

Milestone 6

Version 1.0

Journal Hero App

By:

Daniel Bornemann

Joshua Breininger

Phi Duong

## 1. Team Information

### 1.1 Names and Emails of Project Members

- Daniel Bornemann - [dbornemann2018@my.fit.edu](mailto:dbornemann2018@my.fit.edu)
- Joshua Breininger - [jbreininger2018@my.fit.edu](mailto:jbreininger2018@my.fit.edu)
- Phi Duong - [pduong2018@my.ft.edu](mailto:pduong2018@my.ft.edu)

### 1.2 Faculty Advisor

- Dr. Bernhard - [pbernhar@cs.fit.edu](mailto:pbernhar@cs.fit.edu)

### 1.3. Client

- Calvin Schwartz
- Maya Lindseth

## 2. Project Details

### 2.1 Progress of Milestone 6

Task	Josh	Phi	Daniel	Status
Test/Demo the entire system	33%	33%	33%	Done
Create User/Developer Manual	60%	10%	30%	Done
Create Demo Video	0%	0%	0%	Due to large changes in menus and adding new features, didn't have time to make video

Continue adding scenarios and art	70%	30%	0%	100% but could always have more / there's not really a "100% done"
Add achievements using the framework laid down	10%	10%	10%	30% Achievements were modified to be replaced with buffs and additional turns to the game
Allow user to change name of player character	0%	0%	0%	Addition of game made adding a way to change name more difficult and less of a priority
Add disclaimer splash screen	33%	33%	33%	100%
Finalize graphs	10%	80%	10%	100%
Finalize calendar	33%	33%	33%	100%

Prune Database	50%	50%	0%	Done
Add turn based game that occurs over time	20%	70%	10%	100% Although more could be added

## 2.2 Discussion of Milestone 6

1. We performed a series of bug tests and checks on the app to ensure there were no breaking bugs. We had to fix many issues with sanitizing input to ensure that no crashes occurred, mostly by including default values as well as in our database handler double checking the contents of a query before trying to get data out of it. The result of these tests gave us a solid safe foundation to where it should be extremely difficult to break the app as we gave as little ability as power to mess up input as possible. We ensured if there were to only be numbers in an input, we used bubbles, a slider, or use the android native number pad rather than full access to the keyboard. We also found that limiting the number of digits allowed to be entered in the number pad was effective at preventing database problems. Putting in no data was also tested, which was accommodating for but created many issues during the testing.
2. For the User/Developer manual, we detailed everything the user could do with the app, as well as how to navigate it and the limits we place on the user in terms of input. We also provided the graphical elements when necessary to ensure the user knows where they are or what they are clicking on. Since there's only one kind of user - aside from a developer, we just described how one would use the app as someone logging information and interested in the game would use it. For the developer manual, we detailed the various source files, and generally how the app functions in how it relies on the database for saved information as well as a description of the database.
3. For the Demo Video, since we were adding an entire basic game to the milestone after we started milestone 6, we had to scrap for showcase as what we would have recorded would not be reflective of our product, since it included significant UI changes and how the app works to some extent. This is a result of making such a last minute decision which will be discussed in lessons learned
4. Creating new scenarios and art was just using the foundations in previous milestones to add more text and characters. Since we added a game, we needed enemies, so the art for 9 enemies was made along with scenarios for some of them. We ensured the png file sizes

we used and number of pixels would contribute little amounts of space being taken up on the phone, which is why we chose the art style we did.

5. For achievements, we had planned to do more in depth notifications and rewards based on what the user inputs, however adding a game removed the need for those kinds of achievements and much of the time devoted to them. We decided to take the intent, being pushed to make better choices to the game as we felt it was more likely to act as a motivation than more scenarios and a notification. Instead we provide stat buffs and extra turns to good choices - buffs are granted if you log exercise, fruits or vegetables. No punishments are made for negative choices, just a lack of extra progression.
6. We added a splash screen that pops whenever the app is loaded, and must be closed to use it. The pop up contains basic information we consider to be necessary to ensure that nobody misinterprets the goal or abilities of the app in terms of managing mental health. The disclaimer is as follows: Journal Hero is not a replacement for professional medical or psychological aid. If you are struggling with depression, please seek qualified help. If you or a loved one are suffering from suicidal thoughts, please contact the National Suicide Prevention Lifeline with the number 1-800-273-8255 in the United States. If you are not in the United States, please contact a lifeline in your country.
7. For graphs, we completed the diet graph, which is also now accessible through a button. We use multi bar graphs instead of normal bar graphs to display all diet information due to having multiple diet attributes. We mostly just reused old code for this, being the older graph code.
8. For the calendar, we made sure it worked and we can properly move through the days and weeks and select them. We also made some changes, in that the user can view information about a day in the adventure log, which was repurposed for this as we had less use for the original intent of the log being a record of every scenario seen, although due to less focus on scenarios this is less important to the app. We also disabled the ability to effectively travel through time in the app.
9. For the database pruning, we stuck to removing previous year's daytable and monthtable values through a delete statement, and keeping the year averages. This would be sufficient to ensure the database doesn't bloat, as each row does not take up much data and 365 rows at max for daytable is very small for an sqlite database.
10. We ended up rather last minute adding a turn based game to motivate usage of the app. The game provides a menu screen with the player and one of 9 monsters, each with different resistances and health. The player can either basic attack or use magic once a day, where magic does more damage but takes up mana. Mana is restored partially after logging information. Each monster takes more or less damage from physical damage or magic damage based on stats in the database. We also grant damage buffs to certain inputs, as well as an extra turn if they log a good choice for faster progression. Defeating an enemy gives exp to the player, giving a sense of long term progression. Each of the monsters has their own art, name as well as are the objects inside scenarios. An enemy is

only randomly chosen when one is defeated, so a battle with one enemy should last a few days. Stats were allocated with some test play to take a few days but not be a tedious lack of progression for many days.

### **2.3 Discussion of Team Contribution**

- Joshua Breininger made art and scenarios. Also helped make the game, finish up lingering issues or parts of the project to do and helped bug test the app.
- Daniel Bornemann cleaned up the code, worked on lingering bugs and finished any forgotten or missed parts of features. Also helped work on the game.
- Phi Duong finished up graphs and was the primary worker on the game, implementing the battle system and enemies.

### **2.4 Lessons Learned**

- Plan better in terms of better understanding what parts of a system or features are foundational to future progress, which we had some issues doing which caused extra work.
- One needs to be extremely extensive with bug testing and input sanitization when dealing with user input, as we spent a very long time dealing with crashes or mistakes created by this.
- Although giving certain teammates certain roles and specifications on what they worked on was useful and helped reduce the amount of confusion, it did cause issues where one teammate had to find other things to work on due to having to wait for another to complete something foundational to their work.
- Making large last minute decisions that result in a lot of work requires a lot of consideration due to how it impacts the rest of the project. Although we still think adding the game was justifiable and better for the overall product it massively increased our workload, and had we planned better in the first place we probably would have been better off.

### **2.5 Dates of Meetings with Clients**

1. April 1st, 2022
2. April 10th, 2022

### **2.6 Client Feedback**

- App graphically looks nice, diet pop up could use visual indicators to look better and be more clear - Addressed and completed

- Additional of a full game would be better motivation to use the app as right now it is a bit weak on that front - Addressed and game added

## **2.7 Dates of Meetings with Faculty Advisor**

- April 10th - Email sending updated Poster and E-Book for feedback
- April 18th - Email sending documents and progress reports for feedback.

## **2.8 Faculty Advisor Feedback**

Faculty Advisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Evaluation by Faculty Advisor

Faculty Advisor: detach and return this page to Dr. Chan (HC 214) or email the scores to [pkc@cs.fit.edu](mailto:pkc@cs.fit.edu)

Score (0-10) for each member: circle a score (or circle two adjacent scores for .25 or write down a real number between 0 and 10)

Joshua Breininger	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Daniel Bornemann	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Phi Duong	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

Faculty Advisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_