Team Buttercup RAD

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Team 3:

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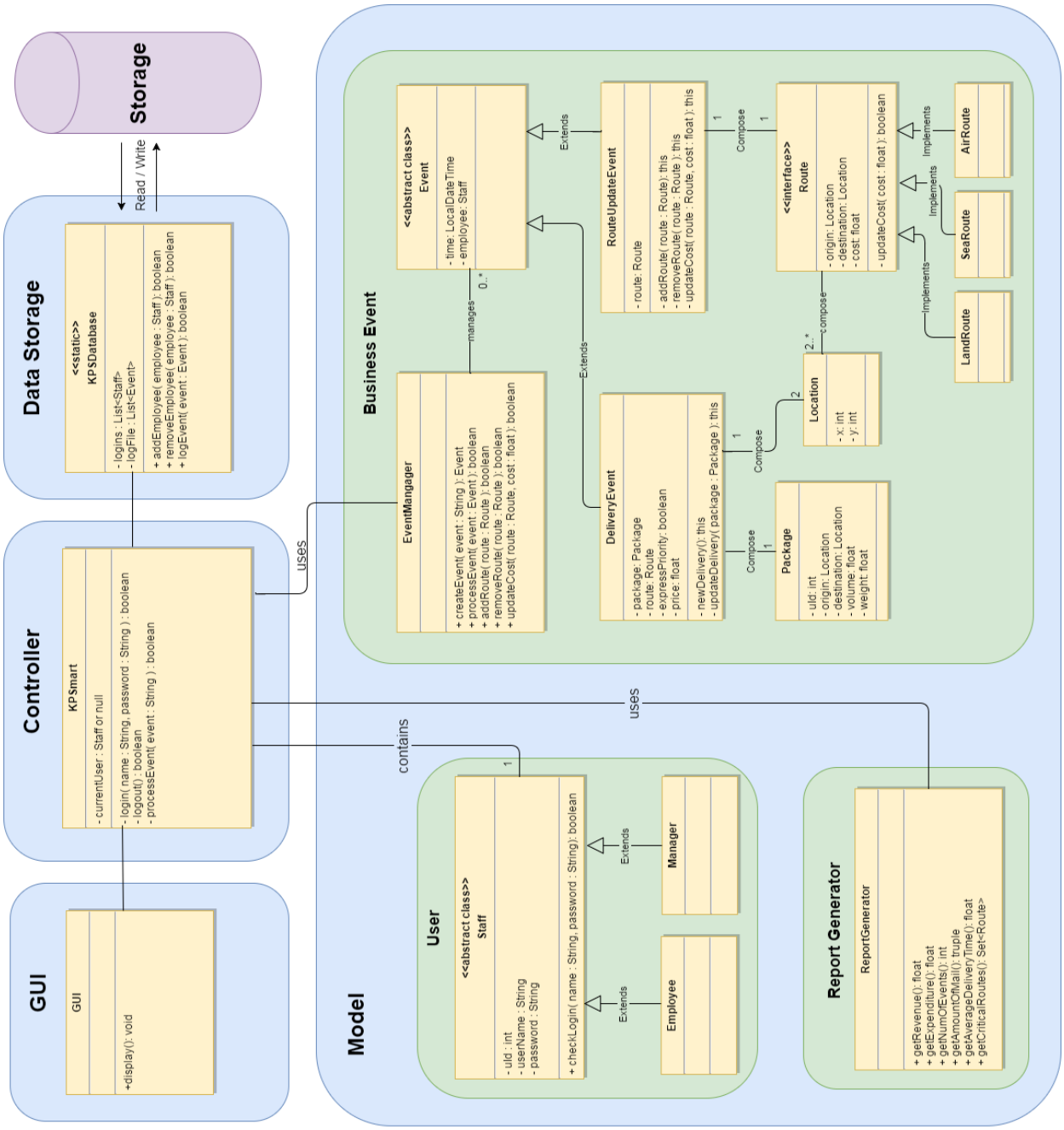
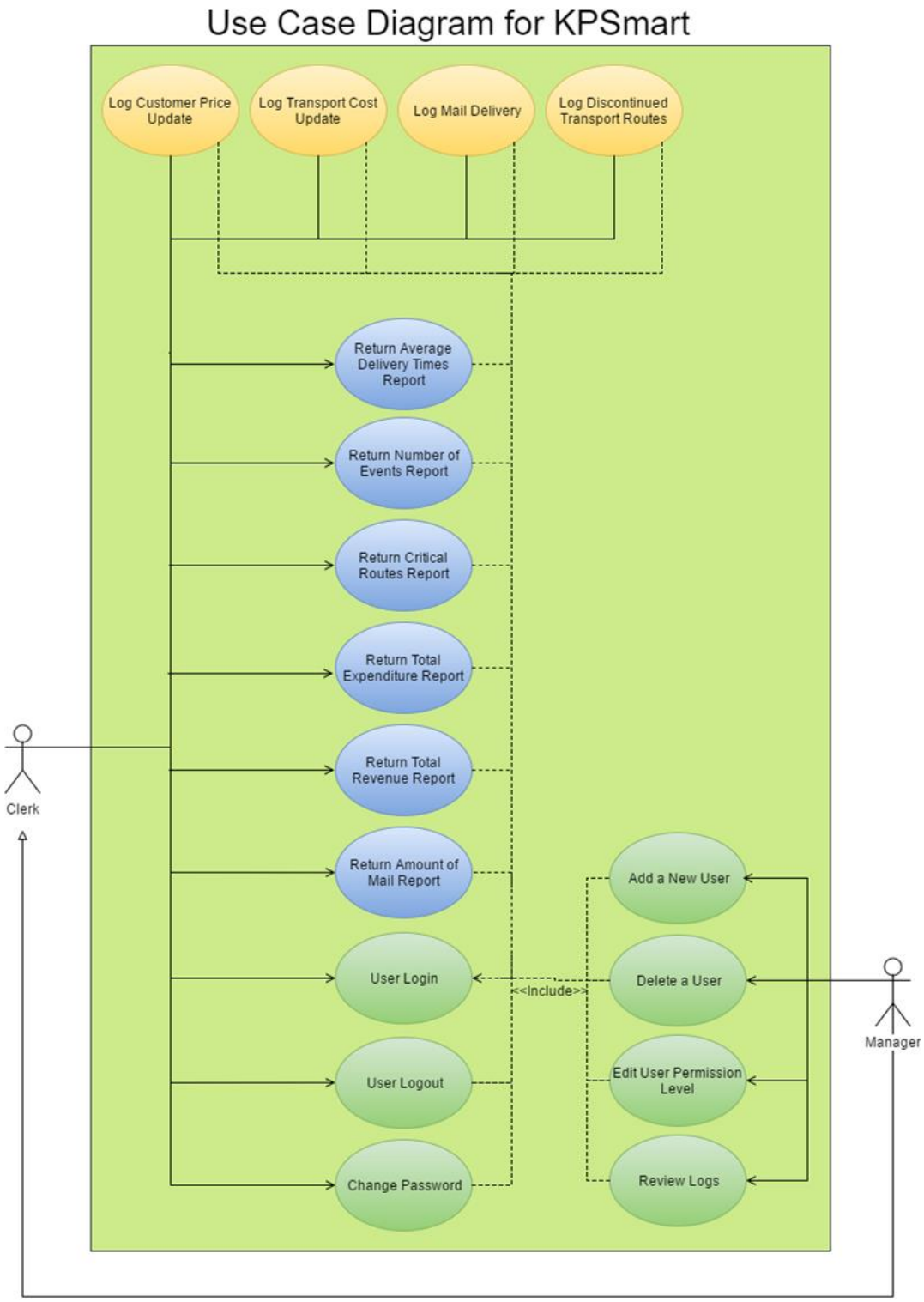
Class Diagram



Use Case Diagram



Use Cases Descriptions

USE CASE: *User Login*

Actors:

1. Manager
2. Clerk

Preconditions:

1. The user must be registered in the ‘User Store’.
2. Only valid credentials must be provided, and in the correct format.
3. User must be connected and have permission to access the ‘User Store’.

Postconditions:

The user must be successfully logged in the system.

Main Success Scenario:

1. The user enters in their username, and password within the login interface of the system.
2. The user logs into the system, and enters into different interface. The interface presented is dependant to their account permissions.

Exception Scenarios:

1a. A user enters in an incorrect password.

- The system informs the user and requests to input again.

1b. A user enters in a username which is not in the system record.

- The system informs the user that there is no corresponding username and suggests talking with the Manager.

USE CASE: *User Logout*

Actors:

1. Manager
2. Clerk

Preconditions:

1. The user must be successfully logged in the system.

Postconditions:

A user successfully logged out the system.

Main Success Scenario:

1. The current user clicks the “Logout” button to request to be logout.
2. The system pops up a dialogue box, and asks the user confirming that they want to be logged out of the system.
3. The user clicks “Yes” to logout.

Exception Scenarios:

1a. A user clicks the “logout” button by mistake.

- The user clicks “No” button on the dialogue box to cancel the action.

Assumptions and Notes:

Assuming that because the user is already logged in, they are successfully connected and have access to User Store.

USE CASE: *Change Password*

Actors:

1. Manager
2. Clerk

Preconditions:

1. The user must be successfully logged in the system.
2. The password has to be different than last one.

Postconditions:

A user password has changed and is able to login into the system with the new password.

Main Success Scenario:

1. The user requests to change the password.
2. The user enters in their previous password into the previous password field.
3. The user enters in a new password in the format required by the system.
4. The user re-enters in a new password again.
5. The system informs the user that the password has changed.
6. The user logs in the system using the new password.

Exception Scenarios:

3a. A user enters in a new password with an invalid format.

- The system asks the user to re-enter in another valid password.

4a. The two enters in passwords are inconsistent.

- The system asks the user to re-enter in the password again.

Assumptions and Notes:

Only if the new password is valid and confirmed by the user for twice, the password can be changed successfully (is this not a precondition).

USE CASE: *Edit User Permission Level*

Actors:

1. Manager

Preconditions:

1. A manager is logged in the system.
2. A valid user is selected.

Postconditions:

A user's role is changed and updated in the user store (Manager -> Clerk or Clerk -> Manager).

Main Success Scenario:

1. A manager requests to change a user's role.
2. The system goes to the "user" page, displays the user list as the order of username and a search bar.
3. The manager selects a user from the user list or searches a username through the search bar.
4. The system displays the relevant information of the selected or searched user, including his/her current permission level.
5. The manager edits the user's role and clicks "submit" to confirm the modification.
6. The system modifies the permission level for the user.

Exception Scenarios:

3a. The manager searches a username that is not in the user list.

- The system informs the manager and asks to re-enter the username once again.

Assumptions and Notes:

Only a manager has the authority to edit the permission level for a user, which means this function is only available in the "user" page when a manager logging in the system.

USE CASE: *Add a New User*

Actors:

1. Manager

Preconditions:

1. A manager has been logged in the system.
2. Valid credentials entered and correct formatting.

Postconditions:

A user is added into the system and can then log into the system using his/her new account.

Main Success Scenario:

1. A manager requests to add a new user.
2. The system redirects manager to dialogue for creating a new user.
3. The manager enters in the relevant information of the new user (E.g. personal information, username, the initial password) and clicks “submit” when finishing input.
4. The system pops up a dialogue to ask the manager to confirm the information.
5. The manager clicks “Yes” to complete the action, and the system adds the user to the user list and System logs creation of user as an event within the database.

Exception Scenarios:

3a. The manager enters in invalid information.

- The system informs the manager and asks to re-enter valid information.

Assumptions and Notes:

- Only a manager has the authority to add a new user, which means this function is only available in the “user” page when a manager logging in the system.
- The initial password for a new user is “0000”. The user can change his/her own password later.

USE CASE: *Delete a User*

Actors:

1. Manager

Preconditions:

1. A manager is successfully logged in the system.
2. Only a valid user can be selected.

Postconditions:

The selected user is removed from the system.

Main Success Scenario:

1. A manager requests to delete a user.
2. The system redirects the manager to the “User” page, displaying the user list as the order of username and a search bar.
3. The manager selects a user from the user list or searches a username through the search bar.
4. The manager clicks the “Delete” button to remove this user.
5. The system pops up a dialogue box to ask the manager to confirm the action.
6. The manager clicks “Yes” to finish the operation, and the system removes the user from the user list and all the relevant information.

Exception Scenarios:

3a. The manager searches a username that is not in the user list.

- The system informs the manager and asks to re-enter in a valid username.

4a. The manager clicks the “Delete” button by mistake.

- The manager cancels the action by clicking “No” within the dialogue box.

Assumptions and Notes:

- Only a manager has the authority to delete a user, which means this function is only available within the “User” page when a manager is logged into the system.
- If the manager wants to delete himself/herself, when the manager clicks “Yes” to finish the action, the system will remove his/her from the user list, and automatically logs him/her out of the system.

USE CASE: *Log a Mail Delivery*

Actors:

1. Manager
2. Clerk

Preconditions:

1. The manager or clerk is logged into the system.
2. Valid package information is entered.
3. The Logs have to be read into the system.

Postconditions:

The item must be successfully logged into the system for delivery.

Main Success Scenario:

1. Customer hands over an item or items to the clerk for it to be delivered to their desired location.
2. Manager or clerk enters in basic information about the item to the system. E.g. weight, size, general description.
3. Manager or clerk asks customer their urgency for package delivery.
4. The system returns a set of possible routes for the item to travel.
5. The customer decides on a route and lets the manager or clerk process it into the system.
6. The package is then recorded into the system for delivery.
7. The system displays final information about the item before delivery. E.g. Total cost, estimated arrival date, size, weight.
8. System prints off label for tracking or locating purposes.
9. Manager or clerk puts a label on the item.
10. Item is set aside to be delivered.

Exception Scenarios:

2a. Clerk or Manager enters in incorrect details.

- The system should inform the clerk or manager of any invalid information.

4a. The location provided by the customer is not possible to be delivered to.

- The clerk should inform the user that delivery to location is not possible.

Assumptions and Notes:

The customer needs to have made a valid payment.

USE CASE: *Log Customer Price Update*

Actors:

1. Manager
2. Clerk

Preconditions:

1. Ensure that Manager or Clerk is successfully logged into the System.
2. Valid price is entered E.g. Price >= 0.
3. The Logs have to be read into the system.

Postconditions:

Ensure that the new Customer Price has been updated into the system.

Main Success Scenario:

1. The manager or clerk enters in the new prices into the database, this includes size (cubic centimetre) and weight (grams) for a package travelling a down a certain route (origin of the package and its destination).
2. The system then updates all routes that match the provided fields and now refers to the new prices.
3. The system will then update the Critical Routes and Total Events reports.
4. The system will then write the Price Event into the log file, with the user who made the changes, as well as the time and date it was updated.

Exception Scenarios:

1a. The provided data is invalid.

- The system will prompt the user to re-enter in valid information.

1b. There are no previous routes that match the provided information.

- The system will then add the information to the database.

USE CASE: *Log Transport Cost Update*

Actors:

1. Manager
2. Clerk

Preconditions:

1. Manager or Clerk must be successfully logged into the System.
2. Valid cost is entered e.g. Price >0.
3. The Logs have to be read into the system.

Postconditions:

The new cost for Transport is updated on the system.

Main Success Scenario:

1. The manager or clerk enters in the new Transport costs into the System. This includes the Origin, Destination, the form of transportation, name, new price per cubic centimetre, new price per gram, the duration of the trip, and date of package departure from the origin.
2. The system will then attempt to find a match with the given parameters, and updates the price if found successfully.
3. The system will then update the Total events and Critical Routes report.
4. The System will then update the log file with the cost update event, stating the user who updated it, as well as the time and date.

Exception Scenarios:

1a. The manager or clerk enters the invalid information into the System.

- The system will then inform the user that the information that they entered in is invalid.

2a. The system does not find a match for the corresponding parameters.

- Modal appears, prompting the user to enter in valid information for matching customers price.
- Once the price has been confirmed, the price event is created.
- If the Manager or Clerk chooses to exit the Modal without any confirmation, all the information entered is removed from the system.

USE CASE: *Log Discontinued Transport Routes*

Actors:

1. Manager
2. Clerk

Preconditions:

1. Manager or Clerk must be successfully logged into the system.
2. Valid transport route is selected.
3. The Logs have to be read into the system.

Postconditions:

The Discontinue Route event has been logged into the system.

Main Success Scenario:

1. The manager or clerk enters in the required parameters into the system.
2. The system will then search and return routes specified by the user.
3. The manager or clerk then selects a specific route that they want to discontinue.
4. The selected route is then removed from the system.
5. The system then updates the Total Events, Critical Routes and Average Delivery time reports.
6. The system will then add the discontinued route into the log file, as well as the user who performed the update and the Time / date.

Exception Scenarios:

1a. Data entered in by the user does not exist within the system.

- The system will then notify the user that the information provided is invalid.

USE CASE: *Return Total Revenue Report*

Actors:

1. Manager
2. Clerk

Preconditions:

1. Manager or Clerk must be successfully logged into the system.
2. Logs are available and readable.

Postconditions:

The Total Revenue will be displayed on the GUI.

Main Success Scenario:

1. The manager or clerk requests for a report on the Total Revenue from the system.
2. The system will then retrieve the information from the data store.
3. The system will return the Total Revenue and display it on the GUI.

Exception Scenarios:

3a. No data logs are found or are unreadable.

- The system will display a message to the user notify then of the issue.

USE CASE: *Return Total Expenditure Report*

Actors:

1. Manager
2. Clerk

Preconditions:

1. Manager or Clerk must be successfully logged into the system.
2. Logs are available and readable.

Postconditions:

The Total Expenditure Report will be displayed on the GUI.

Main Success Scenario:

1. The manager or clerk requests for a report on the Total Expenditure Report from the system.
2. The system will then retrieve the information from the database.
3. The system will return the Total Expenditure Report and display it on the GUI.

Exception Scenarios:

3a. No data logs are found or are unreadable.

- The system will display a message to the user notify then of the issue.

USE CASE: *Return Number of Events Report*

Actors:

1. Manager
2. Clerk.

Preconditions:

1. Manager or Clerk must be successfully logged into the system.
2. Logs are available and readable.

Postconditions:

The Number of Events Report will be displayed on the GUI.

Main Success Scenario:

1. The manager or clerk requests for a report on the Number of Events Report from the system.
2. The system will then retrieve the information from the database.
3. The system will return the Number of Events Report and display it on the GUI.

Exception Scenarios:

3a. No data logs are found or are unreadable.

- The system will display a message to the user notify then of the issue.

USE CASE: *Return Amount of Mail Report*

Actors:

1. Manager
2. Clerk.

Preconditions:

1. Manager or Clerk must be successfully logged into the system.
2. Logs are available and readable.

Postconditions:

The Amount of Mail Report will be displayed on the GUI.

Main Success Scenario:

1. The manager or clerk requests for a report on the Amount of Mail Report from the system.
2. The system will then retrieve the information from the database.
3. The system will return the Amount of Mail Report and display it on the GUI.

Exception Scenarios:

3a. No data logs are found or are unreadable.

- The system will display a message to the user notify then of the issue.

USE CASE: *Return Average Delivery Times Report*

Actors:

1. Manager
2. Clerk.

Preconditions:

1. Manager or Clerk must be successfully logged into the system.
2. Logs are available and readable.

Postconditions:

The Average Delivery Times Report will be displayed on the GUI.

Main Success Scenario:

1. The manager or clerk requests for a report on the Average Delivery Times Report from the system.
2. The system will then retrieve the information from the database.
3. The system will return the Average Delivery Times Report and display it on the GUI.

Exception Scenarios:

3a. No data logs are found or are unreadable.

- The system will display a message to the user notify then of the issue.

USE CASE: *Return Critical Routes Report*

Actors:

1. Manager
2. Clerk.

Preconditions:

1. Manager or Clerk must be successfully logged into the system.
2. Logs are available and readable.

Postconditions:

The Critical Routes Report will be displayed on the GUI.

Main Success Scenario:

1. The manager or clerk requests for a report on the Critical Routes Report from the system.
2. The system will then retrieve the information from the database.
3. The system will return the Critical Routes Report and display it on the GUI.

Exception Scenarios:

3a. No data logs are found or are unreadable.

- The system will display a message to the user notify then of the issue.

USE CASE: *Review Logs*

Actors:

1. Manager

Preconditions:

1. Manager must be successfully logged into the system.
2. Logs are available and readable.

Postconditions:

The business logs are will be displayed on the GUI.

Main Success Scenario:

1. The manager requests for a report of the business logs from the system.
2. The system will then retrieve the information from the data store which will be in the form of an XML file.
3. The system will then convert this into readable format.
4. Then system will then display it on the GUI.

Exception Scenarios:

3a. No data logs are found or are unreadable.

- The system will display a message to the user notify then of the issue.