

Requirements Specification

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I. Description:

This document demonstrates the requirements specification for the ONE Card Mobile project. It includes all of the use cases and four fully dressed use cases of the project.

II. Use cases

Note:

- User means either Student or Employee

Sign in to account: User inputs network ID and password. Parent inputs the student number and student's birthday

View Summary: User selects to view their accounts balance and latest transactions.

Extend View Condor Cash Balance, View Print Balance, and View Transactions

View Transaction History: User selects filter options to view their related transaction history

Display card: User selects to view QR code and barcode of their card

View Terms and Conditions: User selects to view ONE Card Terms and Condition

Add money: User, or the parent inputs amount of money to add or selects quick options such as \$50, \$100, \$500, or \$1000

Suspend card: User selects to suspend the card

Upload photo: User selects to either upload a picture from gallery or use camera to a picture

View notifications: User selects to view the list of notification

View notification details: User selects to view details of a notification

View contact information: User selects to view contact information of ONE Card office

Change application setting: User selects to change General setting or Notifications subscription setting

Sign out: User, or the parent selects to sign out

ONE Card Management Website

Note:

- User means ONE Card department staff

View pending photos: User selects to view all pending photos

View approved photos: User selects to view all approved photos

Approve photos: User hits the approve button to approved a photo

Add a notification: User inputs title, description, select a photo, and notification type

Edit a notification: User edits title, description, photo, or notification type

Delete a notification: User selects to delete a notification

View notifications: User selects to view the list of notifications

III. Fully dressed use cases

1. **Sign in to account:** Users inputs network ID and password. Parent inputs student number and student's birthday. After the first successful login, user has the option to authorize via Face ID or Touch ID on user's devices.

Scope: ONE Card mobile application

Primary Actor: staff, student, and student's parent

Level: User goal

Interests:

- User: Wants the process to execute fast, accurately.
- Administrator: Wants the process to execute fast, accurately. No exception occurs.
- ONE Card department staff: Wants the function to work accurately.

Precondition:

- User needs to download and install the application
- User needs a credential to login, which is generated by administrator
- The device must have network connection.
- The device must support Face ID, or Touch ID for authorization

Success Guarantee

- The user is authorized.
- The application receives a token which is generated by the server.
- The token is saved into the keychain.
- In case user logs in as parents, the application navigates to Add money screen; otherwise, Home screen is navigated.

Main Success Scenario:

1. Use launches the application
- 2.1 User logs in as the first time using the application
 - 2.1.1 User inputs network Id and password to login as student, or staff
 - 2.1.2 User inputs student number and date of birth to login as parents
 - 2.1.3 User hits the login button
- 2.2 User uses Face Id, or Touch Id to login after the first successful login

Extensions:

- 2.1.3.a User does not input username
 - 2.1.3.a.1 The system notifies user to input username
- 2.1.3.b User does not input password
 - 2.1.3.b.1 The system notifies user to input password
- 2.1.3.c User does not input student number
 - 2.1.3.c.1 The system notifies user to input student number
- 2.1.3.d User does not input date of birthday
 - 2.1.3.d.1 The system notifies user to input date of birthday
- 2.2.a Face Id, or Touch Id of the device is off
 - 2.2.a.1 The application requires user to login as normal with typing network Id and password

Special Requirements:

- The devices must have Face Id, or Touch Id to use them for authorization.
- The server must be ready.
- The token is expired after 10 minutes without touching the application.

Technology and Data Variations List:

- User authorization API is provided by PHP server.
- Token is followed JSON Web Tokens standard (JWT)

Frequency of Occurrence: Frequently and continuously.

Open Issues:

- Will user be notified when the token is expired?
- How can user refuse to use Face ID, or Touch ID?
- What should user do when they forgot their password?

2. **Upload photo:** User selects a photo from gallery or take a new photo to upload to server.

Scope: ONE Card mobile application

Primary Actor: staff, student

Level: User goal

Interests:

- User: Wants the process to execute fast, accurately without any interruption.
- Administrator: Wants the process to execute fast, accurately. No exception occurs. No other files except photo is upload to server.
- ONE Card department staff: Wants the function to work accurately. The uploaded photo must be a photo ID.

Precondition:

- User is already login into the application as student, or staff account.
- User navigates to Upload photo screen.
- There is at least one photo ID in gallery in case user select the option to upload photo from gallery.

- The camera is in good condition in case user select the option to take a picture and upload the taken photo.
- User token must be still valid

Success Guarantee:

- The photo is upload to server successfully
- The photo status is marked as waiting for approval.
- User is notified that the photo is upload successfully.

Main Success Scenario:

1. User hits the button "Choose a new photo"
- 2.1.1 User selects the option to take a picture
- 2.1.2 User takes a photo
- 2.2.1 User selects the option to select a photo from gallery
- 2.2.2 User selects a photo from gallery
- 2.3 User hits the Upload button to submit the photo

Extensions

- 2.1.1.a The device does not allow to application to use camera
 - 2.1.1.a.1 User is notified that the camera is unable to use
- 2.2.1.a There is no picture in the gallery
 - 2.2.1.a.1 User is notified that there is no picture in gallery to select
- 2.3.a The selected picture is too large to upload
 - 2.3.a.1 User is notified that the picture is too large and suggested to select another photo.

Special Requirements:

- The device must allow the application to use camera
- The upload photo is not too large
- The upload file must be a photo with the extension *.png, *.jpg

Technology and Data Variations List:

- Upload API is provided by PHP server.

Frequency of Occurrence: Frequently and continuously.

Open Issues:

- What will happen if the network connection is disconnected while the photo is uploading?
- Will the user have the option to review the photo before it is uploaded?
- What will happen if the token is expired?
- Can user upload multiple photo at the same time?
- Is it able to let user review their upload photo?
- Can user delete their uploaded photo?

3. **View Transaction History:** User selects filter options to view their related transaction history

Scope: ONE Card mobile application

Primary Actor: staff, student

Level: User goal

Interests:

- User: Wants the process to execute fast.
- Administrator: Wants the function to work accurately without any interruption.
- ONE Card department staff: Wants the process to execute accurately.

Precondition:

- User is already login into the application as student, or staff account.
- User navigates to the Transaction screen.
- User has a huge number of transactions in history.

Success Guarantee:

- All of the transactions which matches with filter conditions is shown.

Main Success Scenario:

1. Select a From date
2. Select a To date
3. Select to turn on or off the Include Deposit option
4. Select to turn on or off the Include Expense option
5. Select to turn on or off the Include Condor cash option
6. Select to turn on or off the Include Print credit option
7. Hit the search button

Extensions

- 7.1 The application is failed to connect to server due to network connection error.
 - 7.1.a A message is shown to notify user that the connection is error.
- 7.2 The server is failed to connect to the database.
 - 7.2.a A message is shown to notify user that the connection is error.
- 7.3 User has no transaction which matches with filter conditions
 - 7.3.a The application displays no result

Special Requirements: None

Technology and Data Variations List:

- The database system is available to connect.

Frequency of Occurrence: None.

Open Issues:

- What will happen in case the server responds too much matched transactions?
- Does the application support user to limit the number of transactions?
- How long does user need to wait for the response?
- What will happen if the network connection is in low speed.

4. **Add Notification:** ONE Card manager staff inputs title, photo, description, and select a notification type

Scope: ONE Card management website

Primary Actor: ONE Card manager staff

Level: Manager goal

Interests:

- ONE Card manager staff: Wants the process to execute speedily, accurately without any error.
- Administrator: Wants the process to execute speedily, accurately. No exception occurs. The inputting contain does not against legal.
- University, college administrator staff: Wants the process to execute accurately.
- ONE Card mobile user: Wants the notification to be updated frequently.

Precondition:

- ONE Card manager staff is already login into the management website.
- ONE Card manager staff navigates to the Add Notification page.
- ONE Card manager staff has prepared a photo for the notification.
- The size of the photo is not over limitation.

Success Guarantee:

- The notification is added successfully without any error or interruption.
- The notification is shown on the list notification viewing from ONE Card management website.
- The notification is shown on the list notification viewing from ONE Card mobile application.

Main Success Scenario:

1. Input notification title
2. Click on the Photo button
3. Select a photo
4. Hit on OK button to select the photo
5. Input notification description
6. Select notification type
7. Hit on the Add button to add the notification

Extensions

- 1.1 The title is empty
 - 1.1.a A message is shown to notify user that the title field is required
- 1.2 The title contains special character
 - 1.2.a A message is shown to notify user that the title field does not allow to have any special characters.
- 3.1 The size of the photo is too large
 - 3.1.a A message is shown to notify user that the photo size is over limitation.

3.2 The selected file is not a photo (for example: .doc, .pdf ...)

3.2.a A message is shown to notify user that the selected file is not a photo

5.1 The description is empty

5.1.a A message is shown to notify user that the description is required

5.2 The description contains special character

5.2.a A message is shown to notify user that the description field does not allow to have any special characters.

7.1 The system failed to add the notification because of network connection or database error

7.1.a A message is shown to notify user that the notification is failed to be added to the system.

Special Requirements:

- The selected photo is not too large
- The selected file must be a photo with the extension *.png, *.jpg

Technology and Data Variations List:

- The database system is available to connect.

Frequency of Occurrence: None.

Open Issues:

- What will happen if the network connection is disconnected while the photo is uploading?
- Can user select multiple photos?
- Can user change the selected photo?
- Does user have the option to cancel the process while it is adding into the system.