

CashTrack

USE CASE DESCRIPTIONS

TEAM: Runtime Terror

LAB GROUP: B2

Version 1.0, 20th January 2021

Version 1.1, 23rd January 2021

Version 1.2, 28th January 2021

Version 1.3, 31st January 2021

Use Case ID:	#001		
Use Case Name:	Register Account		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	20/01/2021	Date Last Updated:	26/01/2021

Actor:	User (Initiating Actor), Google API
Description:	User will create their account before they can login and use the system
Preconditions:	N/A
Postconditions:	1. A new user account is added to the system
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to create a new account 2. System displays a popup window for account details input 3. User signs in using his/her Google Account 4. System checks that the User has successfully signed in using a Google Account and the relevant user information is retrieved using the Google OAuth API 5. System creates a new account with the details provided & stores it in its database 6. System displays the account creation result (success or failure)
Alternative Flows:	<p>AF1: At MFS3, if any information that the user input is invalid</p> <ol style="list-style-type: none"> 1. The system displays a message stating the error 2. The system returns to MFS2. <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	<p>EX1: Between MFS2 & MFS4, if the user cancels the account creation process</p> <ol style="list-style-type: none"> 1. System clears form 2. System exits from use case
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#002		
Use Case Name:	Login Account		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	20/01/2021	Date Last Updated:	26/01/2021

Actor:	User (Initiating Actor), Google API
Description:	User will login with their account credentials before they can access functionalities of the system
Preconditions:	<ol style="list-style-type: none"> 1. User has an account 2. User is not logged in
Postconditions:	<ol style="list-style-type: none"> 1. User is logged in to the system 2. User has access to functionalities of the system
Frequency of use:	High
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to login 2. System displays a popup window for account details input 3. User signs in using his/her Google Account 4. System checks that the User has successfully signed in using a Google Account and the relevant user information is retrieved using the Google OAuth API 5. System validates the information with the response from database 6. System displays the account login result (success or failure).
Alternative Flows:	<p>AF1: At MFS3, if any information that the user input is empty</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#003		
Use Case Name:	Logout Account		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	20/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	Users will terminate their session with the system.
Preconditions:	1. User has logged in
Postconditions:	1. User is logged out
Frequency of use:	High
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to log out 2. System display the confirmation to log off from system 3. System terminates and invalidates user's session 4. System displays user successfully logged off 5. System redirect user to the homepage
Alternative Flows:	N/A
Exceptions:	EX1: AT MFS2, if the user cancels the logout process <ol style="list-style-type: none"> 1. System exits use case
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#004		
Use Case Name:	Inviting People		
Created By:	Alex Leong	Last Updated By:	Anusha Datta
Date Created:	20/01/2021	Date Last Updated:	30/01/2021

Actor:	User (Initiating Actor)
Description:	Users will send application invitation via email
Preconditions:	1. User is logged into system
Postconditions:	1. Invitation email is sent to respectively email address
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to invite people 2. System display the form to input email address 3. User inputs email address 4. System sends an invitation email to the respective email address
Alternative Flows:	AF1: At MFS3, if any information that the user input is empty <ol style="list-style-type: none"> 1. System clears form 2. System exits from use case
Exceptions:	EX1: AT MFS2 & MFS3, if the user cancels the use case process <ol style="list-style-type: none"> 1. System exits from use case back to dashboard
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#005		
Use Case Name:	Create Group		
Created By:	Alex Leong	Last Updated By:	Nicklaus Tan
Date Created:	20/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User will create a group involving multiple users
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. System consist of other registered users
Postconditions:	<ol style="list-style-type: none"> 1. Group is created in the system
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to create a new account 2. System displays form for group details input - Group name and list of users 3. User inputs group name and select users respectively 4. User submits form 5. System checks that the group details input meets requirements 6. System creates a new group with the details provided & stores it in its database 7. System displays the group creation result (success or failure)
Alternative Flows:	<p>AF1: At MFS4, if user select only zero or one user</p> <ol style="list-style-type: none"> 1. The system displays a message stating to select at least two users 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS4, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Assumptions:	N/A
Notes & Issues:	N/A

Use Case ID:	#006		
Use Case Name:	Input Expense (Group)		
Created By:	Alex Leong	Last Updated By:	Alex Leong
Date Created:	20/01/2021	Date Last Updated:	27/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payee) will create a group expense record
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. System consist of other users 3. Group has already been created
Postconditions:	<ol style="list-style-type: none"> 1. A new group expense record is added to the system and notification sent to expense record members
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to create a new expense record (Group) 2. System displays form for expense details input - Name, Category, Group, split options available (Equally, Percentage, Shares, Custom, Currency Conversion) and comments 3. User (Payee) inputs the required information and submits a form. 4. System checks that the expense details input meets requirements 5. System creates a new expense with the details provided & stores it in its database 6. System displays the expense creation result (success or failure)
Alternative Flows:	<p>AF1: At MFS3, if any information that the user input is empty</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	<p>EX1: Between MFS3 & MFS6, if the user cancels the expense creation process</p> <ol style="list-style-type: none"> 1. System clears expense record form 2. System exits from use case back to dashboard
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#007		
Use Case Name:	Select Category		
Created By:	Nicklaus Tan	Last Updated By:	Anusha Datta
Date Created:	27/01/2021	Date Last Updated:	30/01/2021

Actor:	User (Initiating Actor)
Description:	User will classify expense records into different categories (Food, Travel, Shopping, Entertainment or Others) which can be used for Data Analytics Visualizations
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. User is in-progress of Input Expense Use Case
Postconditions:	<ol style="list-style-type: none"> 1. Expense record is classified accordingly
Frequency of use:	High
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to add a new category 2. System displays option to select category 3. User select the category respectively 4. System sets the selected category to the expense record
Alternative Flows:	<p>AF1: At MFS3, if any information that the user input is empty</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#008		
Use Case Name:	Currency Conversion		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User will convert expense to appropriate currency
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. User is in-progress of Input Expense Use Case
Postconditions:	<ol style="list-style-type: none"> 1. Expense converted to the selected currency
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option for currency conversion 2. System displays option to select currency 3. User selects the appropriate currency 4. System convert and display the expenses after currency conversion
Alternative Flows:	<p>AF1: At MFS3, if any information that the user input is empty</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#009		
Use Case Name:	Comments (Payee)		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payee) will add comments to expense input
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. User is in-progress of Input Expense Use Case
Postconditions:	<ol style="list-style-type: none"> 1. A new comment is added to expense record 2. System will send notification to respective users
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to add a new comment 2. System displays form for comment details input 3. User (Payee) inputs the required information and submits form 4. System checks that the comment details input meets requirements 5. System add new comment to expense record
Alternative Flows:	<p>AF1: At MFS3, if any information that the user input is empty</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#010		
Use Case Name:	Choose Split Method		
Created By:	Nicklaus Tan	Last Updated By:	Alex Leong
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payee) will select the method of distributing the cost of an expense record
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. User is in-progress of Input Expense (Group) Use Case
Postconditions:	<ol style="list-style-type: none"> 1. Expense record split by user's option
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to split 2. System displays option for splitting methods (shares or percentage) 3. User (Payee) select and submit the required information 4. System checks that the input details input meets requirements 5. System displays the expense splitting result (success or failure)
Alternative Flows:	<p>AF1: At MFS3, if any information that the user input is empty</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#011		
Use Case Name:	Spilt by: Shares		
Created By:	Nicklaus Tan	Last Updated By:	Alex Leong
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	Shares Method of distributing the cost of an expense record (Eg. 2 : 3 shares for \$100 bill, Payee is allocated \$40 while Payer is allocated \$60)
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. User is in-progress of Input Expense (Group) Use Case
Postconditions:	<ol style="list-style-type: none"> 1. Expense record is split by shares
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to split by shares 2. System display the form to input shares allocation 3. User (Payee) inputs the shares allocation 4. User (Payee) submit the option to split by shares 5. System splits and displays the expense record base on the shares value that the user input
Alternative Flows:	<p>AF1: At MFS2, if any information that the user input is empty</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS1 <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#012		
Use Case Name:	Spilt by: Percentage		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	Percentage Method of distributing the cost of an expense record (Eg. 75% - 25% split for \$100 bill, Payee is allocated \$75 while Payer is allocated \$25)
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. User is in-progress of Input Expense (Group) Use Case
Postconditions:	<ol style="list-style-type: none"> 1. Expense record split by percentage
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to split by percentage 2. System display the form to input percentage allocation 3. User (Payee) inputs the percentage allocation 4. User (Payee) submit the option to split by percentage 5. System splits and display the expense record base on the percentage value that the user input
Alternative Flows:	<p>AF1: At MFS4, if user inputs invalid percentage value such as negative values and invalid characters</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid percentage value 2. The system returns to MFS2. <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#013		
Use Case Name:	Update Expense (Group)		
Created By:	Nicklaus Tan	Last Updated By:	Alex Leong
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payee) will make changes to existing expense record (Group)
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense records (Group) already created
Postconditions:	<ol style="list-style-type: none"> 1. Expense record modified and updated and notification sent to expense record members
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to update expense record (Group) 2. System display the expense record (Group) 3. User (Payee) inputs the desired fields of the expense record (Group) 4. User (Payee) selects the option to confirm update expense record (Group) 5. System updates a expense record (Group) with the new inputs respectively & stores it in its database 6. System displays the updated expense result (success or failure) and sends a notification to respective user
Alternative Flows:	<p>AF1: At MFS3 & MFS4, if user inputs invalid values</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid value for respective fields 2. The system returns to MFS3. <p>AF2: Between MFS2 & MFS3, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	<p>EX1: AT MFS2, if the user cancels the update expense (Group) process</p> <ol style="list-style-type: none"> 2. System clears update expense record form 3. System exits from use case back to dashboard
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#014		
Use Case Name:	Delete Expense (Group)		
Created By:	Nicklaus Tan	Last Updated By:	Alex Leong
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payee) will delete existing expense record (Group)
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense records (Group) already created
Postconditions:	<ol style="list-style-type: none"> 1. Expense record (Group) deleted and notification sent to respective users
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to delete expense record (Group) 2. System display the confirmation deletion of expanse record (Group) 3. User (Payee) selects the option to confirm deletion of expense record (Group) 4. System deletes expense record (Group) and sends a notification to respective users
Alternative Flows:	AF1: Between MFS2 & MFS3, if user cancels the use case process <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	EX1: AT MFS3, if the user cancels the expense record deletion process <ol style="list-style-type: none"> 2. System exits use case
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#015		
Use Case Name:	Input Expense (Personal)		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User will create a expense record (Personal)
Preconditions:	1. User is logged into system
Postconditions:	1. Personal expense record created
Frequency of use:	High
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to create input expense record (Personal) 2. User inputs a name for the expense record (Personal) 3. User selects a category (tag) for the expense record 4. User inputs amount 5. User selects Add button 6. System checks that the expense details input meets requirements 7. System creates a new expense with the details provided & stores it in its database 8. System displays the expense creation result (success or failure)
Alternative Flows:	AF1: Between MFS2 & MFS5, if user cancels the use case process <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	EX1: Between MFS2 & MFS5, if the user cancels the expense record updating process <ol style="list-style-type: none"> 1. System clears the expense record creation form 2. System exits from use case back to dashboard
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#016		
Use Case Name:	Update Expense (Personal)		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	27/01/2021

Actor:	User (Initiating Actor)
Description:	User wants to make changes to existing expense record (Personal)
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense records (Personal) already created
Postconditions:	<ol style="list-style-type: none"> 1. Personal expense record modified
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to update expense (Personal) 2. User modifies desired fields of the expense record (Personal) 3. User clicks on the update button
Alternative Flows:	N/A
Exceptions:	EX1: AT MFS2, if the user cancels the update expense (Personal) process <ol style="list-style-type: none"> 1. System clears update expense record form 2. System exits from use case back to dashboard
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#017
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Use Case Name:	Delete Expense (Personal)		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	27/01/2021

Actor:	User (Initiating Actor)
Description:	User wants to delete existing expense record (Personal)
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense records (Personal) already created
Postconditions:	Expense record (Personal) deleted
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to delete expense record (Personal) 2. System display the confirmation deletion of expanse record (Personal) 3. User selects the option to confirm deletion of expense record (Personal) 4. System deletes expense record (Personal)
Alternative Flows:	N/A
Exceptions:	EX1: AT MFS3, if the user cancels the expense record deletion process <ol style="list-style-type: none"> 1. System exits use case
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#018
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Use Case Name:	Set Expense Limit		
Created By:	S Sri Kalki	Last Updated By:	Anusha Datta
Date Created:	27/01/2021	Date Last Updated:	30/01/2021

Actor:	User (Initiating Actor)
Description:	User want to set the personal expense limit for a selected time frame (Daily, Weekly, Monthly, Yearly)
Preconditions:	1. User is logged into system
Postconditions:	1. A new expense limit is set
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to set expense limit 2. System displays the form to input amount 3. User inputs the expense limit amount 4. User selects time frame from drop down menu, for which expense limit must be enforced 5. System sets and displays the expense limit amount
Alternative Flows:	<p>AF1: At MFS3, if user inputs invalid amount value such as negative values and invalid characters</p> <ol style="list-style-type: none"> 1. The system displays a message stating invalid value 2. The system returns to MFS2. <p>AF2: Between MFS2 & MFS4, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#19
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Use Case Name:	Exceed Expense Limit		
Created By:	S Sri Kalki	Last Updated By:	Anusha Datta
Date Created:	27/01/2021	Date Last Updated:	30/01/2021

Actor:	User (Initiating Actor)
Description:	User will receive notification when certain specified percentage of personal expense limit reached
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Existing expense limit with specified time frame 3. Existing percentage for expense limit reminder
Postconditions:	<ol style="list-style-type: none"> 1. User is informed of nearing personal expense limit at pre-specified percentage via notification
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. System calculates aggregate user expenses to determine when a certain specified percentage of personal expense limit, within a specified time frame, is reached 2. System sends a notification to user
Alternative Flows:	N/A
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#020
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Use Case Name:	Acknowledge Expense (Group - Payee)		
Created By:	Nicklaus Tan	Last Updated By:	Mehul Kumar
Date Created:	27/01/2021	Date Last Updated:	30/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payee) will acknowledge that the expense record (Group) has been settled
Preconditions:	<ol style="list-style-type: none"> 1. User (Payee) is logged into system 2. User (Payer) has paid the money owed and has acknowledged as in Use Case ID: #021 3. Expense record (Group) has not been acknowledged by the User (Payee)
Postconditions:	<ol style="list-style-type: none"> 1. System sends notification to all Users (Payer) regarding acknowledgement of expense record (Group) by User (Payee) 2. System updates status of expense record (Group) for User (Payer) to mark it as resolved
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User (Payee) selects the option to view the expense record (Group) 2. System displays and prompts User (Payee) to confirm acknowledgement of expense record (Group), that the money lent to User (Payer) has been received 3. User (Payee) selects the option to acknowledge
Alternative Flows:	AF1: At MFS3 if User cancels the acknowledgement <ol style="list-style-type: none"> 1. System sends notification to User (Payer) that the User (Payee) has declined the acknowledgement of the transaction for expense record (Group) 2. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	Assumption: As the CashTrack webapp does not offer integrated payment solutions, the Users (Payee & Payer) must use other methods for their money transactions

Use Case ID:	#021
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Use Case Name:	Acknowledge Expense (Group - Payer)		
Created By:	Mehul Kumar	Last Updated By:	Mehul Kumar
Date Created:	28/01/2021	Date Last Updated:	30/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payer) will acknowledge that the expense record (Group) has been settled on their end
Preconditions:	<ol style="list-style-type: none"> 1. User (Payer) is logged into system 2. The expense record has added by the User (Payee) and not been settled up by the User (Payer)
Postconditions:	<ol style="list-style-type: none"> 1. System sends notification to User (Payee) regarding acknowledgement of expense record (Group) by User (Payer) 2. System prompts the User (Payee) to confirm the receipt of money from the User (Payer) 3. System updates status of expense record (Group) for User (Payer)
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User (Payer) selects the option to view the expense record (Group) 2. System displays and prompts User (Payer) to confirm acknowledgement of expense record (Group), that the money owed to the User (Payee) has been paid 3. User (Payer) selects the option to acknowledge
Alternative Flows:	AF1: At MFS3 if User cancels the acknowledgement 3. System exits from use case
Exceptions:	EX1: At Postcondition 2, if the User (Payee) declines the receipt of money from the User (Payer): <ol style="list-style-type: none"> 1. System sends notification to User (Payee) regarding the rejection of the acknowledgment 2. System updates status of expense record (Group) to unsettled
Special Requirements:	N/A
Notes & Issues:	Assumption: As the CashTrack webapp does not offer integrated payment solutions, the Users (Payee & Payer) must use other methods for their money transactions

Use Case ID:	#022
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Use Case Name:	Comments (Payer)		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payer) will add comments to an existing expense record (Group) created by another User (Payee)
Preconditions:	<ol style="list-style-type: none"> 1. User (Payer) is logged into system 2. Expense records (Group) already created by User (Payee) 3. In the process of Request Modify Use Case
Postconditions:	<ol style="list-style-type: none"> 1. Comments added to expense record (Group) 2. Other user in the expense record (Group) is informed via notification
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User selects an expense record (Group) 2. System displays option to set comment 3. User selects the option to set comment 4. System displays form to input comments 5. User inputs comments 6. System updates comment section of expense record (Group) 7. System sends a notification to respectively user in the expense record (Group)
Alternative Flows:	AF1: Between MFS2 & MFS5, if user cancels the use case process <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#023
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Use Case Name:	Notifications		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	27/01/2021

Actor:	User (Initiating Actor)
Description:	User will receive notifications
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. User has exceeded their set expense limit OR Payer requests to modify expense OR Payee has acknowledged payment from User OR User has uploaded image evidence OR User receives chat message from other Users
Postconditions:	<ol style="list-style-type: none"> 1. User will receive notifications based on preconditions
Frequency of use:	High
Flow of events:	<ol style="list-style-type: none"> 1. User exceeds their set expense limit OR Payer requests to modify expense OR Payee has acknowledged payment from User OR User has uploaded image evidence OR User receives chat message from other Users 2. The system displays a notification and reason for notification based on MFS1
Alternative Flows:	N/A
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#024
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Use Case Name:	Upload Image Evidence		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	27/01/2021

Actor:	User (Initiating Actor)
Description:	User (Payer) wants to upload image evidence of payment
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense record (Group) has already been created
Postconditions:	<ol style="list-style-type: none"> 1. A new image is added to expense
Frequency of use:	Low
Flow of events:	<ol style="list-style-type: none"> 1. User (Payer) selects expense record (Group) 2. User (Payer) selects the option to add media 3. System displays option to select media 4. User selects the image and submit form. 5. System adds image to the expense 6. System displays the image addition result (success or failure) 7. System sends a notification to Payee
Alternative Flows:	<p>AF1: At MFS2 if User selects an image larger than 5 MB</p> <ol style="list-style-type: none"> 1. The system displays a message stating the file is larger than 5 MB 2. The system returns to MFS2 <p>AF2: Between MFS2 & MFS4, if user cancels the use case process</p> <ol style="list-style-type: none"> 1. System exits from use case
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#025
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Use Case Name:	Visualise Expenses		
Created By:	Anusha Datta	Last Updated By:	Anusha Datta
Date Created:	28/01/2021	Date Last Updated:	28/01/2021

Actor:	User (Initiating Actor)
Description:	User wants to view analytical data of their expense records (Personal) & (Group)
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense records (Personal) and expense records (Group) are already created
Postconditions:	<ol style="list-style-type: none"> 1. System displays analytical graphs to user
Frequency of use:	Medium / High
Flow of events:	<ol style="list-style-type: none"> 1. User selects dashboard 2. System displays analytical graphs to user
Alternative Flows:	N/A
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#026
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Use Case Name:	Visualise as: Pie Chart		
Created By:	Amrita Ravishankar	Last Updated By:	Anusha Datta
Date Created:	27/01/2021	Date Last Updated:	30/01/2021

Actor:	User (Initiating Actor)
Description:	Analytical data of users expense record (Personal) can be visualized in Pie Chart format, sections will be based on user expense record categories
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense records (Personal) and expense records (Group) are already created
Postconditions:	<ol style="list-style-type: none"> 1. System displays Pie Chart analytical graph to user
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User selects Pie Chart visualization option 2. User selects time option (Daily / Weekly / Monthly /Yearly) 3. System displays the pie chart analytical graphs to user
Alternative Flows:	N/A
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#027
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Use Case Name:	Visualise as: Line Chart		
Created By:	Nicklaus Tan	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	27/01/2021

Actor:	User (Initiating Actor)
Description:	Analytical data of users expense record (Personal) & (Group) can be visualized in LineChart format
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. Expense records (Personal) / (Group) already created
Postconditions:	<ol style="list-style-type: none"> 1. System displays Line Chart analytical graph to user
Frequency of use:	Medium / High
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option for Line Chart visualization 2. User selects category option 3. User selects time option (Daily / Weekly / Monthly /Yearly) 4. System displays the Line Chart analytical graphs to user
Alternative Flows:	N/A
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A

Use Case ID:	#028
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Use Case Name:	Chat with other users		
Created By:	Amrita Ravishankar	Last Updated By:	Nicklaus Tan
Date Created:	27/01/2021	Date Last Updated:	29/01/2021

Actor:	User (Initiating Actor)
Description:	A user will communicate via text messages with other users
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into system 2. There are existing user in the system
Postconditions:	<ol style="list-style-type: none"> 1. System sends message and notification to respective user 2. System updates chat records
Frequency of use:	Medium
Flow of events:	<ol style="list-style-type: none"> 1. User selects the option to chat with other users 2. System display and prompts to select user to chat 3. User input the user to chat 4. System display form to input message content and option to send message 5. User inputs the message and select the option to send 6. System displays the latest chat records (success or failure)
Alternative Flows:	AF1: At MFS5, if any information that the user input is empty <ol style="list-style-type: none"> 1. The system displays a message stating invalid input 2. The system returns to MFS4.
Exceptions:	N/A
Special Requirements:	N/A
Notes & Issues:	N/A