IC470, Software Engineering

Milestone 4 – Part I: Progress Demo (demo 4 of your acceptance test cases completely implemented) and **Part II: Capstone Proposal Poster Session.**

Due dates: See course webpage for the specific dates. Note that there are two due dates for this milestone – one for getting your Customer and Tech Advisor initials approving your proposed poster BEFORE getting it printed up at MSC, and one due date for the actual progress demonstration and poster session which will be held at the start of class as per the syllabus.

Errata/Updates. Any errata or updates to this document will be dated and shown in red both as a summary below as well as in the contents of this milestone. Each team is responsible for checking (and delivering their milestone in compliance with) any changes indicated in this Errata/Updates section that are dated prior to the delivery.

<div align="center">Summary of Errata/Updates:</div>

08 Nov 2019 - Added Intro Slide.

Part I: Progress Demo

0. **Arrange to meet with your Customer**. Your customer's initials (and your Technical Advisor's initials if your customer is not a member of the CS Dept faculty) must be attained <u>before</u> a team may deliver this milestone (see sections marked with **Customer Involvement Alert** below). Note that:

   a. **Lead-time.** It is the team's responsibility to meet with their customer with enough lead time in order to get the required initials and meet published milestone delivery deadlines.

   b. **Availability.** Your customer or technical advisor not being available in the 2 workdays prior to a milestone delivery deadline is <u>not considered a valid excuse</u>, and no delivery delays will be approved in these types of circumstances (this will instead be viewed as a planning shortfall on the part of the team).

c. **Off-Yard Customers.** Teams with off-yard Customers may attach an email from their Customer showing their Customer's concurrence on test case completion as well as their input for the Customer's Evaluation Cover Sheet in lieu of their physical initials.

d. **Lateness.** All milestones must be delivered in order to pass the course, even the milestones in which a team will earn a 0 due to lateness.

Milestone _____   Team _____
(the above filled in by the team)

Deliverables checklist (see below for more info on each of these items). Be prepared to present the below, in order, during your milestone delivery.

- Checklist (a copy of this deliverables checklist sheet)
- Customer's Evaluation Cover Sheet completed by Customer (and Tech Advisor), or, copies of emails showing your attempts to contact them at least two days prior
- Intro Slide
- Concise Project Overview
- Targeted Functional Requirements for this milestone
- Functional Requirement's Trace Table (just the sections your Customer has signed off on)
- Customer meetings summaries and action items with lead mid for each item id'd
- Live demo of all test cases your Customer has signed off on
- Screen shots of system passing each test case the Customer has signed off on for this milestone (only use if you have problems during your demo)
- Project Poster picked up from MSC
- Paper copy of presentation ready to turn in at start of period
- Email presentation slides to instructor with subj: Group X, Milestone Z as the subject line

Milestone Deliverables (paper copies turned in to your instructor *prior* to beginning your oral presentation)**:**

1. **Admin.** Same requirements as Milestone 1.

2. **Proj Mgnt** (Project Management) (presented to your instructor when called upon)

    a. **Intro Slide.** Same requirements as Milestone 1.

    b. **Concise Project Overview.** Same requirements as Milestone 1.

    c. **Targeted Acceptance Test Cases.** Customer involvement alert => You must completely implement, and demo to your instructor during the milestone delivery, the 4 acceptance test cases you that you identified and designed in Milestone 3.

        i. If you need to change acceptance test cases for some reason, provide an explanation as to why, and also
        ii. provide design artifacts for your new acceptance test cases.

    d. **Functional Requirements Trace Table.** Present just the rows of your Functional Requirements Trace Table with the acceptance test plan test cases for which you can demonstrate completion initialed by your Customer.

        i. Add Testing Status and Customer's Initials columns to your Functional Requirements Trace Table (see Figure 1 below) and have your Customer initial each test case that they feel you have completed to their satisfaction. After milestone delivery, you may enter the Customer's initials electronically in the trace table rather than having them re-initial previously passed test cases for each subsequent milestone.
        ii. Changes. Show any changes to your Functional Requirements or Acceptance Test Plan in your table by striking out the original functional requirement or test case and giving an updated version along with an explanation of any additions, modifications, or removals (see Figure 1 below) as well as the date of the update. Underline the newly added portion. Customer involvement alert => Note that your customer must concur with all such updates, and that the original functional requirement/test cases must be visible (but struck through).

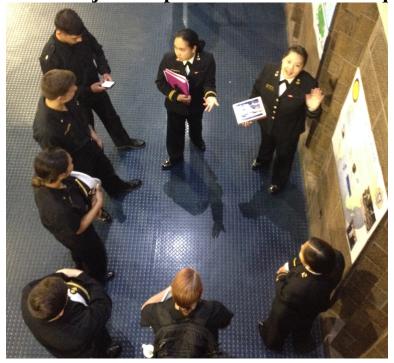| Functional Requirement	Set of Acceptance Test Plan test cases - in total, these test cases must demonstrate that the Functional Requirement in question has been met, and must include (and include an indication of) both normal and abnormal uses of the system.	Build	– note that each test case has its own status field.	- only for test cases demo'd by the team for which the customer is 100% satisfied (to include non-functional aspects such as the way a user interface looks, etc).
Login/Password GUI: Each user must have their own login and password pair that sets their User Role within the system. Primary: Midn J. Gish Backup: Midn W.T. Door	1.1 User with correct login/password attempts to login. **Expected result ->** User is able to login, the correct User Role is associated with the login/password pair. (*normal*) 1.2 User attempts login with the wrong password. **Expected result ->** ~~User is prevented from logging in.~~ User is prevented from logging in after 3 failed attempts. (13 Oct: Customer requested that the number of invalid login attempts be limited to 3 (*abnormal*) 1.3 User indicates they forgot their password. **Expected result ->** System emails a temporary password which user is required to change upon logging in. (*abnormal*)	Build 1	1.1 *Completed* –IC470 Mile 4 (customer must initial agreeing that they are satisfied with the test case demonstration) 1.2 *In progress.* We thought this one was done, but the customer modified the requirement and told us to lock the user out after 3 failed login attempts. 1.3 *In progress.* Have to push this to a later build since we haven't yet figured out how to send an automatic email. Anticipate completion by Build 2.	1.1 __WTD__ 1.2 _____ 1.3 _____

Figure 1. Functional Requirements Trace Table

e. **Risk Management.** n/a for this milestone.

f. **Customer Meeting Summaries. Customer Involvement Alert**. Same requirements as Milestone 1.Remember to:
   i. Include a summary of what was discussed at each Customer meeting to include a list of all action items,
   ii. Identify which team member is the lead on getting each action item resolved.

3. **Modeling.** n/a for this milestone (unless required by 2.b above)

4. **Testing.**

    a. **Acceptance Testing - Test Plan Demonstration:** Give a live demonstration of how the behavior required by your acceptance test plan test cases is fulfilled by your current software system. Include a discussion of any Stubbed-out Supporting Code involved with your Targeted Functional Requirement.

        i. **Requirements mapping**. Bring up a copy of the relevant portion of your Functional Requirements Trace Table to be used to help demonstrate with your software that the acceptance test cases are met.

        ii. **Live Demonstration**: Clearly show, by running your code, how each of your acceptance test cases that your Customer agrees you have completed is met by your system in operation. Use input that you know will work, but be prepared to enter alternate input as directed by your instructor.

    b. **Static GUI Screenshots**: Include slides in your presentation that show static GUI screen shots of your system in operation. Only present them if you have difficulty running your live demonstration. Note that Control-Alt-PrintScreen will let you copy and paste the active window into PowerPoint.

----- Part II. Project Proposal Poster Session Requirements.-----

Overview of Capstone Proposal Poster Session. The Capstone Proposal Poster Session is your team's opportunity to present what you intend to work on as your Capstone Project to an audience with varying levels of familiarity with your project areas and to discuss your plans in a small audience setting.

- As viewers come to your poster area, the first person to speak summarizes the project briefly, and then each person speaks on a separate aspect of the work. *Each* team member present should, however, be prepared to individually give a 1-3 minute overview of your project if asked to do so, and be able to answer questions posed by your viewers, be familiar with the entire project, as well as be able to articulate each team members' roles in the project.

- If new viewers come into your area while you already in the process of discussing your project, do not stop and restart your presentation. Instead, continue on with your presentation as the new viewers will have an opportunity to see your presentation from the start if they choose to remain after your presentation is complete.

- **Maximizing your score:** Look over the Poster Session Judging Rubric (see the course Resources page) in advance and make sure you intentionally hit the key parts during your poster session so as to maximize your score.

    o For example, without prompting, discuss how you expect that your capstone will require you to go beyond what you learned in your

coursework, what obstacles you think you will encounter, and how you plan to overcome them.

- o Refer to your poster during your discussion, practice your 1-2 sentence project summary, etc.

- **Supplemental visual aids:** Teams are encouraged to have supplemental items on hand - such as specialized hardware components, a laptop running a demo of a graphics program you are working with or developing, or short videos if equipment size makes bringing the items into the lab unfeasible. A main goal of the poster session is to convey what your proposed project entails, and having such supplemental items on hand is always a benefit.

Deliverables: For this part of the milestone, prepare and present a Project Poster developed with the aid of MSC using the guidance in the below link and meeting the criteria in the Poster Preparation section below.

Customer Involvement Alert: After your customer and tech advisor have reviewed your poster proposal, and prior to the formal poster session, print out your draft poster (re-sized to 8.5" by 11" – or copy a screen capture of your slide to a Word file and print that out so the entire poster is visible).

a. **Physical poster size:** The file needs to be formatted (via Page Setup) to be printed as a 32''x 24'' poster (that's 32 inches wide, by 24 inches tall) with foam-backing. This size allows the poster to be sized and rigid enough to be placed in the display cases.

b. **Fonts:** The following Font sizes for a 32"x 24" poster are suggested to ensure readability:
   i. Title: 100 pts.
   ii. Body : 60 pts.
   iii. Note that 72 points = 1 inch
   iv. Hint: You can view the poster at 100% and see exactly what the font sizes will look like on the actual poster.

c. **Customer & Technical Advisor Initials.** You must get your customer and technical advisor's initials on the reverse side of your draft poster sheet well in advance of the poster session – see course syllabus for the specific due date.

d. **Instructor Initials.** Bring a copy of your draft poster (previously initialed by your customer and technical advisor) to class well in advance of the poster session – see course syllabus for the specific due date. Have your instructor initial the draft poster as well (MSC will not print the poster without your course instructor's initials).

e. **Copy to MSC.** Take your instructor-initialed draft poster to MSC. The MSC graphics technician will work with you to improve the visual appeal of your poster, but you must budget in some time to allow for their feedback (about 15-30 minutes).

        i. Have your final poster printed up at MSC and bring the resulting poster to class on the milestone delivery date.

       ii. Note: You are advised to also visit MSC with your draft poster <u>well before</u> showing it to your Customer and Technical Advisor to get some early assistance with the graphics and general layout while you are still in the easy-to-make-changes development stage.

f. **Electronic final copy:** Each team leader is to email your IC470 instructor your team's final copy of your poster (the one printed up at MSC) as a PowerPoint file attachment prior to the milestone delivery date.

        i. **File naming convention:** Use the following naming convention for the file you email: GroupX_AY83_CapstoneProposalPoster.ppt where X is your assigned team ID number (see the team compositions link on the course web page), and 83 is replaced with the last two digits of your class year.

       ii. **Email Subj line:** Use "GroupX, Capstone Proposal Poster - Final Copy" as the subject line of the email via which you transmit your electronic copy to your instructor

g. **Poster Session Day's deliverables.** At the start of class:

        i. Your full size project proposal poster, and

       ii. An 8.5x11" paper copy of the final poster, with a copy of the Milestone Grading Sheet (available from the course web page), with the top portion filled in by the team, stapled to the top. You must identify a Milestone Lead for each milestone, and no one may be a milestone lead twice until all team members have been a milestone lead at least once.

h. See the guidance available via the following link as you prepare your draft posters:

http://www.usna.edu/Users/cs/needham/ProjectPosters/ProjectPosters.htm

2. Evaluation Criteria. Your Capstone Proposal Poster Session will be evaluated by your peers (students enrolled in the IC470 section in which the poster is presented - but not on your project team) as well as any guest judges using the rubric on the course web page. You do not need to print out this rubric ahead of time, but you should be aware of its contents.

3. Poster Preparation: Each team must prepare (and refer to during the poster session) a poster containing the content described below. Get early assistance with the development of this poster from USNA's Multimedia Support Center (MSC). The posters should be a self-explanatory (but not too wordy), standalone overview of the main parts of your project. Your poster should be able to be understood by a viewer without you standing there explaining it to them. **Wow Factor**: Include appropriate graphics and images to assist the viewers in understanding your project. Part of your grade will be impacted by how well you textually and graphically portray your project via this poster.

- The CS Department will retain your posters for accreditation purposes, general display, use at open houses, etc.

- For posters, graphics are more pleasing to look at than paragraph after paragraph of text. However, if a graphic requires lengthy textual explanations, you should reconsider how effective it really is.

   o In general, a poster graphic should speak for itself.

   o Include a title or heading for each graphic in order to help the audience understand its content, but overall you should keep written explanations to a minimum.

At a minimum, include the following sections in your poster (note that the poster MUST BE visually appealing!):

- **Title**. A title section to include project title, team member names, and customer/tech adviser names

- **Topical Areas.** Identify the CS/IT topical areas (Information Assurance, Database, Algorithms, Computer Security, etc) encountered in the project.

- **Overview**. An overview section giving a VERY brief, easily understood overview of the project. Think single (short) sentence rather than a paragraph.

- **Top 3 Project Challenges**
   - Identify and *briefly* explain what your team thinks will be the top 3 most challenging functional requirements and/or technical issues your team will encounter in the course of the project.
   - Select these so as to give a strong indication of the growth in CS/IT knowledge required of the team members by your project.

- **High-Level View/GUI Screen Captures/Other Graphics.**
   - Include your High-Level View graphic of your system on your poster.
   - If you have any system prototypes, include at most two GUI screen captures that will aid you in your discussion.
   - You may also include other graphics that are not part of your project but nonetheless help set the backdrop for understanding your project.
   - Include a brief title for all figures and screen captures.
   - Do NOT crowd your poster with too many graphics, but remember that your poster is to be visually appealing.

- **Department Logo and your Team Logo.** Include the Computer Science Department Logo (see below Sample Poster web page) in the top left portion of your poster, and your Team Logo in the top right portion of your poster.

- **Additional items.** Add anything else your team thinks would be appropriate to include in your poster (use an appropriate title for figures).

- **Sample Poster:** Review some of the sample posters at the bottom of:
  http://www.usna.edu/Users/cs/needham/ProjectPosters/ProjectPosters.htm

Notes:

a. Each team is to be fully ready to go at the beginning of the presentation period to include handing in a paper copy of all slides, source code, and GUI screen shots used in the presentation/software demonstration as well as the documentation. Also, each team is to turn in a copy of the oral-presentation grading sheet (available from the course web page), with your team members' names filled in, at the *start* of the period *prior* to beginning your oral presentation.

b. Any team not ready to hand in their paper copies of the above, or to deliver their presentation/demonstration when called upon, will have 10 points deducted from their presentation grade and will go to the end of the presentation cycle for that day. Presentations not delivered during class on the due date will earn a grade of zero, but will still have to be completed and turned in to receive a passing grade for the course.

c. Each team member must participate in all portions of the term project, including *each* oral presentation.