TEAM 23
Corey Combs
Jackson Sorrells
Siravit Tichachol
Wonwin Viwathpongpan

CS 307 Product Backlog

Problem Statement

Picking which dining court to eat is a tedious and cumbersome daily task for everyone, especially for those with special dietary needs and/or practices. Those with special dietary practices (vegetarian, calorie-conscious, religious restrictions, allergies, etc.) would need to spend time looking at ingredients from each dish to determine whether or not they are able to consume it. Even those without special dietary practices still have to spend time looking through every dining court menu to find the most favorite one. Our mobile application would reduce the time it takes for Purdue students, staff, and visitors to choose which dining court to eat at by explicitly rank dining courts based on their food preferences.

Background Information

Living in a university with highly-rated dining courts can make you feel comfortable and relaxed after a tiring school day. However, being presented with a plethora of choices of excellent menus from various dining courts can make you feel overwhelmed. We, the development team, are facing this problem daily. The domain for this project is quality of life Android application. The targeted users of our mobile application are Purdue students and visitors, who may have experienced this problem as well.

The existing dining court app from Purdue offers details of users' favorite menu, but its main limitation is that it does not directly help us to decide which dining courts we should go to each day. Our app will address this limitation by directly showing the dining court that best matches the users' preferences at the top of the dining court list. Another limitation for that particular app is that it offers only one dietary preference, which is vegetarian. We aim to solve this limitation by providing more dietary templates for users to select from.

Functional Requirements

1. As a user, I would like to see ranking of dining courts that have the most matches to my food preferences, so that I could easily choose which dining court to go.
2. As a user, I would like to view current food menus for all dining courts., so that I could choose what to eat in the court.
3. As a user, I would like to add favorite food into my preferences by entering in keywords, so that I can easily matched all menu that matched my keyword.
4. As a user, I would like to add favorite food into my preferences by selecting specific serving menu, so that I can matched specific dish I like.
5. As a user, I would like an auto complete function when entering favorites, so that I have easier time typing and not having to worry about typo.

6. As a user, I would like to sort preference item alphabetically so that I can easily edit my preferences.
7. As a user, I would like to add allergens into my preferences, so that I could avoid food I have allergies to.
8. As a user, I would like to remove my food preferences (both favorite food and allergens), so that I can change my preference if I change my mind.
9. As a user, I would like to choose my dietary practices from premade templates, so that I don't have to spend long time building my preferences.
10. As a user, I would like to remove my dietary practices, so that I can change my practices preference if I change my dietary lifestyle.
11. As a user, I would like to view nutritional values for each food dish, so that I can decide which dish is healthy.
12. As a user, I would like to receive notification when my favorite dishes are being served, so that I don't have to open application to manually check.
13. As a user, I would like to receive timely notification for which dining court I should choose, so that I know which dining court to go without opening the application.
14. As a user, I would like to view locations of places where I can use my dining dollars, so that I can easily spend my dining dollar before it expires.
15. As a user, I would like to view off campus restaurants if all Purdue dining courts are closed, so that I can easily find place to eat when dining courts are closed.
16. As a user, I would like to get suggestions for off campus restaurant based off of my food preferences, so that I can explore more dishes I might like.
17. As a user, I would like to get recommendations on menu I might like based on other users with similar preferences, so that I can explore dish I might like.
18. As a user, I would like to get recommendations on menu based on my ethnicity, so that I can easily build my preferences from users' with similar taste.
19. As a user, I would like to be able to refresh the app, so that I can get the latest dining court information.
20. As a developer, I would like to collect anonymous user's preferences data, so that I can improve suggestion system.
21. If time allows, as a developer, I would like to explore more advanced data mining techniques to create better suggestion system,so that users can get better recommendation.
22. If time allows, as a developer, I would like to a web application version of the app, so that users can easily user our application on PC.
23. If time allows, as a user, I would like a ranking of off campus restaurants based on my preferences, so that I can easily chooses where to eat off campus.
24. If time allows, as a user, I would like the application to work nationwide so that I can choose where to eat when I am travelling.
25. If time allows, are a user, I would like to specify by budget for off campus restaurants, so that I can easily choose restaurants within my budget.
26. If time allows, as a user, I would like the application to learn by itself overtime my dietary preferences, so that I don't have to manually create my preferences.
27. If time allows, as a user, I would like to create my own dietary template and share it with other users, so that I create share specialized eating practice, such as special diet program.
28. If time allows, as a user, I would like to be able to rate memu, so that users can know the quality of the dishes.

29. If time allows, as a user, I would like to leave a review of a dish, so that users can understand the rating.
30. If time allows, as a user, I would like to leave a review of a dining court, so that users can know how good is the service.
31. If time allows, as a developer, I would like to cooperate with Purdue to count number of people inside the courts, and number of seats left so that users can decide if they want to wait.
32. If time allows, as a user, I would like to see a ranking of dining courts based off of popularity at the current time, so that users can see which dining courts are busy.

Non-Functional Requirements

Security:

- There is no sensitive information associated with our current design of the app.
- We want our local database to be hidden from the users, and make sure that users will not be able to modify them for ranking accuracy.

Scalability:

- We want our application to be able to run on different Android devices, starting from Android 5.0.
- We want our ranking system to be able to handle larger number of dining courts that may be added in the future.
- We want our applications to be able to handle any number of off campus restaurants so that restaurants can easily be added and removed.
- We want to cache as much as we could to minimize data usage.

Reliability:

- Our application depends on Purdue API availability and internet availability.
- We want the response time for all of our features and widgets to be less than 30 ms.
- We want the system to be able to deal with different screen size and resolution with respect to different mobile operating systems. The images and widgets in our application should not be distorted for all screen resolutions or screen sizes.
- We want our app to update the local menu database once each day before the user opens the app so that they don't have to wait every time.
- If time allows, we want our app to be able to work offline, so that the app's data will always be available for the users.
- We want to limit request to Purdue dining court API to less than 100 requests per day.

Usability:

- We want the interface to be easy to navigate and understand.
- The interface should not be distracting for the user.
- The notifications should not spam the user.
- The interactable objects or widgets should feel responsive.

- We want application loading time on opening to be less than 500 ms.
- We also want our application to be fluid, as in the performance should be smooth and there should not be unnecessary interrupts during the usage of the application.
- If time allows, we want to fetch and sort dining court in background, and reduce opening time to less than 50 ms.