



**The Faculty of Information and Communication Technology
Mahidol University**

Echo Company

Project Phase 3

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ITCS371 Introduction to Software Engineering

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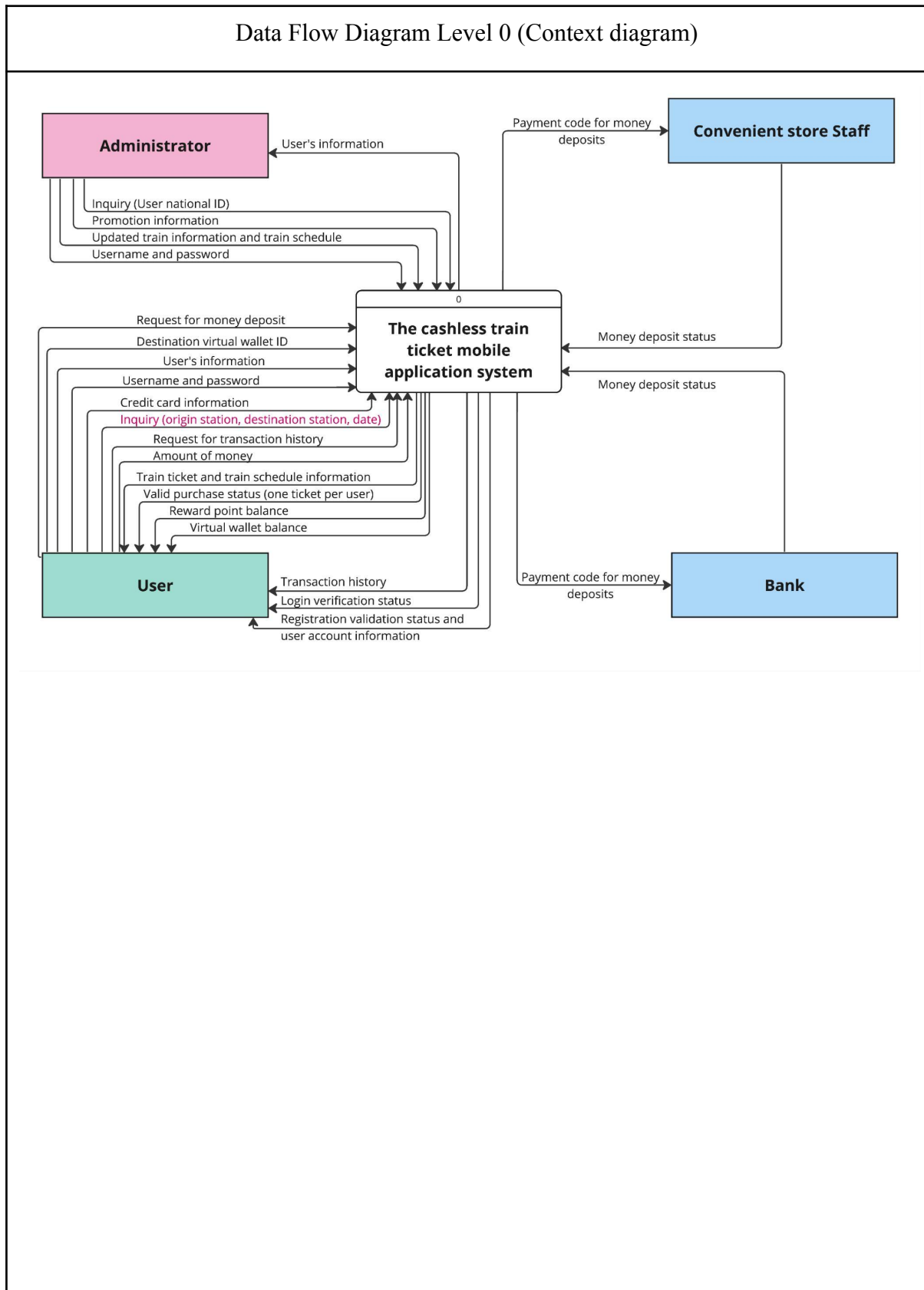
Dr. Chaiyong Ragkhitwetsagul

November 19, 2023

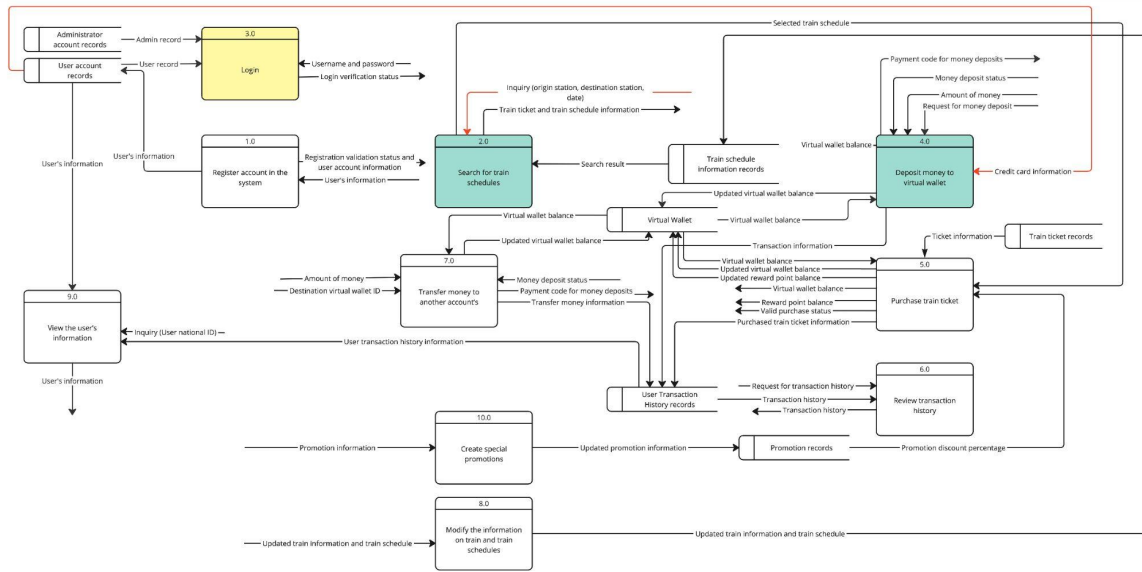
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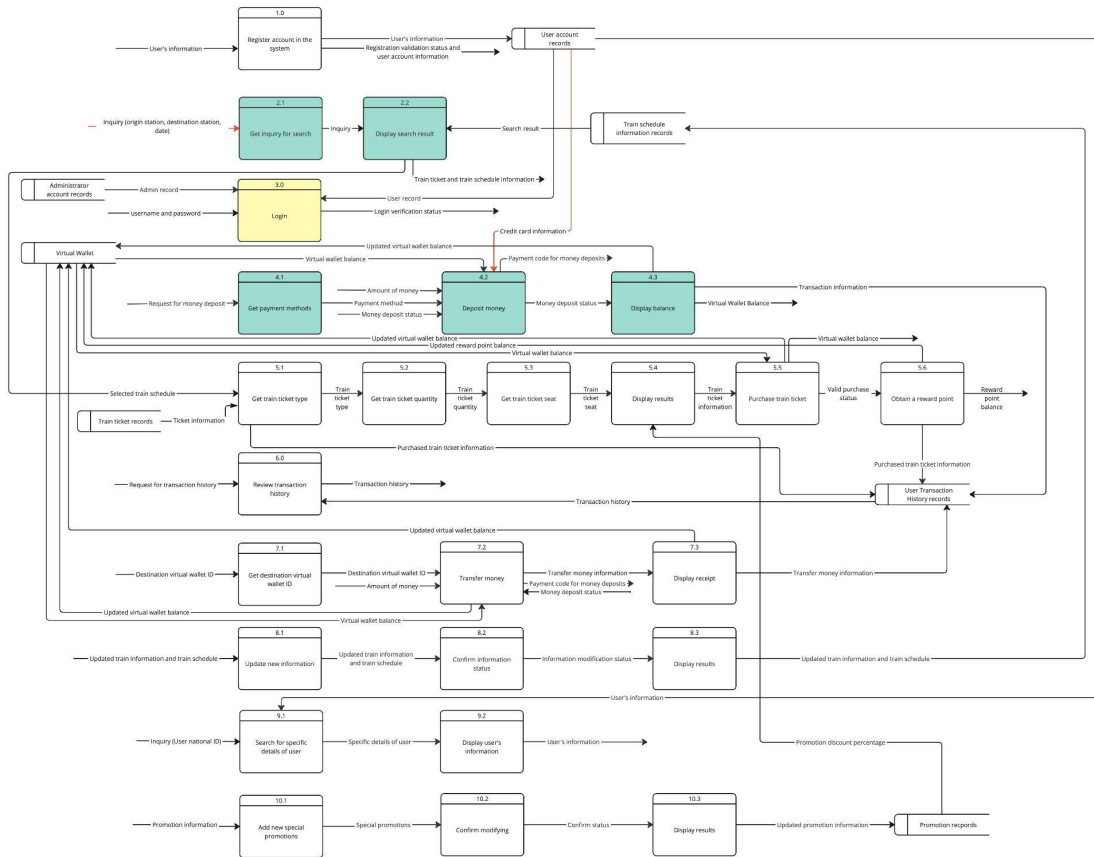
Revision of Phase 2



Data Flow Diagram Level 1



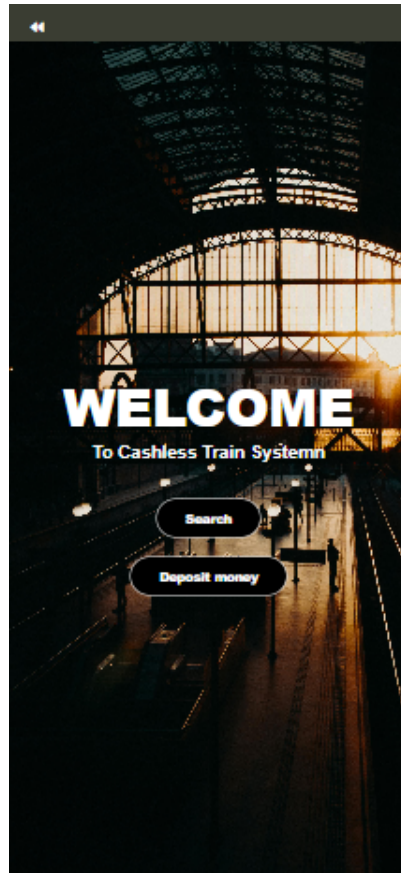
Data Flow Diagram Level 2



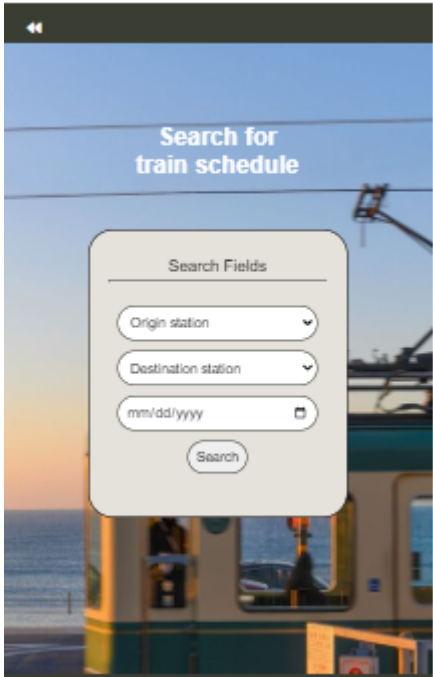
Mock-up prototype

Login screen
<div><p>Have an account?</p><div><h3>Login</h3><p>Username:</p><input type="text" value="Enter your username"/><p>Password:</p><input type="password" value="Enter your password"/><p>Submit</p></div></div>

Welcome screen



Search screen



Search result

2023-11-09

Search for train schedule

Search Fields

Bangkok

▼

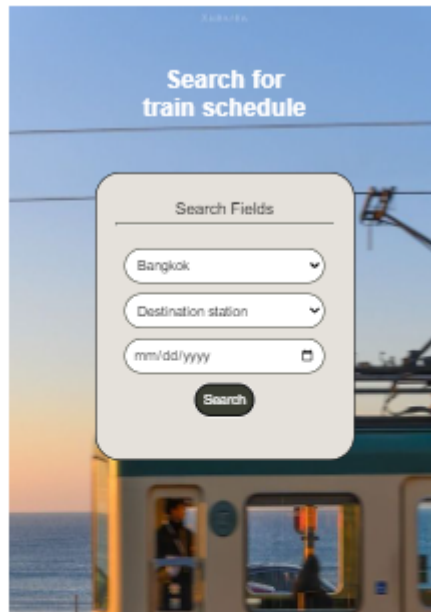
Destination station

▼

mm/dd/yyyy

📅

Search

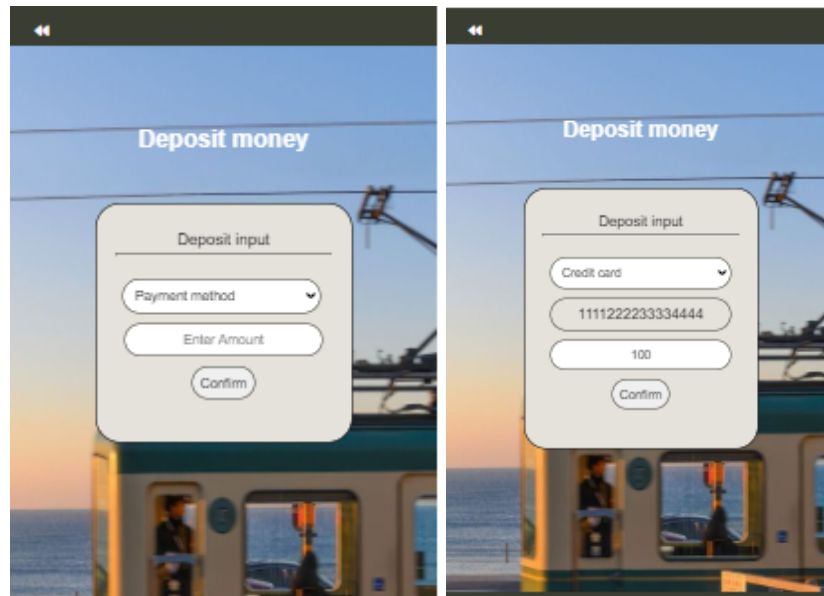


Search result

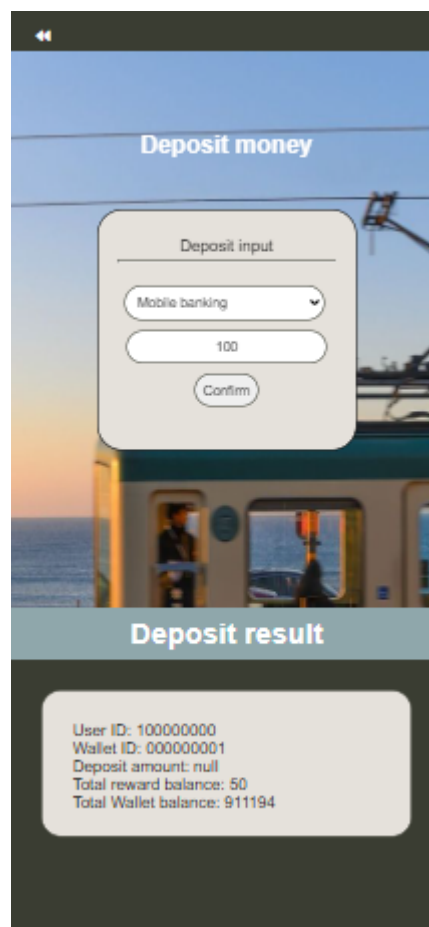
Train ID: TRAIN009

Train Name: Express Train 5
Departure Date: 2023-11-09
Departure Time: 12:00:00
Arrive Time: 16:30:00
Origin Station: Bangkok
Destination Station: Khon Kaen

Deposit money screen



Deposit money result



Test cases

Test Case ID: 01	Test Designed by: Supithcha Jongphoemwatthanaphon
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Login screen	Test Executed by: Supithcha Jongphoemwatthanaphon
Test Title: Verify login with a valid username and password.	Test Execution date: 15/11/2023
Description: Test the login page	

Pre-conditions: The user has a valid username and password.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the login page					Go to localhost:3030
2	Provide valid username	User=fongfong				
3	Provide valid password	Password: u6488052				
4	Click on the Login button		The user should be able to log in	The user is navigated to the welcome page after a successful login.	Pass	Go to localhost:3030 /welcome

Post-conditions:

- The user is validated with the database and successfully logs in to the account.

Test Case ID: 02	Test Designed by: Sasasuang Pattanakitjaroenchai
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Login screen	Test Executed by: Sasasuang Pattanakitjaroenchai
Test Title: Verify login with an invalid username and password.	Test Execution date: 15/11/2023
Description: Test the login page	

Pre-conditions: The user has an invalid username and password.
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Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the login page					Go to localhost:3030
2	Provide valid username	User=fongfong				
3	Provide invalid password	Password: u6488999				
4	Click on the Login button		The user should be unable to log in, and the system should display the message "Invalid	The user unsuccessfully logs in and remains on the login page. The system displays the message	Pass	

			username and password."	"Invalid username and password."		
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Actual result:

Have an account?

Login

Username:

fongfong

Password:

.....

Submit

Invalid username or password

Post-conditions:

- The user is not validated with the database and unsuccessfully logs in to the account.

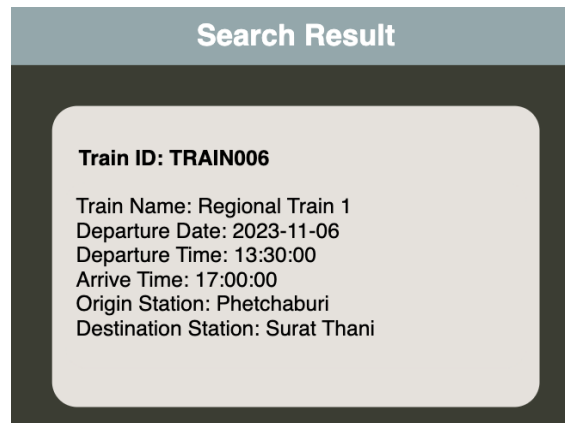
Test Case ID: 03	Test Designed by: Kanita Karunkittikun
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Search train schedule screen	Test Executed by: Kanita Karunkittikun
Test Title: Verify the functionality of search with valid input.	Test Execution date: 15/11/2023
Description: Test the functionality of search input and search result (output).	

Pre-conditions: The user has logged in to the system.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the search page					Go to localhost:3030/search
2	Select Origin Station	ORI_STATION=Phetchaburi				
3	Select Destination Station	DEST_STATION=Surat Thani				
4	Select Departure Date	DEPART_DATE=2023-11-06				
5	Click on the Search button		The system should display the search result of the	The system displays the search result of the ticket ID:	Pass	

			ticket ID: TRAIN006.	TRAIN006 including train information.		
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Actual Result:



Post-conditions:

- The system has successfully retrieved the train schedule information from the 'train_schedule' database.
- The train schedule information related to the search parameters (Origin Station, Destination Station, Departure Date) is displayed on the search result page.

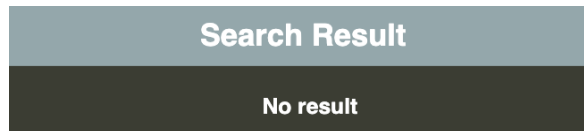
Test Case ID: 04	Test Designed by: Supithcha Jongphoemwatthanaphon
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Search train schedule screen	Test Executed by: Supithcha Jongphoemwatthanaphon
Test Title: Verify the functionality of search with invalid input.	Test Execution date: 15/11/2023
Description: Test the functionality of search input and search result (output).	

Pre-conditions: The user has logged in to the system.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the search page					Go to localhost:3030/search
2	Select Origin Station	ORI_STATION =Phetchaburi				
3	Select Destination Station	DEST_STATION =Bang Sue				
4	Select Departure Date	DEPART_DATE =2023-11-14				
5	Click on the Search		The system should	The system	Pass	

	button		display “No result”.	displays “No result”.		
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Actual Result:



Post-conditions:

- Any temporary data or changes made during the test (e.g., search parameters) are reset or cleared.
- The system is ready for the execution of subsequent test cases.

Test Case ID: 05	Test Designed by: Nisakorn Ngaosri
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Deposit input	Test Executed by: Nisakorn Ngaosri
Test Title: Money deposit via mobile banking payment method with valid amount of money.	Test Execution date: 15/11/2023
Description: Test the money deposit amount of less than 1,000,000 Baht with a mobile banking payment method within the system.	

Pre-conditions:

- The user has logged in to the system.
- The login page stores the user token in the user's local storage.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the deposit page					Go to localhost:3030 /deposit
2	Select payment method	Mobile banking				
3	Provide the amount of money	900,000 Baht				
4	Click on the confirm button		The user's total virtual wallet balance	The user's total virtual balance is	Pass	

			should be added with the amount of money the user provided, and the system should display the user ID, wallet ID, total reward balance, and total wallet balance.	added with the amount of money the user provided, and the system displays the user ID, wallet ID, total reward balance, and total wallet balance.		
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Post-conditions:

- The deposit is successful.
- The user's virtual balance is updated with the deposited amount.

Test Case ID: 06	Test Designed by: Sasasuang Pattanakitjaroenchai
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Deposit input	Test Executed by: Sasasuang Pattanakitjaroenchai
Test Title: Money deposit via convenience store payment method with valid amount of money.	Test Execution date: 15/11/2023
Description: Test the money deposit amount of less than 1,000,000 Baht with the convenience store payment method within the system.	

Pre-conditions:

- The user has logged in to the system.
- The login page stores the user token in the user's local storage.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the deposit page					Go to localhost:3030 /deposit
2	Select payment method	Convenience store				
3	Provide the amount of money	900,000 Baht				
4	Click on the confirm button		The user's total virtual wallet balance	The user's total virtual balance is	Pass	

			should be added with the amount of money the user provided, and the system should display the user ID, wallet ID, total reward balance, and total wallet balance.	added with the amount of money the user provided, and the system displays the user ID, wallet ID, total reward balance, and total wallet balance.		
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Post-conditions:

- The deposit is successful.
- The user's virtual balance is updated with the deposited amount.

Test Case ID: 07	Test Designed by: Chaninan Phetpangun
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Deposit input	Test Executed by: Chaninan Phetpangun
Test Title: Money deposit via credit card payment method with valid amount of money.	Test Execution date: 15/11/2023
Description: Test the money deposit amount of less than 1,000,000 Baht with the credit card payment method within the system.	

Pre-conditions: <ul style="list-style-type: none"> - The user has logged in to the system. - The login page stores the user token in the user's local storage.
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Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the deposit page					Go to localhost:3030 /deposit
2	Select payment method	Credit card	The system should show the credit card number corresponds to the username account that logged in.	The system shows the credit card number corresponds to the username account that logged in.		
3	Provide the amount of	900,000 Baht				

	money					
4	Click on the confirm button		The user's total virtual wallet balance should be added with the amount of money the user provided, and the system should display the user ID, wallet ID, total reward balance, and total wallet balance.	The user's total virtual balance is added with the amount of money the user provided, and the system displays the user ID, wallet ID, total reward balance, and total wallet balance.	Pass	

Post-conditions:

- The deposit is successful.
- The user's virtual balance is updated with the deposited amount.

Test Case ID: 08	Test Designed by: Russarin Eaimrittikrai
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Deposit input	Test Executed by: Russarin Eaimrittikrai
Test Title: Money deposit via credit card payment method with invalid amount of money exceeding 1,000,000 Baht.	Test Execution date: 15/11/2023
Description: Test the depositing money of more than 1,000,000 Baht with a credit card payment method within the system.	

Pre-conditions:

- The user has logged in to the system.
- The login page stores the user token in the user's local storage.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the deposit page					Go to localhost:3030 /deposit
2	Select payment method	Credit card	The system should show the credit card number corresponds to the username account that logged in	The system shows the credit card number corresponds to the username account that logged in		
3	Provide the	1,000,001				

	amount of money	Baht				
5	Click on the confirm button		<p>a. The user should not be able to deposit money and the user's virtual wallet balance remains unchanged.</p> <p>b. The system should display the message "Cannot deposit money more than 1,000,000 Baht"</p>	<p>a. The user cannot deposit money into the virtual wallet and the user's virtual wallet balance remains unchanged.</p> <p>b. The system displays the message "Cannot deposit money more than 1,000,000 Baht"</p>	Pass	

Post-conditions:

- The deposit is unsuccessful.
- The user can attempt to make another deposit with a valid amount.

Test Case ID: 09	Test Designed by: Russarin Eaimrittikrai
Test Priority (Low/Medium/High): High	Test Designed date: 14/11/2023
Module Name: Deposit input	Test Executed by: Russarin Eaimrittikrai
Test Title: Money deposit via convenience store payment method with invalid virtual wallet balance exceed 1,000,000 Baht.	Test Execution date: 15/11/2023
Description: Test the depositing money via the convenience store payment method within the system, ensuring the deposited amount is less than 1,000,000 Baht and that the total account balance remains below 1,000,000 Baht.	

Pre-conditions:
<ul style="list-style-type: none"> - The user has logged in to the system. - The login page stores the user token in the user's local storage.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the deposit page					Go to localhost:3030 /deposit
2	Select payment method	Convenience store				
3	Provide the amount of money	1,000,000 Baht				
5	Click on the		a. The user	a. The user can	Pass	

	confirm button		<p>should not be able to deposit money and the user's virtual wallet balance remains unchanged.</p> <p>b. The system should display a deposit result "Wallet Balance Exceed 1,000,000 Baht. Unable to deposit"</p>	<p>not deposit money into the virtual wallet and the user's virtual wallet balance remains unchanged.</p> <p>b. The system displays a deposit result "Wallet Balance Exceed 1,000,000 Baht. Unable to deposit"</p>		
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Post-conditions:

- The deposit is unsuccessful.
- The user can attempt to make another deposit with a valid amount.