

## Product Backlog (PB)

### PB1: Upcoming Reservation Notification (new user story)

Description: The user with an upcoming reservation should receive notifications T=10 minutes before the start of his/her next upcoming reservation.

### PB2: Upcoming Reservation Notification Change Time (new user story)

Description: The user should be able to set their own notification time T based on their preference. For example, if a user set T=30, then this user should receive notifications T=30 minutes before the start of his/her next upcoming reservation.

### PB3: Open and Close Notification (new user story)

Description: The user should be able to open the notification and close the notification. They should be able to receive the notifications when notification is opened. They should not receive any notifications when notification is closed.

### PB4: Change Password

Description: The user should be able to change their password after logging into their account. After resetting the password, the user should be asked to login again.

### PB5: View Recreational Centers from Actual Map

Description: The user should be able to go click into the Recreational Centers from an actual map, where the user can zoom in/out and view other areas.

### PB6: Highlight Today's Upcoming Booking

Description: The user having an upcoming reservation today should be able to see a highlighted time slot both in the Map Page and in the Booking Information Page.

### PB7: Change Profile Photo

Description: The user should be able to change their profile photo. The new photo should be then displayed on their profile page from then on, the old photo will not be displayed anymore.

### PB8: Connect to USC User Database

Description: The user should be able to go to the USC login page to login by clicking login and be redirected back to the application.

## Sprint Backlog (SB)

### SB1: Upcoming Reservation Notification

[Priority 5, 5 days]

Description: The user with an upcoming reservation should receive notifications T=10 minutes before the start of his/her next upcoming reservation.

### SB2: Upcoming Reservation Notification Change Time

[Priority 4, 3 days]

Description: The user should be able to set their own notification time T based on their preference. For example, if a user set T=30, then this user should receive notifications T=30 minutes before the start of his/her next upcoming reservation.

### SB3: Open and Close Notification (new user story)

[Priority 5, 5 days]

Description: The user should be able to open the notification and close the notification. They should be able to receive the notifications when notification is opened. They should not receive any notifications when notification is closed.

### SB4: Change Password

[Priority 3, 1 day]

Description: The user should be able to change their password after logging into their account. After resetting the password, the user should be asked to login again.

### SB5: View Recreational Centers from Actual Map

[Priority 2, 5 days]

Description: Refine the pages and component animations.

### SB6: Highlight Today's Upcoming Booking

[Priority 2, 1 day]

Description: The user having an upcoming reservation today should be able to see a highlighted time slot both in the Map Page and in the Booking Information Page.

## Sprint Plan

20 days of expected total work, 3 members, 7 days until due date

We will implement the functionalities based on priorities and difficulties in this order:

SB3 > SB1 > SB > SB4 > SB6 > SB5

## Daily 1

Members Participated: Jiang Yi, Shen Dongming, Xu tiancheng

Start time: 4.20 Wednesday 8:00 PM

End time: 4.20 Wednesday 8:15 PM

Meeting Location: Online (Zoom)

Meeting Summary:

i. What did I do since the last meeting that helped my team meet the Sprint goal?

JY: researched the ways to manage foreground tasks.

DS: finished the XML file for a new page for changing notification setting (Setting Page).

RX: researched how to send notifications to users on specific time

ii. What will I do today to help the team meet the Sprint goal?

JY: I will continue to research the ways to manage foreground tasks.

DS: I will finish the activity file for the Setting Page to have the API ready (important to have this ready for testing changing notification).

RX: I will continue to research the ways to send notifications to users on specific time

iii. Do I see any impediment that prevents the team from meeting the Sprint goal?

JY: Yes. I have tried many ways from the internet but can not close notifications currently.

DS: currently everything is fine on my side.

RX: I am currently having difficulty figuring out a way to send notifications

## Daily 2

Members Participated: Jiang Yi, Shen Dongming, Xu tiancheng

Start time: 4:21 Monday 4:30 PM

End time: 4:21 Monday 4:45 PM

Meeting Location: USC Campus

i. What did I do since the last meeting that helped my team meet the Sprint goal?

JY: researched the ways to manage foreground tasks.

DS: finished the activity file for the Setting Page, have the API ready for changing notification settings.

RX: kept researching on methods to send notifications on a specific time

ii. What will I do today to help the team meet the Sprint goal?

JY: change the current notification implementation in the destroy method and onCreate method to pass the flags to stop service.

DS: Connect notification settings with the agent (the core Class that stores everything about the user's information) by storing user preference for notifications into some fields in the agent.

RX: I find a way to use a NotificationUtils and PendingIntent to enable the functionality of sending notifications on specific time to users. I will try to implement them based on our needs.

iii. Do I see any impediment that prevents the team from meeting the Sprint goal?

JY: It throws the exception when the flag passed is null on some activities.

DS: currently, cannot store the user preference for notifications yet. Should be fixed next time.

RX: Not sure if the implementation works.

### Daily 3

Members Participated: Jiang Yi, Shen Dongming, Xu tiancheng

Start time: 4:23 Saturday 8:00 PM

End time: 4:23 Saturday 8:10 PM

Meeting Location: USC Campus

i. What did I do since the last meeting that helped my team meet the Sprint goal?

JY: change the current notification implementation in the destroy method and oncreate method to pass the flags to stop service.

DS: connected user's notification preference with its agent.

RX: already implemented the NotificationUtils and now enabled the application to send notification to users on specific time point.

ii. What will I do today to help the team meet the Sprint goal?

JY: fix the bugs when exceptions are thrown on null object reference and add destroy functionality for service. Add the close portal to each activity page.

DS: connect user's notification preference to the database by storing it into some columns in the database (to save the user's preference and load it upon user's login).

RX: make the notification satisfy the logic of our application. connect to database. try to give users notification based on their choice of notification options and their next reservation time.

iii. Do I see any impediment that prevents the team from meeting the Sprint goal?

JY: In the settings page, I cannot close the notification sometimes.

DS: everything is fine on my side.

RX: everything goes well on my side currently.

### Daily 4

Members Participated: Jiang Yi, Shen Dongming, Xu Tiancheng

Start time: 4:24 Sunday 10:00 PM

End time: 4:24 Sunday 10:10 PM

Meeting Location: Online (Zoom)

i. What did I do since the last meeting that helped my team meet the Sprint goal?

JY: fix the bugs when exceptions are thrown on null object reference and add destroy functionality for service. Add the close portal to each activity page.

DS: successfully connected user's notification preference to the database.

RX: Finished the implementation following the logic of our application. successfully connect to database and give users notification based on each user's different notification options(how much time before reservation, on or off)

ii. What will I do today to help the team meet the Sprint goal?

JY: set up the notification flag in each activity and connect to the functionality to close notifications.

DS: implement the change password functionality, research on actual map functionality.

RX: Testing possible scenarios to give users notification. make sure the notification works logically in all the possible scenarios.

iii. Do I see any impediment that prevents the team from meeting the Sprint goal?

JY: all good.

DS: everything is fine on my side.

RX: everything goes well.

## Daily 5

Members Participated: Jiang Yi, Shen Dongming, Xu tiancheng

Start time: 4:25 4:00 PM

End time: 4:25 4:15 PM

Meeting Location: USC Campus

i. What did I do since the last meeting that helped my team meet the Sprint goal?

JY: set up the notification flag in each activity and connect to the functionality to close notifications.

DS: successfully implemented the change password functionality and researched on using actual map in the app.

RX: Debugging the functionality to send notifications to users. Found a bug(a mistake in logic) and fixed it. now ensured the functionality's correctness.

ii. What will I do today to help the team meet the Sprint goal?

JY: check for small bugs and fix them

DS: testing and debugging

RX: do some final tests. research on implementing an actual map in the app. make a highlight on user's reservation that will happen today in map and summary page

iii. Do I see any impediment that prevents the team from meeting the Sprint goal?

JY: all good for notification.

DS: The actual map functionality is way more complicated than we expected. We don't have enough time to implement this.

RX: notification works properly. but it's hard to implement the actual map functionality and we probably need to give up on this functionality



## Sprint Review

### i. Review meeting time (start time and end time), location, and the attendees

Attendees: Jiang Yi, Shen Dongming, Xu tiancheng

Start time: 4.26 7 pm

End time: 4.26 8 pm

Location: xxxx s budlong avenue (Home)

### ii. Meeting summary

#### 1. What has been done?

Completed:

PB1: Upcoming Reservation Notification (new user story)

PB2: Upcoming Reservation Notification Change Time (new user story)

PB3: Open and Close Notification (new user story)

PB4: Change Password

#### 2. What was planned but wasn't completed, and why?

Not completed:

PB5: View Recreational Centers from Actual Map

Why and Potential Improvements (Reflections):

= We had a slower burn down rate than we expected. This was mainly because we underestimated the difficulty on the notification part. We spend much longer time debugging notifications than expected. For instance, the app always runs in the background even if we try to close the background service. Additionally, when user turns off the notifications, it only works some of the time.

= We underestimated the difficulty of implementing the real map functionality. After doing a complete research on this, we realized that this functionality will take us much more time than we expected.

#### 3. What went well during the sprint?

We implemented all the functions with high priority. Also, we communicated with each other efficiently, as every one showed up in every meeting, and completed their assigned task actively.

#### 4. What could be improved going forward?

= After developmeing more apps, we should be more experienced to give more accurate estimations on our abilities to implement a specific functionality. This will guide us to select a subset of functionalities in our sprint that is more likely to be implemented within the given amount of time.

= In the future, we should do more research on each functionality before assigning an estimate time to a functionality, instead of assigning the expected time purely based on our assumptions on the difficulty of a functionality.