First Iteration:

Team name: Initial Dream
Members: Yifan Li (yl4287), Zixian Zhu (zz2689), Yuqiu gan (yg2684), Shuwan Yao (sy2884)

Part 1:
https://github.com/ysw1997/COMS4156_InitialDream

Part 2:User Stories and acceptance test
#1 Get daily pass
As a student to use this system for the first time, I want to submit the form and update my daily health information so that I would get a green pass code. First, I will visit the auth.register page. I will register a new account.
If I put a unique username and a password and click on the register button, I will jump to the login page.
If I leave the username empty and submit, a flash message will say 'username is required'.
If I fill the username and leave the password empty and submit, a flash message will say 'password is required'.
If I fill the username and password and submit, but the username has been used, a flash message will say 'User username is already registered'.
Then, in the login page, I will fill my username and password.
If I put my username and correct password and click on login , I will jump to the index page. To be specific, 1 means has some symptoms, 0 means no symptom. From the government website, there are some high risk states. The choice of states includes some high risk one people from which need to self quarantine for 14 days.
If I leave my username empty or the username is not in the database and submit, a flash message will say 'incorrect username'.
If I fill the correct username and wrong password and submit, a flash message will say 'incorrect password'.
 In the index page I will click on 'get your pass and jump' to dailypass.submit page.
If I leave my username empty or the username is not in the database and submit, a flash message will say 'incorrect username'.
If I fill in the correct username and choose today's today, and '0' for the symptoms, 'NWC' for visited building, 'NewYork' for visited state in the past 14 days.I will jump to the green pass page', which says 'green pass', and a link to get back to the index.

If I leave one of the dates, symptoms, visittime empty, the website will flash 'please fill in'.

If I enter some letters instead of 0 or 1 in symptoms and submit, the page won't jump to other places, no pass is given, no data is written to the database.
If i leave the choice of building or state empty, there will be a 400 bad request error.

If I fill in the correct username and choose today's today, and '1' for the symptoms, 'NWC' for visited building, 'NewYork' for visited state in the past 14 days.I will jump to the yellow pass page', which says 'yellow pass', and a link to report your self quarantine, a link to upload test result and a link to get back to the index.
All the steps mentioned above are tested manually from the website. There are a few things that need to be improved, which we will do in the next generation. We didn't fix them now because we have to recombine our frontend and backend codes. These parts will get fixed thoroughly in our next generation.

#2 About uploading the test result
As a user who was assigned a yellow pass. I was required to quarantine myself for 14 days. But I got a covid-19 test, and want to upload the result to get a green pass.
- Case 1
  The website can't recognise my test result. It popped out a message telling me to contact the supervisor to apply for a manual review.
- Case 2
  The website recognised my test result. I successfully got my green pass.

#3 About self quarantine
As a user who was assigned a yellow pass. I was required to quarantine myself for 14 days. I don't want to test covid-19, so I decided to quarantine for 14 days.
- Case 1
  Everyday I reported my location in my quarantine area, so my quarantine is valid.
- Case 2
  One day I got out of my quarantine area, the gps location detected that, and I was notified that this quarantine is not valid now. I need to restart a new 14-days-quarantine.

Part 3:
We used pytest to do the unitest.
your github repository containing all the test cases
https://github.com/ysw1997/COMS4156_InitialDream/tree/main/teamproject/tests

the file(s) in your repository that configure the build tool

https://github.com/ysw1997/COMS4156_InitialDream/blob/main/teamproject/tests/conftest.py

coverage run -m pytest

Coverage report

https://github.com/ysw1997/COMS4156_InitialDream/blob/main/teamproject/coverage%20report

Part 4:

We used flake8 and pylint

https://github.com/ysw1997/COMS4156_InitialDream/blob/main/teamproject/coverage%20report

https://github.com/ysw1997/COMS4156_InitialDream/blob/main/teamproject/flaskr/pylint_report.txt

Checkstyle Report

```
● ● ●                              📁 teamproject — -bash — 143×33
./tests/test_travel.py:9:6: W292 no newline at end of file
./tests/test_dailypass.py:5:80: E501 line too long (82 > 79 characters)
./tests/test_dailypass.py:9:80: E501 line too long (80 > 79 characters)
./tests/test_dailypass.py:18:80: E501 line too long (80 > 79 characters)
./flaskr/quarantine.py:28:80: E501 line too long (82 > 79 characters)
./flaskr/quarantine.py:34:80: E501 line too long (82 > 79 characters)
[(base) Shuwans-MBP:teamproject shuwanyao$ flake8 $(shell git ls-files '*.py')
-bash: shell: command not found
./ocr_core.py:1:5: W291 trailing whitespace
./ocr_core.py:3:20: W291 trailing whitespace
./ocr_core.py:9:24: W291 trailing whitespace
./tests/test_quarantine.py:13:80: E501 line too long (87 > 79 characters)
./tests/test_quarantine.py:13:82: E231 missing whitespace after ':'
./tests/test_dailypass.py:5:80: E501 line too long (82 > 79 characters)
./tests/test_dailypass.py:9:80: E501 line too long (80 > 79 characters)
./tests/test_dailypass.py:18:80: E501 line too long (80 > 79 characters)
./flaskr/quarantine.py:28:80: E501 line too long (82 > 79 characters)
./flaskr/quarantine.py:34:80: E501 line too long (82 > 79 characters)
[(base) Shuwans-MBP:teamproject shuwanyao$ flake8 $(shell git ls-files '*.py')
-bash: shell: command not found
./ocr_core.py:1:5: W291 trailing whitespace
./ocr_core.py:3:20: W291 trailing whitespace
./ocr_core.py:9:24: W291 trailing whitespace
./flaskr/quarantine.py:28:80: E501 line too long (82 > 79 characters)
./flaskr/quarantine.py:34:80: E501 line too long (82 > 79 characters)
[(base) Shuwans-MBP:teamproject shuwanyao$ flake8 $(shell git ls-files '*.py')
-bash: shell: command not found
./ocr_core.py:1:5: W291 trailing whitespace
./ocr_core.py:3:20: W291 trailing whitespace
./ocr_core.py:9:24: W291 trailing whitespace
[(base) Shuwans-MBP:teamproject shuwanyao$ flake8 $(shell git ls-files '*.py')
-bash: shell: command not found
(base) Shuwans-MBP:teamproject shuwanyao$ ▊
```

Front-end development instructions

Setup

Run the following commands at `webapp` directory: `npm install` or `yarn`. This would help you install the dependency libraries.

Run `npm run start` or `yarn start` to start the dev server. Then the React app would be available on `localhost:3000`. The dev server would update the app each time you save a change to the project dynamically.

Testing framework

- The app is initialized using "create-react-app". It came with "Jest" & "testing-library/react".
- `Jest` provides a powerful "expect" function.
- `testing-library/react` provides "render" function to use in tests. `Enzyme` can be used to test button functions. `Snapshot` tests are a very useful tool whenever you want to make sure your UI does not change unexpectedly. A typical snapshot test case renders a UI component, takes a snapshot, then compares it to a reference snapshot file stored alongside the test. The test will fail if the two snapshots do not match: either the change is unexpected, or the reference snapshot needs to be updated to the new version of the UI component.

Mock framework

- `mock.js` can fake the response from backends.
- It actually set up a server that simply map request to jsons.

Checkstyle report :

Issue of not defined variables are default variables from Jest however the JS checkstyle cannot pass them, I google for it and cannot get any solution yet.

```
TerMinate batch Job (Y/N)? Y
PS C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone> standard
Debugger attached.
standard: Use JavaScript Standard Style (https://standardjs.com)
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\App.test.js:6:1: 'it' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Header.test.js:8:1: 'it' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Header.test.js:19:1: 'describe' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Header.test.js:20:3: 'test' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Header.test.js:22:5: 'expect' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Header.test.js:26:1: 'it' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Header.test.js:27:14: 'jest' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Header.test.js:33:3: 'expect' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Home.test.js:21:1: 'it' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\index.test.js:6:1: 'it' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Login.js:20:23: 'alert' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Login.js:34:23: 'alert' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\Login.test.js:20:1: 'it' is not defined.
  C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone\src\serviceWorker.js:103:3: 'fetch' is not defined.
Waiting for the debugger to disconnect...
PS C:\Users\yiifa\OneDrive\桌面\Initial_dream\amzon-clone> █
```

Test report:

We did not connect the back-end and front-end in this iteration, so we cannot test branches and some functions that need data from the database, however we successfully test all the rendering of pages, text, imgs and buttons used in our pages.

```
Waiting for the debugger to disconnect...
-------------------|---------|----------|---------|---------|-------------------
File               | % Stmts | % Branch | % Funcs | % Lines | Uncovered Line #s
-------------------|---------|----------|---------|---------|-------------------
All files          |   16.49 |        0 |   13.51 |   15.63 |
 App.js            |       0 |        0 |       0 |       0 | 12-62
 Header.js         |      20 |        0 |      50 |      20 | 13-19
 Home.js           |     100 |      100 |     100 |     100 |
 Login.js          |   35.29 |        0 |   11.11 |   35.29 | 13-20,24-34,52-55
 Product.js        |     100 |      100 |     100 |     100 |
 StateProvider.js  |      80 |      100 |      50 |      75 | 10
 firebase.js       |     100 |      100 |     100 |     100 |
 index.js          |       0 |      100 |     100 |       0 | 9-22
 reducer.js        |       0 |        0 |       0 |       0 | 1-21
 reportWebVitals.js|       0 |        0 |       0 |       0 | 1-8
 serviceWorker.js  |       0 |        0 |       0 |       0 | 13-138
-------------------|---------|----------|---------|---------|-------------------
Test Suites: 3 failed, 2 passed, 5 total
Tests:       2 failed, 3 passed, 5 total
Snapshots:   1 passed, 1 total
Time:        16.531 s
Ran all test suites.
```

Bugger Finder Report:

We used DeepScan in VScode marketplace as the bug finder, but it cannot produce a report, it can only highlight issues in the code and show a rule description using a code action. We have fixed all issues and bugs and there is no highlight in our final file.