## Criterion B: Record of tasks

Include at least 40 detailed items of the work you do. You can include work on the sections of this document, client/advisor time, etc. Be detailed, list time in hours.

You have 30 hours of in class time that you should account for, but you should also be spending at least another 10-20 hours outside of class and account for that as well.

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| Task number | Planned action | | Planned outcome | | | | Time estimated | | Target completion date | | | Criterion |
| 1 | Conduct a conversation with my client regarding the problem he wants fixed | | I will gain a further understanding of what problem the client faces, potential solutions, and design considerations. | | | | 0.5 hours | | 1/28/23 | | | A |
| 2 | Discuss with my advisor regarding the clients problem and potential design pathways | | I will narrow down my ideas for fixing Ethan's problem to a select handful, all of which are equally realistic. | | | | 0.5 hours | | 1/29/23 | | | A |
| 3 | Pitch initial solutions to the client and gauge feedback | | Determine which of my ideas best fits the client’s needs and interests to the highest level. | | | | 0.5 hours | | 1/30/23 | | | A |
| 4 | Create an organized project environment using Google Drive for managing deliverables. | | All documentation files will be instantiated via a cloud, allowing me to work on them from anywhere. | | | | 0.5 Hours | | 1/31/23 | | | A |
| 5 | Create a GitHub repository for managing and controlling versions of project executable. | | The code of the project will be backed up to a cloud service, providing security in case of an accidental deletion. | | | | 0.5 Hours | | 1/31/23 | | | A |
| 6 | Create outlines for each criterion to complete as I progress through the project | | Every element of each documentation file will be clearly defined, allowing me to plan my workload better. | | | | 0.5 Hours | | 2/1/23 | | | A |
| 7 | Begin writing solution overview and problem scenario | | I will have determined my client, advisor, and what my application will entail. | | | | 0.75 Hours | | 2/1/23 | | | A |
| 8 | Create a Gantt chart of the internal assessment timeline | | Devise a useful template for planning my work schedule in order to spread out the workload and avoid procrastination. | | | | 0.75 hours | | 2/2/23 | | | A |
| 9 | Finalize proposed solution and success criterion | | My plan of action will be set, and the application language and device demographic chosen. | | | | 0.5 hours | | 2/3/23 | | | A |
| 10 | Finish writing the planning document. | | Solution rationale and success criteria are fully defined | | | | 0.75 Hours | | 2/4/23 | | | A |
| 11 | Compile initial interactions with client and advisor into criterion A template | | All parts of criterion A have been finished. | | | | 0.75 hours | | 2/5/23 | | | A |
| 12 | Review and refine first draft of criterion A | | The entirety of documentation for criterion A have been fully finalized. | | | | 0.75 hours | | 2/6/23 | | | A |
| 13 | Submit draft of criterion A | | First draft of all planning resources has been submitted. | | | | 0.75 hours | | 2/6/23 | | | A |
| 14 | Research the benefits and drawbacks of MVVM project architecture | | I will determine the structure of my executable application in order to maximize encapsulation. | | | | 0.5 Hours | | 2/7/23 | | | B |
| 15 | Create a flowchart for the login algorithm of the application | | Fully understand all the orders of events relating to the user logging into the application | | | | 0.5 Hours | | 2/8/23 | | | B |
| 16 | Devise an explanation of the algorithm, entailing everything that the algorithm accomplishes | | Have a finalized course of action for what this algorithm will do, when, and how. | | | | 0.5 hours | | 2/8/23 | | | B |
| 17 | Create a flowchart for the main “Home page” algorithm that routes users to the correct location | | Understand the route at which pages need to link together, and which pages need the option to go backwards to the previous page. | | | | 0.75 Hours | | 2/9/23 | | | B |
| 18 | Write an explanation for what can be expected from the “Home Page” algorithm | | Gain a deeper understanding of what this algorithm entails for me as a developer | | | | 0.5 hours | | 2/9/23 | | | B |
| 19 | Create a use-case diagram, displaying all of the methods the user interacts with the application. | | I will learn every way that the consumer interacts with the product, as well as how I, the developer, will interact with it as well. | | | | 0.75 Hours | | 2/10/23 | | | B |
| 20 | Create a UI framework of what the final application should look like. | | Have a complete diagram for every page of the application. Understand what methods of interaction are needed per page. | | | | 0.75 Hours | | 2/11/23 | | | B |
| 21 | Create first draft of UML class diagram | | Understand how the backend code should be divided and tracked | | | | 0.75 | | 2/11/23 | | | B |
| 22 | Determine what data structures will be used, and provide an explanation. | | Understand how these classes will be tracked, iterated through, and organized. | | | | 0.75 hours | | 2/12/23 | | | B |
| 23 | Devise test plans for each of the seven criteria. | | Understand what needs to be done in order to prove that the application has successfully met the success criteria | | | | 0.5 Hours | | 2/12/23 | | | B |
| 24 | Meet with client for evaluated feedback on the apps’ wireframes and flowcharts | | Make any changes to the design of the application now rather than once coding has begun, saving myself time. | | | | 0.75 hours | | 2/13/23 | | | B |
| 25 | Submit first draft of Criterion B | | Have every deliverable ready for the IA’s second criterion | | | | 0.5 hours | | 2/13/23 | | | B |
| 26 | Begin installing Flutter and Dart onto my school-provided laptop. | | I have begun to create my development environment which will be used for making the application | | | | 0.75 hours | | 2/14/23 | | | C |
| 27 | Install Android Studio. | | Download several Android emulators for running and testing the application on | | | | 0.75 hours | | 2/16/23 | | | C |
| 28 | Conduct research into how to install Google Maps in flutter. | | Have a course of action for adding an external API without paying a substantial amount. | | | | 0.75 hours | | 2/16/23 | | | B |
| 29 | Begin construction of the “Tool” Dart class. | | Have a complete reconstruction of the Tool UML diagram but in code | | | | 0.5 Hours | | 2/17/23 | | | C |
| 30 | Begin construction of the “Team” Dart class. | | Have a complete reconstruction of the Team UML diagram but in code | | | | 0.5 Hours | | 2/17/23 | | | C |
| 31 | Begin construction of the “Log in” page frontend | | Reach a state in which Flutter displays all desired widgets on the page, regardless of if they have functions coded yet. | | | | 0.75 Hours | | 2/18/23 | | | C |
| 32 | Fix “No device emulator found” error in VSCode. | | Get back on track towards pushing code into iOS and Android emulators. | | | | 0.75 Hours | | 2/20/23 | | | C |
| 33 | Upgrade Gradle to 7.4. | | resolve an issue where Flutter does not recognize imported dependencies | | | | 0.5 Hours | | 2/21/23 | | | C |
| 34 | Import “Path Provider” and “CSV interpreter” Gradle dependencies. | | Obtain pre-built methods for accessing and writing to local data files | | | | 0.25 Hours | | 2/22/23 | | | C |
| 35 | Finish construction of the “Login page” frontend | | All visual elements of the login page have been completed. | | | | 0.85 hours | | 2/22/23 | | | C |
| 36 | Begin construction of the “Login page” viewmodel | | The code which handles verifying users will begin production | | | | 0.75 hours | | 2/24/23 | | | C |
| 37 | Construct the code for a public Teams hashmap data structure | | Create a variable accessible from everywhere containing the information of each team. | | | | 0.75 hours | | 2/25/23 | | | C |
| 38 | Begin construction of the UI of the New user page | | Create several interactable widgets for the user to add new team’s information to. | | | | 0.85 hours | | 2/27/23 | | | C |
| 39 | Create a new Google Cloud Developer account | | Create a billing account which may be used for utilizing the Google Maps API | | | | 0.5 hours | | 2/28/23 | | | C |
| 40 | Add Google Maps API key to the Flutter Project directory | | The Maps dependency will be updated in pubsec.yaml, allowing me to utilize maps in the app. | | | | 0.75 hours | | 3/1/23 | | | C |
| 41 | Begin coding the new user authentication algorithm | | The new user page will check for all required information that has been input before creating a new user. | | | | 0.75 hours | |  | | | C |
| 42 | Finish construction of the login page backend | | Every piece of code related to the login process has been concluded. | | | | 0.75 hours | | 3/2/23 | | | C |
| 43 | Begin construction of the home page UI in Flutter | | I will instantiate every button needed by the user to route them to different pages of the application | | | | 0.90 hours | | 3/3/23 | | | C |
| 44 | Conduct progress check regarding Criterion C with teacher | | I will be held accountable for the amount of progress I have achieved per the timeline I originally created. | | | | 0.5 hours | | 3/3/23 | | | C |
| 45 | Create the “AddTool” view page, responsible for the AddTool page’s UI. | | Begin construction of the methods of interaction used to instantiate a new Tool instance. | | | | 0.5 hours | | 3/4/23 | | | C |
| 46 | Research how to use a radial number picker using Flutter’s Stateful widgets | | I will discover and utilize a more efficient means for picking the quantity of tools required. | | | | 0.7 hours | | 3/4/23 | | | C |
| 47 | Conduct Progress check with teacher for application progress. | | My updated progress on the application will be evaluated by the teacher once more. | | | | 0.75 hours | | 3/6/23 | | | C |
| 48 | Code the backend algorithm for creating new tools using the radial number picker | | Finalize the code of the AddTools page, so now the user can instantiate new tools while accounting for the many exceptions that user error might throw. | | | | 0.8 hours | | 3/7/23 | | | C |
| 49 | Create methods for routing to every page of the application within the homepage’s viewmodel. | | The buttons of the home page will now do something, as they will now route the use to their respective pages. | | | | 0.5 hours | | 3/8/23 | | | C |
| 50 | Begin Construction of the Delete tool page’s ui within the view file. | | Construct a visible, interactable list of all the user’s tools, which must vary in size to account for the number of tools present. | | | | 0.75 hours | | 3/9/23 | | | C |
| 51 | Finish the viewmodel code of the delete tool page. | | All code relating to the delete tool page has been finished. If the user possesses no tools, they are routed back to the home page with an error dialog. | | | | 0.75 hours | | 3/10/23 | | | C |
| 52 | Conduct research into how to use autofill suggestion boxes in Flutter | | Depending on the difficulty, I could potentially use auto-suggestions within the text field of the search page. | | | | 0.5 hours | | 3/12/23 | | | C |
| 53 | Conduct final Criterion C progress check with teacher | | Acquire any remaining feedback for how my documentation is progressing, and what needs to be done to meet the final deadline in time. | | | | 0.5 hours | | 3/13/23 | | | C |
| 54 | construct the user interface for the search tool page of the application | | By the end of today, I’ll have a google map display with a variable width and height to fit the user’s screen size of their device. | | | | 0.65 hours | | 3/13/23 | | | C |
| 55 | On Paper, begin drafting up the design of the recursive search method for finding tools. | | Plan out the majority of the search method before coding to save myself time once I begin. | | | | 0.5 hours | | 3/13/23 | | | C |
| 56 | Begin construction on the recursive search method for tools | | Code the method header, parameters, and recursive case of the function’s composition. | | | | 0.75 hours | | 3/14/23 | | | C |
| 57 | Finish construction of the recursive search method. All code of the Search page will be completed. | | Finish coding the two base cases of the recursive method for routing the user to the Emergency Request page when no tools exist, or altering the map’s camera to focus on the nearest tool | | | | 0.75 hours | | 3/14/23 | | | C |
| 58 | Code the UI of the Emergency Requests page | | I used similar code from the delete tools page to display a variable sized list of all emergency requests within the application. | | | | 0.5 hours | | 3/15/23 | | | C |
| 59 | Create the New Emergency Requests page. | | Code the page for adding a new request using the tool’s name and quantity. The user is rerouted to the emergency request page upon completion. | | | | 0.5 hours | | 3/15/23 | | | C |
| 60 | Develop code for displaying notifications upon request fulfillment | | When a team logs into the application after having one of their requests fulfilled, they will now be greeted by a success notification, and the request removed from the list. | | | | 0.75 hours | | 3/15/23 | | | C |
| 61 | Conduct the second meeting with my advisor | | Gain insight into how data can be saved locally within my flutter application | | | | 0.35 hours | | 3/16/23 | | | C |
| 62 | Implement toJSON() methods for the Team class, Tool class, and EmergencyRequest class. | | Provide methods to convert user-developed classes into organized text format for saving by writing to a local file. | | | | 0.75 hours | | 3/16/23 | | | C |
| 63 | Code the fromJSON() methods for each of the user-made classes | | Create a second constructor from each class that restores instance from JSON text input strings. | | | | 0.75 hours | | 3/16/23 | | | C |
| 64 | Create a method in the main class for restoring a hashmap of elements from the JSON txt file | | Restore all saved data in an organized fashion, already in a Map structure to use | | | | 0.5 hours | | 3/16/23 | | | C |
| 65 | Organize code, add additional comments. | | Now that the code is finished, I added dozens of comments, explaining what each method and class does and what processes are used. | | | | 0.5 hours | | 3/17/23 | | | C |
| 66 | Deploy the application to testflight using iOS’s XCode. | | Push the flutter project onto mobile devices for use by the client and myself | | | | 0.75 hours | | 3/17/23 | | | C |
| 67 | Conduct one last meeting with the client to determine their feedback for the final product | | I will gauge Ethan’s opinion regarding if the application performed all the tasks he desired to the level intended. | | | | 0.5 hours | | 3/17/23 | | | E |
| 68 | Conduct one last meeting with the advisor to see what could be improved for the application in the future. | | Discuss the feasibility of several improvements which could be made to the application. | | | | 0.5 hours | | 3/17/23 | | | E |
| 69 | Record a video of the application running for criterion d. | | Create and edit a video which displays whether or not the application met each of the success criteria, and what can be improved upon in the future. | | | | 0.5 hours | | 3/18/23 | | | D |
|  | Compile client and advisor feedback into criterion E template | | Finish criterion E, thus having every piece of documentation finished. | | | | 0.3 hours | | 3/19/23 | | | E |
| 70 | Organize all documentation and product code into a single zipped folder. | | Organize my submittables per the structure stated by the teacher. Reduce the size of the submittable for quick uploading. | | | | 0.25 hours | | 3/19/23 | | | ALL |
| 71 | Submit the internal assessment on the class’s canvas page | | Turn in all deliverables, effectively concluding the project. | | | | 0.1 hours | | 3/20/23 | | | ALL |
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