

CS Capstone Design

Final Project Demo Grading Sheet (50 pts)

TEAM: HomeAide

Overview: The main purpose of the “Technical Demos” is to very clearly explore the extent to which the team has implemented the key functional and performance requirements for their project. Grading is based on two factors:

- **Completeness:** Have all of the key requirements been implemented. To what extent does the product have all of the functionalities and performance that was promised.
- **Quality:** Just having basic functionality is the bare minimum. What is the quality of the implementation? Is the resulting product aesthetically pleasing, easy to use, and a pleasure to work with; to what extent is it “ready for market”?

This template is fleshed out by the team, **reviewed and approved by CS mentor beforehand**, and then brought to demo in hardcopy for the mentor to use as a grading sheet.

Requirements Review

Based on our requirements acquisition work and evolution during implementation, the following are the key technical requirements driving of our product:

R1: User needs to be able to provide their general functional limitations. The user will need to be able to be able to input any limitations that they may be experiencing into the mobile application. The mobile application will not only be responsible for remembering these limitations, but also considering these limitations to make any recommendations for AT.

Specific implemented functionalities that satisfy this requirement:

- There is a dedication section (the user profile) in which the user will be able to input their general limitations. By default, the user will be given a list of known limitations that they could choose from. From there, the user will be able to select which limitation applies to them.

R2: User needs to be able to identify difficult areas in their home. Much like allowing the user to provide their functional limitations, the user must also be able to identify any areas in their home that give them additional trouble, or are more difficult than usual given their limitations. The application must then remember these trouble areas, and use this information to make recommendations for AT.

Specific implemented functionalities that satisfy this requirement:

- The main portion of the app will allow the user to navigate around a virtual home. In this virtual home, the user will be able to select specific rooms to gather more information about them (such as known objects that exist in that room, advice pertaining to the nature of that room, etc). Once the user has select a room to view, they will also be able to have to app remember that that room is also a trouble area for them.

R3: User information needs to be stored. All information pertaining to the user must be stored to some capacity. This includes their functional limitations, trouble areas, and even their user profile. This is to not only help prevent the user from entering data multiple times, but also assist the user in the event that data on the app is lost (such as the user getting a new device).

Specific implemented functionalities that satisfy this requirement:

- Everytime the user makes any changes relating to their profile (general limitations, favorites, trouble areas, etc), they will be given an option to save this information manually. Once saved, their profile will be encrypted and saved into the database which is located on a Cloud server.

R4: Application needs to be accommodate screen readers and color blindness. Given that the nature of this app is to help all those with a wide variety of functional limitations, it must also be accessible to all regardless of what these limitations could be. This would include providing a variety of color schemes to the user in the event that they may have visual impairments, and works with screen readers built into the phone's operating system.

Specific implemented functionalities that satisfy this requirement:

- The user of the app can change the color scheme of the app which can help with color blindness.
- Screen readers are able to read the text and buttons in the app, allowing the user to navigate using them.

R5: Application needs to recommend AT for the home area and user limitations. As mentioned previously, the mobile application will need to be able to recommend 'best fit' AT devices to the user by considering their functional limitations and trouble areas in their home.

Specific implemented functionalities that satisfy this requirement:

- While a user is navigating around a virtual home, they will be able to have the application recommend any AT devices. The application will utilize the search functionality implemented for the database to search the database. The application will place trouble areas and general limitations into this search engine. The database will conduct this search, and once it has generated results, will populate them into the mobile application where the user will be able to view.

R6: Admins need to be able to add, remove, and edit information from the database.

This database is what will contain all information regarding AT devices that could potentially be recommended to any user. Administrators need to be able to update information about these AT devices to help users narrow down what would be a best fit for their situation.

Specific implemented functionalities that satisfy this requirement:

- This is the core functionality of the website application. There are multiple different links throughout the website that allows the administrators to update a variety of information contained within the database (such as any AT devices, state resources, room objects, etc). These pages are also populated with a variety of buttons to assist their ability to navigate around the page, but to also add, edit, or remove devices.

R7: App should enable the user to connect with their local resources. Each state has its own resources to assist users with AT. The admins should be able to populate a list of state resources and the app should provide information about these resources to the user. The app should also allow the user to share their recommendations and limitations.

Specific implemented functionalities that satisfy this requirement:

- The website allows the admins to add resources for a specific state. The app can query the website for a list of the resources for the state chosen by the user. The user can view information about a specific resource in the app. The app also allows the user to share their recommendations via email or via a website.

Demonstration Sequences:

This section outlines the demonstration sequences prepared to prove the above functionalities. Each sequence is a coherent walk-through of some piece/area of the product, designed to highlight implementation of specific requirements/functionalities outlined in the last section.

Demonstration Sequence 1: User needs to be able to log in to the app

Requirements demonstrated: R3

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. User will enter in their username and password
2. The user is logged in

Evaluation (filled in real-time by mentor):

- ✓ User is able to successfully login using their username and password
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Demonstration Sequence 2: the user needs to be able to create or delete their user profile. User profile includes a username, password, age range, state, and user icon

Requirements demonstrated: R3

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. If no account exists the app will allow the user to register
2. The user can input all relevant information
3. App presents the terms of service that the user must accept to continue
4. The app saves the user account information, verify in "My Account" in the app
5. In "My Account" there is an option to delete their profile

Evaluation (filled in real-time by mentor):

- ✓ The user can provide their account information for a new account
- ✓ User must accept the terms of service
- ✓ The app saves the user information
- ✓ The user is able to delete their profile

Demonstration Sequence 3: The user needs to be able to provide their general limitations, and have been saved. User limitations include the physical difficulties they have such as a vision impairment

Requirements demonstrated: R1, R3

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. User goes into their user profile in the mobile application
2. User goes into my account
3. User goes into select my general limitations
4. Mobile application should display a list of limitations that are available to select
5. The user selects their limitations
6. App saves users limitations

Evaluation (filled in real-time by mentor):

- ✓ The app shows a list of general limitations to select
- ✓ The user can select from the list of limitations
- ✓ The app saves the users selection

Demonstration Sequence 4: User needs to be able to change rooms and be able to identify their trouble areas in the room. Inside a room the user can select objects that they have difficulties with.

Requirements demonstrated: R2, R3

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. User goes into the house section of the app
2. User selects room of house
3. User selects area of room

Evaluation (filled in real-time by mentor):

- ✓ The user can change the room
- ✓ From the room you can select an area inside that room the user has difficulty with

Demonstration Sequence 5: The app needs to give AT recommendations based on the user's general limitations and the room area.

Requirements demonstrated: R5

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. In Demonstration Sequence 3, the user provided their general limitations
2. In Demonstration Sequence 4, the user navigates to the room area that is giving the user difficulty
3. The app returns a list of recommendations based on their general limitations and the area.

Evaluation (filled in real-time by mentor):

- ✓ The app provides a list of recommendations that are relevant to the users limitations and room area

Demonstration Sequence 6: The app asks the user if they would like to share their AT device recommendations and/or their profile via email or printer. To print it out it will be shown as a web page the user will then have to print from their browser.

Requirements demonstrated: R7

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. In Demonstration Sequence 5, the app has given the user a list of recommendations.
2. User has an option to share their results in the list of recommendations
3. Users are asked if they want to create an email or display results in a webpage for sharing/printing.
4. If email, the app will start an email for them to open it in their installed email application
5. If webpage, app will generate a webpage and open it up in the user's browser.

Evaluation (filled in real-time by mentor):

- ✓ App creates an email for the user
- ✓ App opens up users email client
- ✓ App creates a webpage
- ✓ App opens up the users browser

Demonstration Sequence 7: The app needs to allow the user to save their favorite products they have viewed.

Requirements demonstrated: R3

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. In Demonstration Sequence 5, the user was given a list of AT recommendations
2. App user selects one of the results
3. While the user is viewing specific AT device details, there is an option to add it to their favorites at the bottom.
4. The user can navigate back to their profile, and then select "My Favorites" to verify that it was saved.

Evaluation (filled in real-time by mentor):

- ✓ User is able to click an option to add AT devices to their favorites
- ✓ Users can see their list of favorites in their profile.

Demonstration Sequence 8: App needs to refer the user to local services contact information. Local services are based on state.

Requirements demonstrated: <Note which of the above reqs (e.g. "R1, R4, R5" are addressed in this demo sequence>

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. User goes into the resources tab
2. App defaults to the user's state, but users can select their desired state for resources
3. The app will display the chosen states resources
4. The app user can click on one of the results for more information about that resource.

Evaluation (filled in real-time by mentor):

- ✓ The user will be able to successfully find the chosen state's resources

Demonstration Sequence 9: Admins can create and remove other admin accounts for the website

Requirements demonstrated: R6

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. An admin logs into the website
2. Admin clicks on link for admin user management
3. Admin clicks a button to add a new user
4. Admin is given a form to enter in a username and password
5. Admin clicks a button that says create
6. Admin logs out of their account and logs in with the new account
7. Admin logs out and logs back in with their own account
8. To remove an account, admin goes back to admin user management
9. Admin clicks delete button next to account they want deleted
10. That admin account is deleted

Evaluation (filled in real-time by mentor):

- ✓ Admins can add new accounts to the website.
- ✓ New account is able to log in
- ✓ Admins can remove accounts from the website

Demonstration Sequence 10: Client needs to be able to manage the AT inventory in the database. Clients can add, edit, or remove AT device

Requirements demonstrated: R6

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. Admin logs into the website.
2. Admin navigates to the AT Inventory
3. To add a new AT device, admin clicks on “new AT device” button
4. Form is opened up where the admin can input information about a new AT device
5. To edit an existing AT device they click on an AT in the AT Inventory listing
6. More information is shown about that AT. Admin clicks the edit button.
7. Form is opened up where the admin can edit the AT information
8. To remove an existing AT device the admin goes back to the device information and clicks on the delete button
9. AT device is removed when the admin clicks OK on the warning dialog.

Evaluation (filled in real-time by mentor):

- ✓ Admin can add a new AT device
- ✓ Admin can edit an existing AT device
- ✓ Admin can remove an existing AT device

Demonstration Sequence 11: Admin can search the AT inventory. The admins can perform either a basic search or an advanced search. An advanced search allows the admin to limit their search keywords to specific categories.

Requirements demonstrated: R6

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. Admin clicks on either "Home" or the "AT Inventory" page
2. Admin can select from either basic or advanced search
 - a. If basic search, admin can input keywords into the field and click "Search"
 - b. If advanced search admin can click on "Advanced Search"
 - i. Admin can enter search terms for specific fields and choose to exclude them.
3. Either search returns the correct results

Evaluation (filled in real-time by mentor):

- ✓ Admin is able to perform a basic search
- ✓ Admin is able to perform an advanced search
- ✓ Website returns that match the search query

Demonstration Sequence 12: Admin can send users Qualtrics surveys to the app. Admins can also view results of surveys.

Requirements demonstrated: R6

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. Admin logs into website
2. Admin clicks on messages and survey link
3. Admin clicks on button that says new message
4. Admin enters survey information into the form
5. Admin saves the survey information
6. Users are able to view surveys in user profiles under messages.
7. Admin can view completed surveys by clicking on the survey url in the messages and surveys page.

Evaluation (filled in real-time by mentor):

- ✓ Admin is able to add a survey
- ✓ Admin is able to view completed surveys
- ✓ User is able to view surveys

Demonstration Sequence 13: Admin can add, edit, or remove extra categories to the AT device table. These are categories the admins might want to add later on. Extra categories are not functional; they only serve to provide extra information.

Requirements demonstrated: R6

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. In the "Other Configuration" page there is a button to add categories
2. An alert is opened where the admin can give the category name
3. After a custom category is created there is a button to edit or delete it
4. If edit, admin is prompted for a new category name
5. If delete, admin is prompted to confirm deletion
6. If admin accepts deletion, the category is deleted

Evaluation (filled in real-time by mentor):

- ✓ Admin can add a new category
- ✓ Admin can edit a newly added category
- ✓ Admin can delete a newly added category

Demonstration Sequence 14: Admins can change wording of terms of service and grant information in the app.

Requirements demonstrated: R6

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. Admin logs into website
2. Admin goes to the "Other Configuration" tab
3. Admin can change the wording of the terms of service and save it
4. Admin can change the wording of the grant information and save it
5. App user sees the changes in the app (terms of service when creating a profile as in earlier, and grant information in the resources tab)

Evaluation (filled in real-time by mentor):

- ✓ Terms of service wording was saved
- ✓ Grant information wording was saved
- ✓ App shows the updated wording

Demonstration Sequence 15: Screen reader accommodation.

Requirements demonstrated: R4

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. Go into the app accessibility settings and enable the screen reader/text-to-speech
2. Go back to the app
3. Get a recommendation using Demonstration Sequence 5 with screen reader enabled

Evaluation (filled in real-time by mentor):

- ✓ Screen reader reads the text labels and buttons in the app and allows the app user to get recommendations using the screen reader.

Other challenges recognized but not addressed by demo:

If there were requirements that you listed earlier that were *not* covered by a demo, list here. This will hopefully be a short list...but better to be clear about what is done and not. If there are items here, one could provide explanation of why they weren't done.

- The app user should be able to change the app colors but we were not able to implement this before the demo because we ran out of time and this is a bit complicated to do.