Heading: System and Unit Test Report:

1. **System Test scenarios:**
    a. **User story 3 from sprint 1:** As a backend developer, I need to learn about Firebase and its functions so that I can integrate it into our application to establish a connection with the Firebase database.
    b. **User story 5 from sprint 1:**As a user, I would like to log into the app so that I can make comments on the restaurants and experience all the features.
    c. **User story 2 from sprint 1:** As an interface developer, I need to learn XML in Android Studio to create the user interfaces. (login page, sign up page)

    Scenario:

    1. Running the simulator android device on Android Studio
    2. Click "IF you do not have an account, sign up here"
        a. Fill in username which is email "ajdhakjdhj@gmail.com"
        b. Fill in password which need to be Strong Password: "@hjadh123123"
        c. Fill in Three Expertises: Chinese, Franch, Korea
        d. Fill in Four Interests: Chinese, Chinese,Chinese,Chinese
    3. Click register Button
    4. Back to login
    5. Go to your registered email to verified
    6. Click forgot password
        a. Enter the email you want to reset(have to be the registered email)
        b. Go to email and click the link
        c. Enter the new password
    7. Go back to login to sign in
    8. Check Firebase Authentication if the user's email exist
    9. Check Firebase Realtime Database if user's input information is exist.
2. **System Test scenarios:**
    a. **User Story 2 from Sprint 2:** As a frontend developer, I need to learn search view(search bar), image button(restaurants button) to make more abundant button choices.
    b. **User Story 2 from Sprint 1:**As an interface developer, I need to learn XML in Android Studio to create the user interfaces. (Homepage, login page, sign up page, search result page, restaurant info page, filter, etc.)

    Scenario:

    1. Run the simulator android device to start the app
    2. Check the design of homepage same as expectation.
    3. Click Profile
    4. Check the design of login same as expectation.
    5. Click "IF you do not have an account, sign up here"

6. Check the design of signup same as expectation.
7. Click “forgot password”
8. Check the design of forgot password
9. Go back to home page
10. Click the search icon
11. Check design of search result page as expectation
12. Click filter icon
13. Check design of filter page as expectation

3. **System Test scenarios:**
    a. **User Story 4 from Sprint 4:** As a user, I need to be able to see my user info in user profile so that I am able to see my selection at the restaurant.
    b. **User Story 2 from Sprint 3:** As a user, I need to be able to see my user info in user profile so that I am able to check my selection at the restaurant.

    Scenario:

    1. Running the simulator android device on Android Studio
    2. Login with email and password assumed user already register
    3. Able to see all the review that user wrote by click the arrow key next to Reviews
    4. Able to see all the user favorite restaurants by click the arrow key next to Favorites
        a. Able to click the restaurant and go to the restaurant page.
    5. Able to see all the user recent view restaurant by click the arrow key next to Recent Viewed
        a. Able to click the restaurant and go to the restaurant page
    6. Click “setting”
        a. Able to click circle image and choose image from local image to upload
        b. Select new three expertises
        c. Select new four interests
        d. Click save

4. **System Test scenarios:**
    a. **User Story 5 from Sprint 4:** As a frontend developer, I need to change all the pages to dynamic, so switch between pages can be more efficient and prettier.
    b. **User Story 1 from Sprint 4:**
    c. **User Story 2 from Sprint 3:** As a user, I need to be able to see my user info in user profile so that I am able to check my selection at the restaurant.
    d. **User Story 1 from Sprint 3:**As a user, I need to see the next page faster when click the button, so that I can save more time.

e. **User Story 1 from Sprint 1:**As an app developer, I need to learn how to operate Android Studio so that I can build an android app.
f. **User Story 2 from Sprint 2:**As an interface developer, I need to learn XML in Android Studio to create the user interfaces. (Homepage, login page, sign up page, search result page, restaurant info page, filter, etc.).
g. **User Story 4 from Sprint 1:**As a user, I want to search restaurant by it's name and location, so I'm able to search the right restaurant for me.
h. **User Story 1 from Sprint 4:** As a frontend developer, I want to improve UI to make our product looks more fancy

Scenario:

1. Running the simulator android device on Android Studio
2. Clicked the profile button on the bottom navigation bar (dynamically)
3. Log in to your account and direct to user profile page (dynamically)
4. Click setting button on the user profile page and direct to setting page
5. After choose your interest and experity, click save button and direct back to user profile page with all the information appear on profile page (dynamically)
6. Go to homePage and click search bar will direct to two search bar (dynamically). First bar is name and second bar is location.
7. Clicked search will direct to the search result page with correct restaurant (dynamically)
8. Clicked filter button will direct to filter page, select your choice and clicked submit will direct back to the search result page.

5. **System Test scenarios:**
   a. **User Story 4 from Sprint 2:** As a backend developer, I need to use Firebase to organize restaurant information in desired patterns and be able to successfully send restaurant information when users see their personal homepage in Sprint 3
   b. **User Story 5 from Sprint 3:** As a user, I want to have a customized search function so that I can find my desire restaurant.

Scenario:

1. Manually choose to sort by Distance
2. Run the android device simulator on Android Studio
3. Click the search button
4. Type in "Burger" and "Santa Cruz" for name and location
5. Check if the list is showing properly
6. Manually choose to sort by Rating
7. Repeat Step 2-5
8. Choose to not sort
9. Repeat Step 2-3

10. Type in “Burger” for the name and make sure the location of the simulator is in Santa Cruz
11. Check if the restaurants showing are in Santa Cruz

6. **System Test scenarios:**
    a. **User Story 3 from Sprint 3:** As a user, I want to be able to read articles from the homepage so that I am able to understand diverse food culture.

    Scenario:

    1. Run the android virtual device on Android Studio
    2. Click on article on the home page
    3. Able to see article in web view from a new activity
    4. Able to go back to homepage when back key is pressed

7. **System Test scenarios:**
    a. **User Story 4 from Sprint 2:** As a backend developer, I need to use Firebase to organize restaurant information in desired patterns and be able to successfully send restaurant information when users see their personal homepage in Sprint 3
    b. **User Story 4 from Sprint 3:** As a user, I want to be able to open restaurant information from search result page so that I am able to choose restaurants by more detailed information.
    c. **User Story 6 from Sprint 3:** As a backend developer, I want to connect restaurant info fetched from Yelp with our own database.

    Scenario:

    1. Run the android virtual device on Android Studio
    2. Click on the search button
    3. Enter the restaurant name and location into the search fields, type:
        a. Name = <McDonald>
        b. Location = <Santa Cruz>
        c. Click the “search icon” on the keyboard
    4. User should be able to see a list of desired/related restaurants information
    5. Scroll through the list to check if all the restaurants are displayed correctly
    6. Select a restaurant to view its detailed information
    7. Scroll through the page to check if all the info are displayed correctly

Unit Test:

Since we are doing an Android app, we are able to test function that fit our definition of done manually. This implies that running a simulator Android device on Android Studio to check if the function is working properly.