Cashless train ticket system

Customer application:

1. It must be a mobile application for android and IOS systems.
2. A virtual wallet that users can top up in it but not more than the maximum amount is 1 million baht. However, virtual wallets can be transferred in 3 ways.
   - Mobile banking
   - Credit card
   - Counter service (Users can use QR codes to transfer their money)
3. Users can check how much money they have transaction history in their virtual wallet and can transfer their money between users.
4. Use your money in the wallet that a customer top-up to buy a virtual train ticket that shows and verifies at the station.
   - A 1-way tickets
   - A daily pass: buy for one single price and can travel how many times they want throughout the day.
   - A Monthly pass: buy for one single price and can travel how many times they want in 1 / 3 / 6 months.
   - A Yearly pass: buy for one single price and can travel how many times they want in 1 year.
5. The application can display train schedules for all trains, including time, train number, and destination. Thus, users can search for some specific train numbers.
6. Users must register for new users that use their basic information, including name, surname, ID number, and home location. Thus, ID numbers are used to verify who is traveling and the destination he/she goes to for personal

privacy. However, this is sensitive information that should have a good enough security system. (For example, use encryption to reach their password and ID in a database)

7. Every time a user buys a ticket. They receive some collection points that can reach up to 100 as a maximum. This point can be exchanged with some gifts or transferred to money in a virtual wallet.

8. The application should be easy to understand and use with good UX and UI. In addition, it must support disabled people (blind people/others). Beware of color blindness. It must have a version that suits them too.

9. The ability of the system should be excellent, the application should be able all the time (Beware of server cashing)

Admin application:

1. Has an ability to add a seasonal promotion or other promotion that discounts some specific ticket

2. Adjust train schedule

3. Other features.

Position bitch	Nickname	Name	Student ID
Software design	Jacky	Dhammawat Siribunchawan	6388055
Front end	Games	Sorawanan Jeamjantarasakhon	6388019
Back end	DDay	Tawan-ok Ruekveerawattana	6388142
Back end	Mek	Nopparwut Sirisawat	6388056
Database	Tai	Pattanan Korkiattrakool	6388022
Database	Min	Kittipat Arpanon	6388119

Phase 1

https://studentmahidolac-my.sharepoint.com/:w:/g/personal/morakot_cho_mahidol_ac_th/EY3zsqtxew9Im0WY5IzyTtgBUMQmtUbUXZRNq8PDsHarUA?e=AQk26Q

No.	Research topic	Number of people needs	Who do this shit	Deadline	Is it done?
1.	Information about State Railway of Thailand	1	Mek	17 Sep	☑
2.	State Railway of Thailand service features	1	Jacky	17 Sep	☑
3.	What is Work breakdown structure (WBS)	1	Tai	17 Sep	☑
4.	Password security (encryption way), to maintain and protect user's information(implicate with customer application no.6)	1	Games	17 Sep	☑
5.	How to create good enough system that make less server cash case	2	DDay	17 Sep	☑
			Min	17 Sep	
6.	What should admin application have	1	Jacky	21 Sep	☑
7.	What action customer can interact (for use case diagram) (Should start doing this shit when Topic 2 done)	2	DDay	21 Sep	☑
			Tai		
8.					☐
9.					☐
10.					☐

No.	Items	Minimum expectation	Score (%)	Number of people needs	Who do this shit	Deadline	Is it done?
				Involve with phase 1			
1.	Introduction of the work including overall description of the project, customer, and the business	500 words (single space)	10	3	Tai Mek	28 Sep	☑
2.	Functional requirements	15 requirements	13	2	DDday	25 Sep	☑
	Non-functional requirements	10 requirements	13				
3.	Work breakdown structure (WBS) showing task assignment and duration	Completed WBS (cover all functional requirements)	5	2	Tai Mek	28 Sep	☑
4.	Identifying actors	At least 2 based on requirements	10	3	Jacky Min Games	28 Sep	☑
5.	Use case diagram	Cover all functional requirement	13	3	Jacky Games Min	28 Sep	☑
6.	Use case narrative	3 main use cases	20	3	Jacky Games Min	28 Sep	☑
7.	Data flow diagram Level 0 - context diagram	Align with the requirements and use cases	6	2	Games Jacky	28 Sep	☑

8.	Presentation slide	-	-	1	Jacky	8 Oct	☑
9.	VIDEO presentation recording					9 Oct	☑
8.	VIDEO editing	-	-	1	Jacky	9 Oct	☑
10.	Finalize recheck					9 Oct`	☑
11.	Phase 1 deadline					10 Oct	☑