**System Functionality:**

Our Health App is securely built to create a web domain that connects the ground with the ISS staff and allows for secure monitoring and health data transfer.

The system allows three types of users to access the system: System Administrators, Astronauts located in the ISS and medics (Doctors/Physicians) located on the ground.

The Health App allows the astronauts to input their blood pressure and weight. It also allows them to send private messages to registered medics.

The medics by using the Health App can view all health data entered by the astronauts and send private messages to astronauts for their feedback, recommendations, and questions.

The System Administrators can access all data on the system (i.e., posts, blood pressure, and weight) and additionally can register new users.

Furthermore, the system includes a download function where all users can download the Health Data in a .csv file.

**Requirements and Running:**

Tools required for running the code:

* WTForms~=2.3.3
* Flask~=2.0.1
* cryptography~=3.4.7
* requests~=2.25.1
* PyJWT~=2.1.0

The requirements.txt file should allow the IDE to download all required modules by running the “*pip install -r requirements.txt*” command.

Our design is coded using Python, PostgreSQL for the database, flash and CSS for our web application and API, Fernet for data encryption and Bcrypt for password hashing.

After completing the installation of the aforementioned modules, the domain can start its operation using the run.py Python file. The Web Health Application can be accessed from the <http://127.0.0.1:5000/> URL and its functionality is only available for authorised users.

To access the system the below emails and passwords can be used:

|  |  |  |
| --- | --- | --- |
| **User** | **Email** | **Password** |
| Astronaut | [astro@email.com](mailto:astro@email.com) | testing |
| Medic | [doc@email.com](mailto:doc@email.com) | test123 |
| Administrator | [admin@email.com](mailto:admin@email.com) | password |

**Further Improvements and Limitations:**