**CSIS 3750 Software Engineering Team Projects**

*Submit All reports only 1 version per team.*

Canvas should be configured to recognize your team, assuming your team was previously identified to the instructor.

Team Assignment 1: The Project Charter You must form a team of usually 3 (or 2) students and select a project from the two choices below or your own proposal (subject to approval). In either case, the explanatory material should be viewed as a starting point. Teams are expected to propose alternative or additional features in their initial proposal and also at a point later (week2) in the project (based on outside input, experience gained to that point, or late inspiration).

1. ***A web-based system to support faculty curriculum evolution. The faculty own the curriculum and continuously evaluate its quality. There are several aspects to this evaluation. One is the quality of delivery, including student outcomes and attainment (relative to expected outcomes), and preparedness of students for downstream courses. The other is the appropriateness of content. This can involve coverage of standard curriculum guidelines, recent industry trends, and feedback from employers and alums. Given all this information, it is desired to have a web portal to manage the types of content, reporting, and discussion needed to support this activity.***

***OR***

1. ***A web-based system to support delivery and assessment in online and inverted courses. Our present course management system works well, but it is felt that the online experience could be better. The current system is organized around types of content. To test alternatives, we would like a prototype system that is organized around the flow of learning. Imagine that the course is structured as a sequence of skills and knowledge to be attained. From that perspective, when the student is at a particular point in that sequence, the student should be presented with all of the links and content relevant and needed for the current objective and guide student learning. The system should support multiple modes of presentation and assessment and also have features which are adaptive to the outcome of assessment. For example, when the assessment indicate that the student needs repetition or added material the system should present additional material and links to earlier in the sequence.***

***OR***

1. ***A project proposed by you which should contain the three tier architecture and has to be approved by the Professor.***

Please send me email when you have formed a team so that I can set up the teams in Canvas.

Teams should be finalized by ***February 26th 2022.***

You may communicate with the instructor via Canvas(Once team formed) or email for feedback about possible projects and the likelihood of your proposal being accepted. The instructor acts as the Program Office and has final say about which projects are accepted and in what form.

Instructions are attached. The ***first draft*** of this proposal must be submitted by ***March 10th.*** And final draft of proposal by March 17th.

Once you have formed your team, you must prepare a project proposal to be submitted in the form of a Project Charter. A Project Charter, when signed, represents the start of a project. It is fairly standard in IT organizations, but some details differ from one organization to the next. It is generally a 1 page document, presented in small type and sometimes with 2 columns. I have collected the most common parts for this assignment, listed below. In the Project Charter, the person or group proposing the project makes the case for going ahead with the project and lays out in general terms what is to be expected. It is used by the Project Office, or high level management, to compare project proposals and decide which ones to authorize. This is a form, and not a report, so it does not need an introduction and conclusion, or any discussion. Except for the first two items, they usually just contain headings and bullet lists. Examples are available through the links listed below. The contents of a Project Charter are a superset of something called the Project Overview Statement (POS). So you may want to look at online samples and tutorials for the POS as well. Don’t worry about getting it just right. Most teams will need two iterations of this document before getting final approval for your project proposal. So get started on this at the earliest.

1. Summary (2-3 sentences)

2. Description of Problem or Opportunity (2-4 sentences)

3. Business Case (1-3 benefits, 1-2 costs, 1-4 alignment elements)

* costs and benefits to the business (can be fuzzy (low vs. high) or measurable ($$ in X years))
* strategic alignment (consistent with mission of the business – in this case our learning goals)

4. Project Scope (3-5 items)

* what is part of the solution and what is not part of the solution

5. Approach and Deliverables (5-7 artifacts)

* what approach will be taken (write code, adapt open source project, etc.)
* preview of what might be delivered and when

6. Assumptions, Constraints, Risks, and Opportunities (2-4 exposures)

* unknowns and things that could change that might affect outcomes

7. Success Criteria / Measurable Objectives (3-4 objectives)

* concrete and quantified criteria to judge completion and success

8. Team (1-2 lines per team member)

* identify team members and their interest and qualifications for doing this project and if decided what part of the project each team member would be handling.

The Summary is just what the name implies, a short summary of what is being proposed.

The Description of the Problem or Opportunity should describe the need that is to be addressed.

The Business Case presents a preliminary assessment of the likely costs and benefits of doing this project. Not only does the project have to be worth the investment, but is also has to be consistent with the overall strategy or mission of the business. Since we are a class, our mission is to teach you about software engineering. So here you make the case that this is an interesting and doable project that will fit the need for a project that motivates the team and serves as a platform for learning.

Project Scope sets out what will and will not be included in the project. In other words it describes what will be delivered, and which kinds of concerns will be addressed. For example, it may say that the delivery will provide the ability to point at specific videos, but will not include the mechanisms to view those videos.

Approach and Deliverables is a combination of two items. The approach identifies the approach you plan to take. Here, you choose a strategy such as design and code, or assemble from several existing components (i.e. web browser and data base), or install and configure an open source application (e.g. Drupal or an EHR project). The deliverables identifies at a very high level what parts of the solution you envision your team will deliver at the end of the term.

The section on Assumptions, Constraints, Risks, and Opportunities is usually hard for students to figure out, since they don’t have experience and therefore have not seen the sorts of things that befall real projects. Just try your best to identify 2 or 3 events outside your control, possibly affecting your team. Real projects use this section to identify risks and possible contingencies.

Success Criteria must be things that can be measured, which is to say it must be spelled out in such a way that if two people are asked to judge whether the project met the objective in question, they would agree without need for argument.

The Team section is not often used within an organization, but is important for proposals made to a second party. In this section, you may also want to give your team a name as if it were a fictitious company. Also in the team section identify each team member and what part they will be handling.

If this were a real proposal being made to an outside entity (e.g. investor or funding agency) the proposal would have more detail, including an actual budget and schedule. Here are some resources on Project Charters that should help. The first three are Wikipedia, an organization that helps practicing project managers, and a document from another university. Follow the link at the bottom of the Wikipedia page for a site with more resources, then follow the links from there. The last link is a set of detailed guidelines from the IT Project Office of the State of Virginia. You can also consult any project management textbook.

<http://en.wikipedia.org/wiki/Project_charter>

<http://it.ucsf.edu/sites/it.ucsf.edu/files/enterprise_reporting_charter.pdf>

***Proposal (Draft and Final) ( 10 points)***

* 3 points are awarded for initial submission on time, and
* 7 points for approval of a final version and the final draft. Note that you may use Google Docs or other sharing sites for this assignment. Later, we will use standard project tools for shared work.

***Project Status Checkpoints – (40 points)***

***Project will have a stand up meeting every week a Sprint Review every alternate week and a midterm status report due. Online Students are strongly encouraged to attend these sessions. These can be done at the end of the class so that they can join or can be presented by the team if team member(s) in class. For Sprint review attendance is mandatory and if you cannot record yourself and send a video earlier to me and your team mates who will present your status.***

***Stand ups – 5 minutes. (Towards beginning of class) ??***

***Reviews – 30 minutes. (Towards beginning of class) ??***

* ***We will have a Sprint Standup every Wednesday ??. Online students are encouraged to attend. If they cannot, send me the written report before class or through their team mates if the team mate is in class.***
* ***Stand ups every week. ( 10 points )*** 
  + ***Team Activity – March 9th***
  + ***Stand up 1 – March 16th***
  + ***Stand up 2 – March 23rd***
  + ***Stand up 3 – March30th***
  + ***Stand up 4 – April 7th***
  + ***Stand up 5 – April 14th***
  + ***Out of the five standups make sure that you attend at least three.***
* ***We will have a Sprint Review every other Monday ??. Online students are encouraged to attend. If they cannot, send me the a recorded video of their work through their team mates if the team mate is in class.***
* ***Check Point 1: March14th - Sprint Review 1( 5 points )***
* ***Check Point 2: March 28th - Sprint Review 2 ( 5 points )***
* ***Check Point 3: April 12th – Sprint Review 3 ( 5 points )***
* ***A Mid project status report of the project. Any problems, any changes from proposal should be reported at this time. A two page report on the tools, languages used and problems if any faced. This will be due on April 3rd and will be part of the Sprint Review on April 5th. Will give you a format for this at a later date ( 15 points per team )***
* ***At the last sprint review you should be almost done with the work and ready to present next week.***

***Project Final Presentation in class. ( 40 points )***

* ***Powerpoint (20 points)***
* ***Presentation (20 points) (*This will be the only rubric scored per individual and will be rated by the Product Owner, Scrum Master and Other team members. All other criteria are scored per team)**
* ***Date1 for Presentation: 04/18/2022 Monday 3:05 pm to 4:50 pm***
* ***Date 2 for presentation: 04/20/2022 Wednesday 3:05 pm to4:50 pm.***

***Project Report (Finalized) – 60 points***

* ***Date of Completion and Submission of Final Project April 29th  Friday 2022 (04/23/21 6pm)***
* ***Details of project Report will be published at a later date.***

**Feedback from Experience of the Winter xxxx Class**

I have posted the cVision team’s Project Charter as an example for you to follow. Please prepare you own project charter in the form of a Microsoft Word table. Arrange the spaces in a manner to that used in the posted example. You do not have to use the chiseled shadow treatment; simple frames are sufficient. Below are general comments that you may find helpful for improving your charter. This is a team assignment, so only one charter is needed per team.

Advice Given in Feedback to Students of Previous Classes On Project Proposal

Most documents would benefit from application of a technique called the 5 Whys to get to the underlying significant issues. Try Googling “5 whys” and use the technique to get a better understanding of what you really have to say. As a general comment, work on understanding what matters to the customer (and project sponsor) vs. what matters to developers. This document should not dive into developer details, like the use of a database. Such details will eventually be part of a design, but are not significant to the question of whether or not this is a good project to go forward. It will be even more important to avoid unnecessary implementation details when preparing the requirements. The summary statement has to give the reader a vision of the project result. The summary should say what it is about the project that adds value or creates value, and it needs to paint a picture of happy people using the new solution. The summary should be more focused on the value to the customer than on details of the design. The problem statement has to make the reader feel that something should be done. The problem statement should paint a picture of unhappy people struggling with a bad situation, or at least not as happy as they could be. The Benefits section should have short statements with specific benefits. There has to be a clear connection between each listed benefit and either making or saving money for the project sponsor. The cost should be organizational costs in terms of high, medium, and low. Not dollars. Is the software cost is low or high? What about the cost in terms of organizational training and adjustment? For success criteria, think about how to decide when the developers should be paid and sent home. This isn’t like giving a grade. This is about not needing lawyers to resolve disputes at the end. Success criteria should be unambiguous. Sometimes it is easier to set upper limits on failures than lower limits on success. Consider measurable tests, like successfully reading 90% of labels from a random sample. The deliverables should describe a real project and working product, not just a collection of parts.