

# CSC 648/848 SFSU Fall 2019 Milestone 3

**Review of functionality, UI, SW and planning for final product delivery**

**Includes Checklist for instructors and teams (Appendix I and II)**

**Due: 04/23/2020. M3 document and horizontal prototype.**

## **Objective and Overview**

The objectives of Milestone 3 are to:

- **Define exactly what product you are delivering.** We will come to “temporal” agreement on what the final application is going to look like in terms of functionality, especially which functional items are priority 1 (P1). This will be the base for your final commitment to the instructor/client that will be made in M4
- **Ensure software development is on track.** We will verify that all the SW components are installed and integrated and that most major functions work. The software you present must follow adopted coding style, be reasonably documented and deployed on the final deployment platform. Github usage (organization, comments to postings etc.) will also be checked.
- **Provide feedback on all major UI screens and functionality.** This will be done through a review of the so-called *horizontal or UI prototype* (see below).
- **Check software architecture** by reviewing your code, the database and overall design at a high level (may be done partially off-line, remotely)
- **Check all algorithms** like search and filtering
- Ensure basic best practices for **security** are followed
- **Identify and address all technical risks**
- **Ensure effective teamwork** by verifying that all team members have started implementation of their portion of the project
- **Ensure software development is effective** by verifying your team’s coding practices, software engineering practices and usage of team development tools

**Milestone 3 will be in the form of three parts:**

1. **Part 1 - Milestone documentation: more detailed specifications**
2. **Part 2 – each team meets with the class instructor: Review of functionality, UI and general project status (online)** will be done by each team meeting with class instructor for 20 – 30 minutes. online on 04/23/2020. A member of the team must

3. be assigned to record or type all the feedback ( or main points ) provided by the instructor. In order to be efficient teams must observe strict schedule and come fully prepared. All team members must be on the meeting. No exceptions!!!  
Checklist for Part 2 review is in Appendix I
4. **Part 3: SW review (off-line):** Architecture, Code, Github, team account, database and general SW and code review will be done remotely by class instructor one day after Part 1 review. The class instructor will fill out a report (Appendix II) and send to each team.

After Milestone 3 the teams will meet to analyze feedback and revise design and implementation accordingly, as well as to fix on P1 set of features. After this the teams will have “feature freeze” e.g. the teams must focus on intense implementation of only P1 features. The feedback provided by the instructor in part #1 must be included in the M3 document as a new section.

## **Part 1 Document – More Detailed Specifications and Software Design Patters**

### **1. Data Definitions V3**

This should be reasonably consistent with Milestone 2 version 2, but should be expanded as needed. This is the final version of your data definitions, and the ones you will fully implement in your project. That’s it, all your final specifications should implement in some way the entities and data items described in this section. You are allowed to copy and paste your final data definitions from M2V2 here if there are no further modifications.

### **2. Functional Requirements V3**

In this section, **all the team together in an online meeting**, must revise all the functional requirements in detail, **one by one**. This includes also P2s and P3s. Then, decide which functional requirements are dropped, or moved to a lowest priority (i.e P1 requirements moved to P2). Be realistic here, and discuss the pros and cons of decreasing the priority requirements or dropping them. Take into consideration that P1s, P2s and P3s functional requirements are always implemented. However, P2s and P3s functional requirements are only implemented in the maintenance process of the product. That’s it, after the delivery date and deployed by regular updates. However, this is not done in this class due to the lack of time. So, put all your in making sure that your P1s are good and no trivial. Try to challenge yourself here!.

### **3. Wireframes Based on your Mockups/Storyboards V2 (detailed)**

- Create an updated and detailed version of your mockups/storyboards using a wireframe approach for all use cases. **must be done** using SW tools. No hand drawings this time (see architecture slides for recommendations). Recall that your horizontal prototype will be tested based on the mockups and storyboards/wireframes from this section. Recall that wireframes are a sequence of steps done by the user in order to accomplish one goal. For example, a good wireframe will show the sequence of steps (UI/UX only) done in order to accomplish a successful sign up process. They must have lines pointing to the next frame that will be shown in screen after the user clicks or edit an item. See architecture and design class slides for more detailed info
- Wireframes in M3 must be consistent with the Mockups and storyboards you had in M2V2 after instructor feedback
- Your final version of your wireframes in M3 must be also consistent with your UI/UX in the horizontal prototype.
- “Test” this section as many times as you need, keeping ease of use and your use cases in mind. Walk through your mockups/wireframes as if they are “live” with someone playing the role of user clicking on buttons as per use cases.
- Use data terms and names consistently with data dictionary and use cases.
- Make sure that the actual display of mockups in the hard copy Milestone 3 document is easy to read (If I cannot read them, I cannot grade them)

### **4. High level database architecture and organization V2 (detailed)**

Copy and paste here the final version of your database model from M2V2 after modified using your instructor feedback. Note not need to add your ERD in this section because the final version of your database model will reflect all the changes made by you in your ERD from M2V2. Note that all the missed sections from M2V1 need to be completed in M2V2 based on my feedback and perfected in this milestone.

### **5. High Level Diagrams V2 (detailed)**

- Your final UML version from M2V2 after the feedback from the instructor was implemented. Take into consideration that this is your final UML version and the one you'll follow in your code implementation.
- Your final versions of your deployment and network diagrams. Make sure that they are really detailed.

### **Milestone 3 Version 1 (Documentation) Submission Guidelines**

Once the document is completed and reviewed by the team lead, it must be uploaded to your M3 folder in your team repository, and send (the link to the document) via e-mail to [jortizco@sfsu.edu](mailto:jortizco@sfsu.edu) by the deadline. The submission format and process **must be followed precisely**, as always. Submission must be done by the deadline specified; No extensions requests will be approved for this milestone at this time. We are so behind schedule!. **Late submissions will incur in a 10% of penalty in the final grade of the milestone.**

**e-mail subject line:** Must be “CSC648-848 Spring 2020 Milestone3 Version1 Team N” in the subject line (N is a team number (01, 02 etc.).

**e-mail body contains:**

- some courtesy text explaining what the e-mail is about
- link to the document in the team Github repository.

### **Part 2 Horizontal Prototype Review – Functionality and UI feedback and general project status**

#### **IMPORTANT!**

BE ON TIME (see schedule below). Schedule will be strictly enforced

Appoint a “scribe” e.g. person to collect meeting feedback and main points and action items (use Appendix I as a template)

Have all the required items in your repository ready– failure to do so will reduce team grade

You have only a limited time available for the meeting. Any time you lose due to improper preparation means less time for your team to receive feedback. Be sure all the team members are present and that your SW works. The review will not begin until all the team members are in the meeting, and all the documentation needed is in your master branch of the team repository

## Horizontal Prototype of your product

An horizontal prototype of your product consist in all the UI/UX related to the front-end already implemented based on your mockups and storyboards/wireframes from M3 V1. At this point all the pages of your web site (front-end only) must be completely implemented.

The back-end needed for the horizontal prototype is minimal. Your prototype must show the ability to move from page to page. Take into consideration that the final version of your vertical prototype after my feedback must be included in your horizontal prototype.

**Review Schedule and meeting place:** the review of your horizontal prototype will take place on 04/23/2020 in an online meeting with your instructor Jose Ortiz. The exact time of the available meeting slots will be posted soon on iLean.

In terms of attendance, all members of the team must attend and be prepared to describe the work you have done so far in detail. For each team member missing the meeting, it will incur in a 10% penalty in the final grade of this milestone.

## What to bring to the meeting

**The team must have in the repository the following for the Milestone 3 Part 2 meeting:**

- ***Product prototype*** with limited functionality: Access to the current version of your SW (e.g. extension of vertical prototype) running on deployment server . Functionality it must have is as follows: actual home page and basic search with search results integrated with back end (the rest of pages may not be connected, see below); Insert endpoint, e.g. it can be the create account page saving data to the database. Finally, image and image thumbnail; basic maps showing position of one item (if any)
- ***Horizontal prototype*** costing of all UI pages of P1 functionality coded in your chosen framework but NOT necessarily connected to the backend (you can have tab for each). This will be used to simulate storyboards workflow and to give UI feedback. Note that your horizontal prototype pages or popups must be fully connected and functional. In other words, I must be able to navigate from page to page, show and hide popups...etc. No backend needed in horizontal prototype
- Access to Github, database etc. for quick review (credentials folder updated and with precise instructions to access all the parts of the system)
- Add the link to your home page in your main README file of your repository (if you haven't done it already)

Class instructor will exercise major use cases using a shared screen with your live horizontal prototype executed from your server and will give you feedback on UI and functionality playing the role of a set of customers in a focus group.

**You are requested to appoint a scribe who collects the feedback. You can also record the session (audio, video) but YOU MUST NOT post it on any on-line media.**

**Use Appendix I as a template to record feedback as well as hard copy UI screen shots with instructor's feedback on it. Hard copy of UI screen shots are not submitted in this milestone, but will make your job easier to determine where and how to work in the improvements of your prototype. They will be submitted in M5**

After functionality and UI feedback, we will go briefly through a project status checklist.

Your prototype and project will be reviewed as per rubrics in Appendix I (see next page)

**After the M3 Part 2 meeting (recommended to do it immediately after the meeting):**

Team has to meet, analyze meeting feedback and revise design and implementation as necessary. Team also must finalize P1 set of features. This feedback as well as finalized P1 list MUST be recorded using template (or its modification) as in Appendix I. You must incorporate the feedback in M3 document after the meeting, and you will submit it with M5 folder at the end of the semester. You must use marked UI screens with feedback as a guidance to revise UI designs.

**Appendix I – Rubrics and checklist for Part 1 Milestone 3 review: Project Status and UI Review (to be done by class instructor meeting each team for 20 min). Use modification of this for team M3 summary**

**Section:                      Team:                      Date:                      Number of students present:**

**Team on time:                      all required items brought to the meeting:**

***1. UI and functionality feedback (P1 functions only)***

**Instructor will use the url provided in your main README file to run your SW from deployment server and from the instructor's laptop with a shared screen-**

- Test main use cases
- Check functionality and record issues/observe bugs
- Check UI and usability for: adherence to established UI design patterns, layout, flow, clarity, functionality vs. use cases etc.
- Mark comments on hard copy of UI, team to record comments
- Check if UI is responsive to change of browser size
- Performance in page/image rendering, search
- Verify enough WWW pages are implemented and connected

**Students must:** Record meeting summary (use scribe and Appendix I as template, as well as hard copies of UI screen shots with institutor's comments). Then the team should meet (preferably immediately after the review) to analyze feedback, prioritize and revise and plan to implement changes accordingly. **Also, after the review the team must finalize P1 set of features and focus only on those from then on.**

**Instructor will check functionality and pages/use cases as below:**

- Home page
- Search (including search field validation)
- Search results
- Filtering
- Search Details and maps (if applicable)
- Messaging/contact seller/user (if applicable)
- Data Upload

- dashboards (user, admin)
- UI responsiveness (resize the browser)
- Performance (e.g. display of results list)

## ***2. Brief review of coding, Github, database etc.***

Be ready to show examples of code so coding style and documentation can be checked. Same with Github (file organization e.g. MVC, comments on code positing etc.)

Also be ready to show DB tables and data in them using the tool of your choice (e.g. whatever your site admin would use). Stored PW will be checked for encryption. Image storage will be checked as well

## ***3. Project status – be ready to verbally explain status of the issues below***

- Teamwork*: is the team working out, any related issues
- Risks*: all actual (not hypothetical) risks (schedule, technical, skills etc.) should be identified and either resolved or plans made how to resolve them asap.
- Coding practices*: by this time you should have decided which coding style to use and actually use it, so be ready to report on this. Actual code will be verified
- Usage of proper SE code management practices*: be ready to comment on how you manage code submissions, reviews, build and test etc. This will be verified by looking at actual code and server logs
- How did you address site security and safe coding practices*: PW management, use of secure protocols, checking for valid inputs etc.
- Digital content* (e.g. images, video) please provide information on status and availability, chosen formats, resolution etc.
- Other

## ***4. List of P1 features committed for delivery***

**Instructor may issue checkpoint in case there is an issue that has to be urgently solved or tracked.**

**Teams then meet after the meeting and summarize the feedback in this template including agreed P1 list of features. Team uses marked UI screens with feedback for UI revision.**



## **Appendix II– Rubrics and checklist for Part 2 Milestone 3 review: SW Review (to be done off-line)**

**Section:**            **Team:**            **Date:**

### **Instructor to Check and comment below:**

- Git/Github organization (e.g. organization of branches)
- Git/Github usage: Comments on positing; Number of posting to Github; App. even distribution of submissions among team members (check GitHub post stats for all members)
- Code documented (header, in code) with good coding style
- MVC/OO patterns followed up
- Frameworks (back end front end) deployed correctly
- Database organization (tables, naming...)
- Blobs being used? If so, is it working?
- Adherence to best practices of security (PW encrypted, search inputs verified etc.)
- Efficiency (proper use of image thumbnails, efficient search etc.)
- Other

**Instructor will send e-mail with comments to team lead. Team is supposed to meet, analyze the feedback and revise as necessary.**