Use Case Name 1: View City Data

Actors:

- Traveler (Selects cities to visit and food to purchase on their trip)
- Database System (Loads city and food data from the database)

Triggers:

- The traveler indicates that they want to view city data.

Preconditions:

- From the main menu, the travel clicked on a button to view city data.

Post-conditions:

- The program will show city data to the traveler from the database.

Normal Flow:

1. The traveler will indicate that they want to view city data by selecting the "view city info" button from the main menu.
2. The database system will provide the system a list of cities that the traveler is able to visit
3. The traveler will select the name of a city they wish to view the data of.
4. The database system will provide the system with a list of the distance from the city to every other city, the foods available for purchase, and the price of each food item.
5. The traveler will view the data of the selected city.
6. The traveler will select the "main menu" button to exit the system.

Alternate Flows:

3A1: Instead of selecting a city the traveler decides to return to the main menu.

1. The traveler will select the "back" button to exit the system
2. The use case ends.

6A1: The traveler decides to view data from another city instead of selecting the "back" button to exit the system.

1. The traveler will select the name of the city they wish to view the data of
2. The use case returns to step 4 and continues.

Use Case Name 2: Update City Data

Actors:

- Admin (Determines selections possible in the trip planner)

- Database System (Loads city and food data from the database)

Triggers:

- The admin indicates that they want to update city data.

Preconditions:

- The admin has already logged in as an admin, instead of a traveler.

Post-conditions:

- The program will update database data based on changes specified by the admin

Normal Flow:

7. The admin will enter the menu to update the database after logging in from the login menu.
8. The system will display buttons to the admin so that the admin will have the ability to add a city, delete a city, or modify a city.
9. The admin will select a button to modify existing city data.
10. The database system will provide the system with a list of cities from the database.
11. The admin will select a city.
12. The system will present data related to that city.
13. The system will display a save changes button.
14. The admin will change some data.
15. The admin will click on the save changes button.
16. The database system will update the database with the changes of the admin.
17. The database system will let the admin know that it has successfully updated the database.
18. The admin will select the "main menu" button to exit the system.

Alternate Flows:

3A1: Instead of selecting to modify existing city data, the admin decides to add a city.

3. The admin will select the "add a city" button.
4. The system will prompt the admin with forms for each detail of the new city.

5. The system will display a save new city button.
6. The admin inputs data.
7. The admin selects the "save new city" button.
8. The system adds the city to the existing database.
9. The use case continues to step 11.

3A2: Instead of selecting to modify existing city data, the admin decides to delete a city.

1. The admin will select the "delete a city" button.
2. The system will show a list of cities from the database.
3. The system will display a button to delete the selected city.
4. The admin selects a city to delete.
5. The admin selects the "delete city" button.
6. The system removes the city from the existing database.
7. The use case continues to step 11.

3A3: Instead of selecting to modify existing city data, the admin decides to return to the main menu.

1. The admin will select the "main menu" button.
2. The system returns to the main menu.
3. The use case ends.

Use Case Name 3: Plan a Trip

Actors:

- Traveler (Selects cities to visit and food to purchase on their trip
- Admin (Determines selections possible in the trip planner)
- Database System (Loads city and food data from the database)

Triggers:

- The traveler selects the "Plan a Trip" button on the main menu.

Preconditions:

- Program is at main menu

Post-conditions

- Traveler will see a results menu that will see their city and food selections they made in their trip plan.

Normal Flow

1. The traveler selects the "Plan a Trip" Button on the main menu.
2. The system will present the traveler with 3 different trip plans to choose from
   a. 11 closest cities from Paris
   b. Closest Cities From London plan
   c. Custom Trip plan
3. The user will select the "custom trip" plan and will select the next button to proceed.
4. The database system will provide the system with a list of cities that the user is able to visit
5. The traveler will indicate the cities they desire to visit by selecting a checkbox next to the city name and selecting the "proceed to food purchase" button
6. The data the traveler inputted in step 5 will be loaded into the database system.
7. The database system will provide the system with a list of foods that the traveler is able to purchase from each city, including the price of each food item
8. The traveler will indicate the foods they desire to purchase by typing in the number of the quantity of a food item to purchase next to the name of the food item and selecting the "proceed to trip results" button.
9. The data the traveler inputted in step 8 will be loaded into the database system.
10. The database system will provide the system with a table of the cities the traveler has selected to visit, the distance between each city, the total distance to be traveled, and a receipt of the food to purchase including a sum of the food prices
11. The traveler will view the trip plan.
12. The traveler will select the "main menu" button to exit the system.

Alternate Flows:

3A1: Instead of selecting the "custom trip" plan, the user instead selects the "11 cities from Paris" plan

1. The user will select the "11 cities from Paris" plan and will select the next button to proceed.
2. The database system will provide the system with a list of 11 predetermined cities, including Paris,
3. The traveler will indicate that they want to visit the 11 cities starting at Paris by selecting the "proceed to food purchase" button
4. The use case continues to step 6

3A2: Instead of selecting the "custom trip" plan, the user instead selects the "Closest Cities from London" plan

1. The traveler will select the "Closest Cities from London" plan and will select the next button to proceed.

2. The database system will provide the system with a list of cities that the user is able to visit
3. The traveler will indicate the number of cities that they desire to visit within a text box.
4. The database system will load the number of cities that the user indicated they want to visit by calculating the closest cities from London
5. The use case continues to step 7

5A1: The traveler desires to choose a different trip plan from the one they selected.

1. The traveler will indicate they want to select a different plan by selecting the "Change plan" button
2. The use case continues from step 2

8A1: The traveler desires to choose different cities to visit than the ones they selected.

1. The traveler will indicate they want to select different cities by selecting the "Change selected cities" button
2. The use case continues from step 4

11A1: The traveler desires to make a new trip plan instead of going to the main menu

1. The traveler will indicate they want to plan a new trip by selecting the "Plan a New Trip" button
2. The use case continues from step 2