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| <b>User Story: As a user, I would like to see the suggestions while inputting the destination</b>                    |                      |                  |
| <b>Tasks</b>   | <b>Estimate time</b> | <b>Owner</b>     |
| Application shows the possible destination as an autocomplete list for the textbox                                   | 2 hours              | Nathan           |
| <b>User Stories: As a user, I would like to see the shortest path to my destination highlighted on the map</b>       |                      |                  |
| <b>Tasks</b>   | <b>Estimate time</b> | <b>Owner</b>     |
| Specify the navigation nodes and configure the database to make these nodes be able to correspond to any destination | 6 hours              | Yao              |
| Create the database for the edges between all the navigation nodes   | 4 hours              | Zilun            |
| Apply the shortest path algorithm to find the route to the destination   | 4 hours              | Yao              |
| Show the path on the map screen  | 4 hours              | Gott             |
| <b>User Story: As a user, I would like to have a step-by-step instructions to guide me to the destination</b>        |                      |                  |
| <b>Tasks</b>   | <b>Estimate time</b> | <b>Owner</b>     |
| Automatically generate the instruction from the path between any two navigation nodes in the route                   | 8 hours each         | Yao<br>Zilun     |
| Automatically generate the instruction from the navigation node to the real destination                              | 8 hours each         | Zilun<br>Nathan  |
| Design a UI for showing the instruction on the screen  | 4 hours              | Gott             |
| Implement the UI and interactions for this screen  | 10 hours each        | Gott<br>Xiaojing |
| Provide the way for the user to respond whether he/she has completed each step of the instruction or not             | 4 hours              | Zilun            |
| <b>User Story: As a user, I would like be able to re-input my location if I am away from the directions.</b>         |                      |                  |
| <b>Tasks</b>   | <b>Estimate time</b> | <b>Owner</b>     |

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| Design a screen to help user to re-figure out where they are   | 4 hours              | Gott           |
| Implement this helper screen and connect it to the existing QR-code scanner and the manual location input                  | 8 hours              | Xiaojing       |
| Re-calculate the shortest path and restart the navigation  | 4 hours              | Yao            |
| <b>User Story: As a user, I would like to have easy-to-find qr code on the wall at every corner,crossroad and entrance</b> |                      |                |
| <b>Tasks</b>   | <b>Estimate Time</b> | <b>Owner</b>   |
| Print the qr codes out and put it on the corners and entrances of the test building  | 30 minutes           | Nathan         |
| <b>User Story: As a user, I would like to be able to manipulate the map to view where I am better</b>                      |                      |                |
| <b>Tasks</b>   | <b>Estimate Time</b> | <b>Owner</b>   |
| Implement scrolling the map vertically and horizontally  | 4 hours              | Nathan         |
| Implement zooming the map in and out.  | 6 hours              | Nathan         |
| <b>User Story: As a user, I would like to have a good user experience using an app</b>                                     |                      |                |
| <b>Tasks</b>   | <b>Estimate time</b> | <b>Owner</b>   |
| Implement the mobile-app-like transitions between pages  | 8 hours each         | Gott, Nathan   |
| Design and Implement the navigation menu   | 3 hours each         | Gott, Xiaojing |
| <b>User Story: As a user, I would like to be able to communicate with people who are currently inside the building.</b>    |                      |                |
| <b>Tasks</b>   | <b>Estimate time</b> | <b>Owner</b>   |
| Design and implement the messaging screen  | 8 hours              | Xiaojing       |
| Show the available users inside the building   | 6 hours              | Zilun          |

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| Allow the user to request help from the person inside the building | 6 hours | Yao |
| Allow the user to set the status offline                           | 2 hours | Yao |