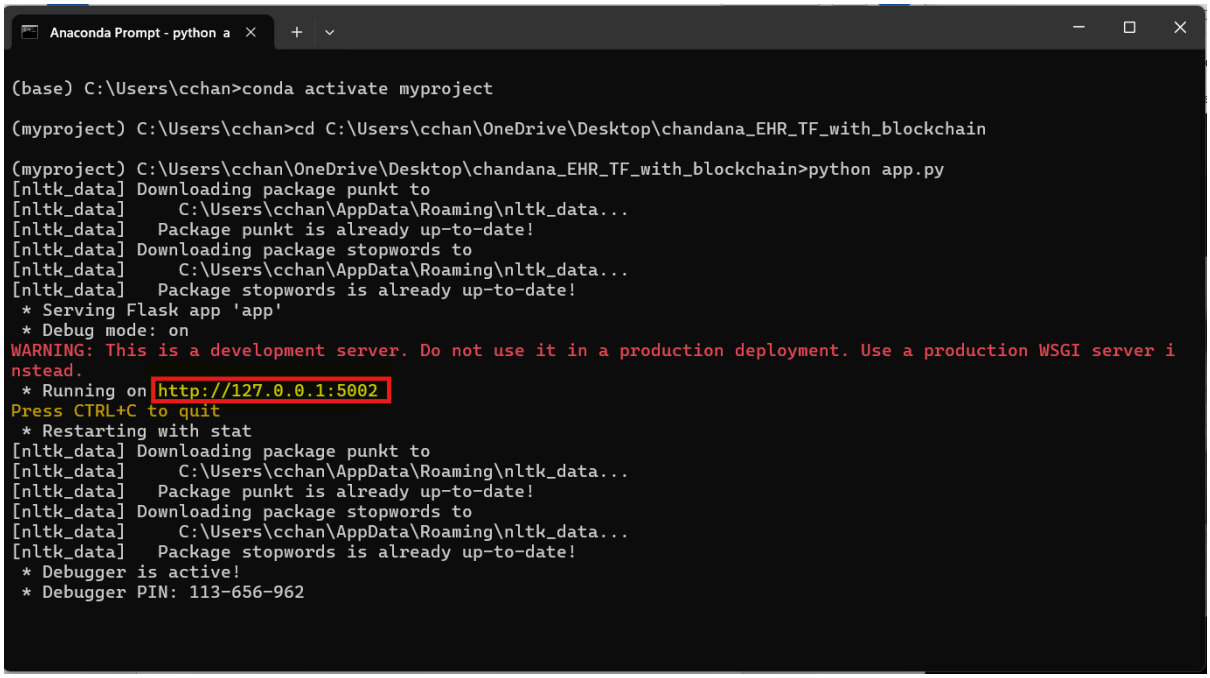

Figure 5 website domain

4. Website Interface

The first page is the admin page that can be accessed by the credential given in the code folder.

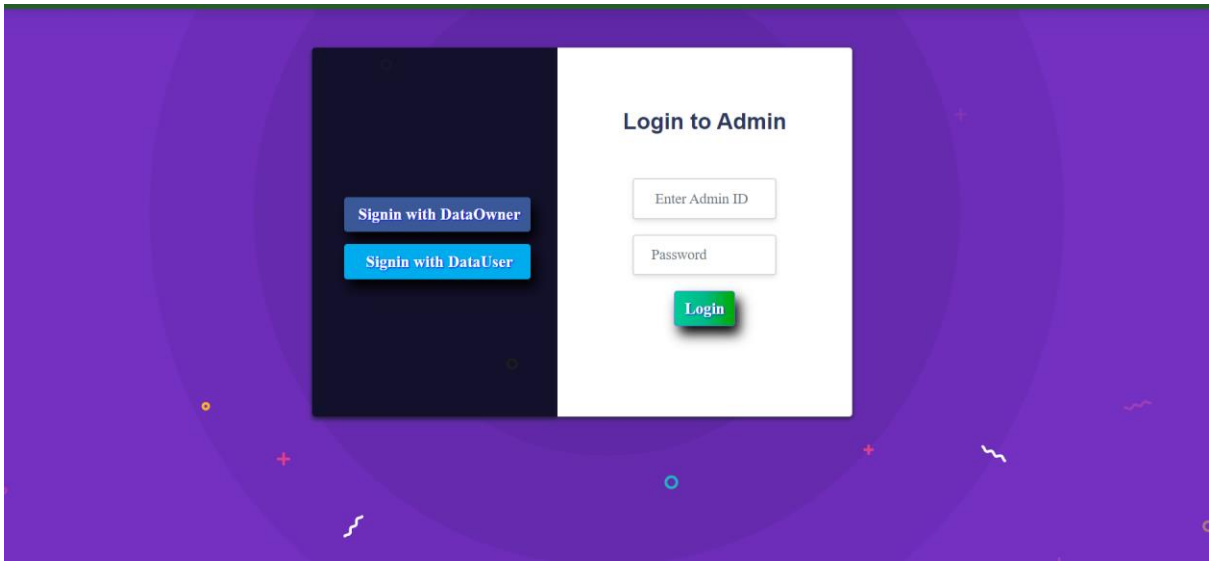

Figure 6 Admin page

The admin page have the whole system controll it can create the dataOwner, can view the files and view the list of the DataUsers. The admin is the one who decides which dataOwner is going to encrypt the data with RSA or ECC algorithm.

Figure 7 DataOwner creation page

DATAOWNER

Dataowner are the once who have the privilege of storing the data in the cloud and they can create the datausers, dataowners can create the attributes and also give access to the files according to the attributes.

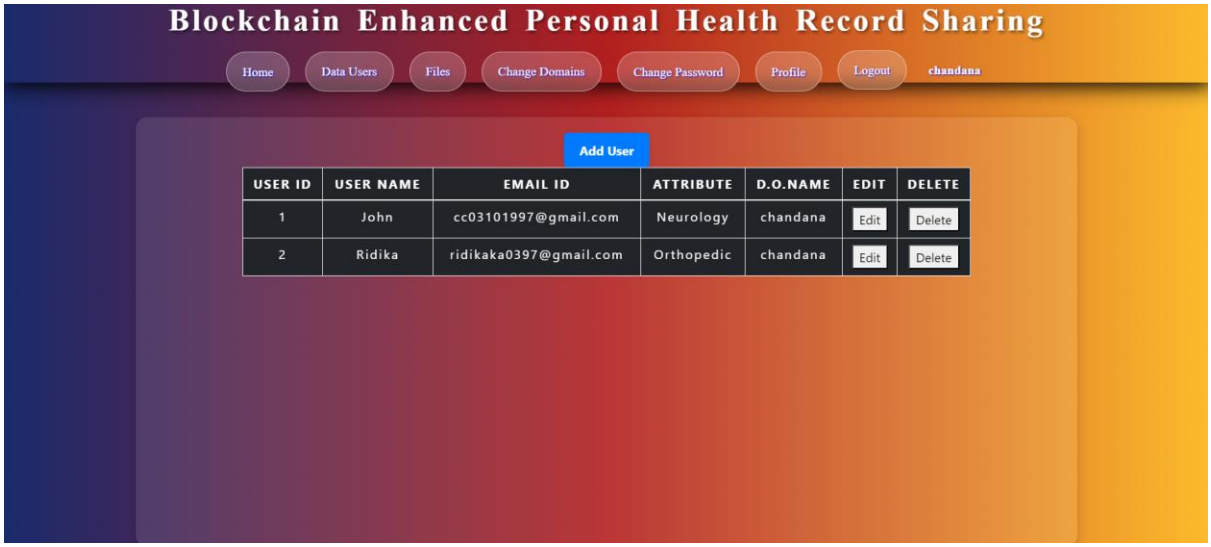

Figure 8 Creation of data user.

Figure 9 uploading of the file.

Figure 10 add and remove a domain

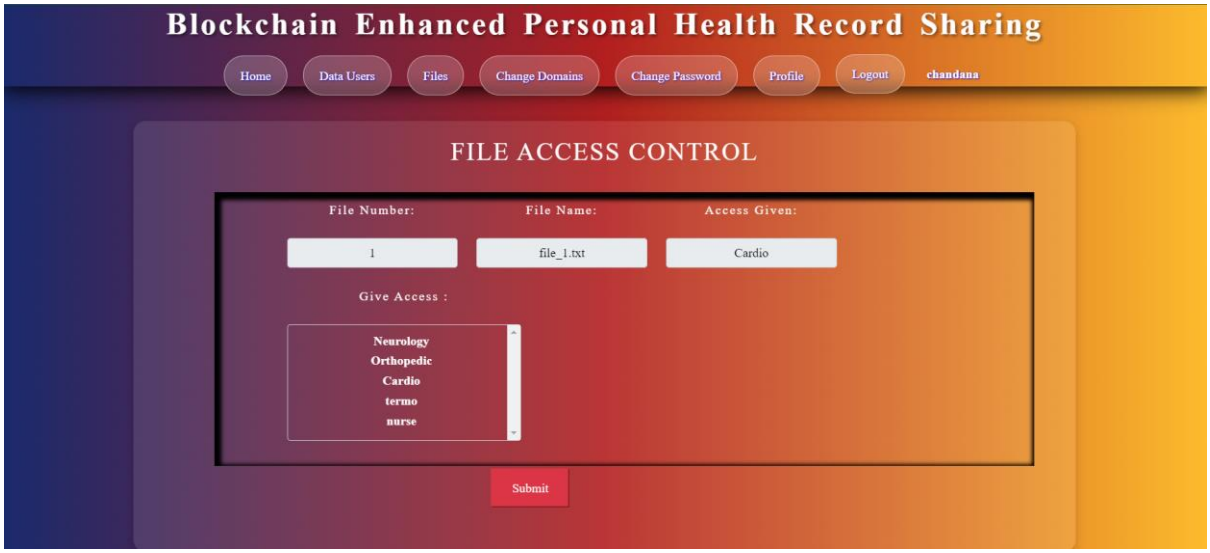

Figure 11 giving access to the file according to the domain

DATAUSER

The datauser can access the file that they have privelage to view. They can download the file while downloading the file get decrypted and made available to the user. There is one additional security in this where the user can verify the file to check the inigrity of the file.

Figure 12 The datauser can download the file

Figure 13 the datauser can verify the file.