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Project Title:

Tasteful Panthers: Food Recommendation at Dining Halls

Client: Philip Chan

Test Document

1. Introduction

1.1. Document identifier

Test Plan for Tasteful Panthers: Food Recommendation at Dining Halls

1.2. Scope

The scope of this test plan is to outline the testing process for the Tasteful Panthers mobile application. This will include all required features for the Tasteful Panthers application. We need to understand the testing process and what is to be expected in order to properly meet all of the requirements for our app.

1.3. References

[e.g. page 53 of [IEEE Standard for Software Test Documentation](#)]

1.4. Context

Tasteful Panthers is a mobile application designed to provide personalized meal recommendations, allow users to leave, search, and view reviews, as well as participate in contests and offer meal suggestions. Testing will cover the six key features of the app, including the personalized recommendation system, enter/view/search reviews, GPS notification system, leaderboard contests, student meal suggestions, and kitchen staff searching/viewing/commenting on reviews as well as a few other features.

1.5. Notation for description

- a. Test case identifier
- b. Objective
- c. Inputs
- d. Outcome(s)
- e. Environmental needs
- f. Special procedural requirements
- g. Intercase dependencies

2. Details

2.1 Application GUI

a. Test case identifier: GUI Test Case

b. Objective: Ensure the UI is easy to use and all main features are easily accessible.

c. Inputs:

1. Navigate between Home Screen, Personal Profile Screen, Review Screen
2. Load personalized meal recommendations
3. Load current polls and contests
4. Load leaderboard information
5. Load past reviews/ratings
6. Submit a review
7. Search for reviews
8. View notifications d.

d. Outcome(s):

Correct:

1. All screens load correctly with appropriate content
2. Daily personalized meal recommendation is displayed on Home Screen
3. Current polls and contests are visible on Home Screen
4. Leaderboard information is correctly displayed
5. Personal Profile shows user's name, email, flavor profile, past reviews/ratings, and contest information
6. Review submission is successful with all elements (stars, text, images, videos, tags)
7. Review search returns accurate results based on search criteria
8. Notifications are displayed within the app when opened

Incorrect:

1. Screens fail to load or display incorrect information
2. Personalized recommendation is missing or irrelevant
3. Polls and contests are outdated or missing
4. Leaderboard information is inaccurate or missing
5. Personal Profile is incomplete or shows incorrect information
6. Review submission fails or doesn't include all elements
7. Review search returns irrelevant results or no results
8. Notifications are not displayed or are shown incorrectly

e. Environmental Needs: Needs to work in an Android mobile environment.

f. Special procedural requirements: N/A

g. Intercase dependencies: We must have a functional login system in order for users to access all of the available pages

2.2 Login System

a. Test case identifier: Login Test Case

b. Objective: Users can log into the app.

c. Inputs:

1. Student login with "@fit.edu" email
2. Kitchen staff login with "@fit.edu" email
3. Login attempt with non-@fit.edu email
4. Login attempt with incorrect password
5. Student attempting to create staff account
6. Staff attempting to create student account

d. Outcome(s):

Correct:

1. Students can access all required pages (reviews, contests, suggestions, profile, recommendations)
2. Kitchen staff can view and comment on reviews, see meal suggestions
3. Non-@fit.edu email login is rejected
4. Incorrect password prompts an error message
5. Students are prevented from creating staff accounts
6. Staff are prevented from creating student accounts

Incorrect:

1. Students can access staff pages or cannot access student pages
2. Kitchen staff can submit reviews or access student-only features
3. Non-@fit.edu email login is accepted
4. Incorrect password allows access
5. Students can create staff accounts
6. Staff can create student accounts

e. Environmental needs: We will need a database to store all of this information.

f. Special procedural requirements: Account validation to ensure user/staff have access to correct pages/functionalities.

g. Intercase dependencies: we will need a backend API for login validation.

2.3 Personalized Recommendations

a. Test case identifier: Recommendation Test Cases

b. Objective: Ensure personalized recommendations are determined by users flavor profiles as well as other profiles they've been determined to have similar flavor profiles to.

c. Inputs:

1. New user with no reviews, only flavor profile
2. User with reviews and flavor profile
3. User with specific dietary restrictions (e.g., gluten-free, vegan)
4. User with preferred tags (e.g., good for studying, health-conscious)

d.Outcome(s):

Correct:

1. New user receives top-rated meals matching their flavor profile
2. User with reviews gets recommendations based on similar users' preferences and own flavor profile
3. Recommendations respect dietary restrictions
4. Recommendations include meals with preferred tags
5. Recommendations update daily based on recent reviews

Incorrect:

1. New user receives random or irrelevant recommendations
2. User with reviews gets recommendations ignoring similar users or own preferences
3. Recommendations ignore dietary restrictions
4. Recommendations exclude meals with preferred tags
5. Recommendations remain static and don't update daily

e. Environmental needs: Backend data focusing on user profiles and their review history.

f. Special procedural requirements: Test a variety of profiles with a variety of flavor profiles.

g. Intercase dependencies: This will require a functional review system as well as databases to store user info and the reviews.

2.4 Review System

a. Test case identifier: Review System Test cases

b. Objective: Ensure users can submit and search for reviews which should include tags, images/videos, and star ratings, as well as view these reviews.

c. Inputs:

1. Submit review with 1-5 stars, text (100 characters max), image, video link, and tags
2. Search reviews by specific tags (e.g., good for taste buds, health, restricted diets)
3. Search reviews by star rating (e.g., 4 stars and above)
4. Search reviews by keywords in text comments
5. View reviews for personalized recommendation
6. View reviews from leaderboard items

d. Outcome(s):

Correct:

1. Review is submitted with all elements and stored in the database
2. Search returns all reviews with specified tags
3. Search returns all reviews at or above specified star rating
4. Search returns reviews containing specified keywords
5. User can view reviews for their personalized recommendation

6. User can view reviews for items on the leaderboard

Incorrect:

1. Review submission fails or misses elements
 2. Search returns reviews without specified tags or no results
 3. Search returns reviews below specified star rating
 4. Search fails to find reviews with specified keywords
 5. User cannot view reviews for their personalized recommendation
 6. User cannot access reviews for leaderboard items
- e. Environmental needs: Reviews need to be stored and to be able to be retrieved.
- f. Special procedural requirements: Test video links can be stored and accessed.
- g. Intercase dependencies: Need databases to access reviews.

2.5 GPS Notifications

- a. Test case identifier: GPS Test cases
- b. Objective: Ensure notifications are triggered at the correct location/times, such as when a diner enters a dining hall and 30 minutes after arriving.
- c. Inputs:
1. User enters within 100 feet of the Panther Dining Hall
 2. User remains in the dining hall for 30 minutes
 3. User leaves the dining hall before 30 minutes
 4. User enters and exits the dining hall multiple times within short intervals
- d. Outcome(s):

Correct:

5. Notification with personalized recommendation sent when user enters dining hall
6. Reminder to leave a review sent 30 minutes after entering dining hall
7. No review reminder if user leaves before 30 minutes
8. Correct handling of multiple entries/exits without duplicate notifications

Incorrect:

1. No notification or incorrect recommendation when entering dining hall
 2. No review reminder or reminder sent at wrong time
 3. Review reminder sent even if user has left
 4. Multiple or conflicting notifications for multiple entries/exits
- e. Environmental needs: GPS tracking needs to be enabled on the device of the user.
- f. Special procedural requirements: Test for how accurate the GPS's accuracy is.
- g. Intercase dependencies: We will need to have built the actual notification system for this to work.

2.6 Contests/Leaderboards

- a. Test case identifier: Contest Test Cases
- b. Objective: Ensure contests and leaderboards update in real time based off of the users participation.
- c. Inputs:
 - 1. Daily poll responses
 - 2. Weekly review contest participation (e.g., reviews with specific tag)
 - 3. User predicts most popular meal for tomorrow
 - 4. Multiple users submit reviews under contest tag
- d. Outcome(s):
 - Correct:
 - 1. Daily poll results displayed to all users
 - 2. Weekly contest leaderboard updates in real-time
 - 3. Correct tracking of meal popularity predictions
 - 4. Top three reviewers for weekly tag correctly identified and rewarded
 - Incorrect:
 - 1. Poll results not displayed or incorrectly calculated
 - 2. Leaderboard fails to update in real-time
 - 3. Incorrect tracking or display of meal popularity predictions
 - 4. Wrong reviewers identified as winners or no rewards given
- e. Environmental needs: Database needed to track users activity and reviews.
- f. Special procedural requirements: Leaderboard must update in real time.
- g. Intercase dependencies: Review system must work as well as a system for the polls.

2.7 User Suggestions for Meals

- a. Test case identifier: User Suggestion Test Cases
- b. Objective: Ensure users are able to submit meal suggestions for next week's menu and receive confirmation the suggestion has been received.
- c. Inputs:
 - 1. User submits suggestion with meal name and reasoning
 - 2. User submits suggestion with meal name, reasoning, and recipe link
 - 3. Multiple users submit the same meal suggestion
 - 4. User submits suggestion without required fields d.
- Outcome(s):
 - Correct:
 - 1. Suggestion is stored in database and confirmation shown to user
 - 2. Suggestion with recipe link is correctly stored and accessible
 - 3. Multiple identical suggestions are tracked for popularity
 - 4. User is prompted to fill in required fields
 - Incorrect:
 - 1. Suggestion is not stored or no confirmation shown

- 2. Recipe link is lost or inaccessible
- 3. Duplicate suggestions are treated as separate entries
- 4. Incomplete suggestions are accepted without all required information
- e. Environmental needs: Database is needed to store meal suggestions.
- f. Special procedural requirements: Test multiple different meals to make sure they're being processed properly.
- g. Intercase dependencies: N/A

2.8 Staff Interactions with Reviews

- a. Test case identifier: Staff Interactions Test Cases
- b. Objective: Ensure kitchen staff can view, search, and comment on user reviews as specified.
- c. Inputs:
 - 1. Staff views all reviews
 - 2. Staff searches reviews by specific tags (e.g., "spicy", "good for studying")
 - 3. Staff filters reviews by star ratings (1-5 stars)
 - 4. Staff adds a comment to a student review
 - 5. Staff attempts to leave a review
- d. Outcome(s):

Correct:

 - 1. All reviews are displayed to staff
 - 2. Only reviews with specified tags are shown in search results
 - 3. Only reviews with selected star ratings are displayed
 - 4. Staff comment is successfully added and visible under the student review
 - 5. Staff is prevented from leaving a review and receives an error message

Incorrect:

 - 1. Reviews are not visible or incomplete
 - 2. Search by tags returns irrelevant or no results
 - 3. Star rating filter shows incorrect ratings or all ratings
 - 4. Staff comment is not added or added to the wrong review
 - 5. Staff is able to leave a review as a regular user
- e. Environmental needs: Admin interface for staff access, review database
- f. Special procedural requirements: Ensure clear distinction between staff comments and user reviews
- g. Intercase dependencies: Review system, staff login system

2.9 Home Screen for Diners

- a. Test case identifier: Diner Home Screen Test Cases:
- b. Objective: Ensure the diner's home screen displays all required elements and functions correctly.
- c. Inputs:

1. User clicks "Today's Recommendation" button
 2. User clicks on recommended dish
 3. User clicks "Reviews" button
 4. User clicks "Contest" button
 5. User clicks "Settings" button
 6. Kitchen staff decides to make a suggested meal
- d. Outcome(s):
- Correct:
1. Message "Recommended to try these flavorful meals by my tasteful twin" is displayed with recommended dishes
 2. Reviews for the clicked dish are displayed
 3. User is taken to the enter/search/view review screen
 4. User is taken to the leaderboard page showing all three userboards
 5. User's personal information (email, flavor profile, notification settings) is displayed
 6. Users receive a notification about the day/week the suggested meal will be made
- Incorrect:
1. No recommendation message or dishes are displayed
 2. Clicking on a dish doesn't show its reviews
 3. Reviews button doesn't lead to the correct screen
 4. Contest button doesn't show all leaderboards
 5. Settings don't display all required personal information
 6. No notification is sent when a suggested meal is scheduled
- e. Environmental needs: User profile database, review database, contest/leaderboard system
- f. Special procedural requirements: Test navigation between different screens
- g. Intercase dependencies: Personalized recommendation system, review system, contest system, user profile system

2.10 Home Screen for Staff

- a. Test case identifier: Staff Home Screen Test Cases
- b. Objective: Ensure the staff home screen displays all required elements and functions correctly.
- c. Inputs:
1. Staff clicks "Student reviews" button
 2. Staff clicks "Top rated meals" button
 3. Staff clicks "Lowest rated meals" button
 4. Staff clicks "Analytics" button
- d. Outcome(s):

Correct:

1. Staff is taken to the student reviews page where they can search by tags and filter by star ratings
2. Staff is shown a page with the current top-rated meals
3. Staff is shown a page with meals rated 1 or 2 stars
4. Staff is taken to the leaderboards page showing suggested meals and their popularity

Incorrect:

1. Student reviews page doesn't allow searching or filtering
 2. Top rated meals page is empty or shows incorrect ratings
 3. Lowest rated meals page shows meals with high ratings
 4. Analytics page doesn't show leaderboards or suggested meals
- e. Environmental needs: Review database, meal rating system, leaderboard system
- f. Special procedural requirements: Ensure staff can't access diner-specific features
- g. Intercase dependencies: Review system, meal rating system, leaderboard system

2.11 Profiles

- a. Test case identifier: Profile Test Cases
- b. Objective: Ensure student and kitchen staff profiles are created and managed correctly.
- c. Inputs:
1. Student signs up with @fit.edu email
 2. Student signs up with non-@fit.edu email
 3. Student adds name to profile
 4. Student adds image and YouTube account links
 5. Student adds favorite categories and tags
 6. Kitchen staff logs in with admin credentials
 7. Attempt to create multiple kitchen staff accounts
- d. Outcome(s):

Correct:

1. Student account is created successfully with @fit.edu email
2. Sign-up is rejected for non-@fit.edu email
3. Student's name is added to their profile
4. Image and YouTube links are successfully added to student profile
5. Favorite categories and tags are added to student profile
6. Kitchen staff can access admin features with single account
7. System prevents creation of multiple kitchen staff accounts

Incorrect:

1. Student account creation fails with valid @fit.edu email
 2. Non-@fit.edu email is accepted for student account
 3. Student's name is not saved or displayed incorrectly
 4. Image and YouTube links are not saved or displayed
 5. Categories and tags are not saved or associated with wrong profile
 6. Kitchen staff login doesn't grant access to admin features
 7. Multiple kitchen staff accounts can be created
- e. Environmental needs: User profile database, authentication system
- f. Special procedural requirements: Ensure proper validation for email addresses and admin credentials
- g. Intercase dependencies: Login system, review system, recommendation system