Projects for Fall 2017

Form a team of 4-6 people in the class. Let Prof. Turkstra know via email (jeff@purdue.edu) by Friday, August 25 who is on your team. Keehwan Park, CS 30700 Head TA, has created a Piazza class for CS 30700 at https://piazza.com/purdue/fall2017/cs30700 with which you can “Search for Teammates”. If you cannot form a team, let Prof. Turkstra know as soon as possible and he will put those people together into teams or add them to existing teams that still need people.

Project Coordinator Responsibilities - Teaching Assistant who will review all your work, accept things or request that further work be done, and will meet with you as needed concerning your project. The Project Coordinator will grade all submissions by your team.

Team Leader Responsibilities - Schedule meetings with other team members and Project Coordinator as needed, coordinate work of all other team members, ensure that all things are done on time, and discuss with your Project Coordinator if there are team problems.

A CS 30700 Software Engineering Project should be appropriate for a team of students to spend approximately 10 hours per week per person for the 15-week semester. The team will need to meet the following milestones:

Fri, Aug 25 – Team Assignments
Mon, Aug 28 - 8:30 am - 4:30 pm - CS 30700 Consultation Meeting, LWSN 3102
Fri, Sep 01 – Project Charter due by 3:00 pm
Fri, Sep 08 – Code Repository Setup
Fri, Sep 08 – Project Name due (Choose a name for your project)
Fri, Sep 08 – Product Backlog (Requirements Document) due
Fri, Sep 15 – Design Document due
Mon, Sep 19 – Sprint 1 Planning Document due
Tue, Sep 19 – Sprint 1 begins
Thu, Oct 05 – Sprint 1 Review (Demo) Meetings
Thu, Oct 06 – Sprint 1 Review (Demo) Meetings
Wed, Oct 11 – Sprint 1 Retrospective due
Wed, Oct 11 – First Peer Evaluation due
Thu, Oct 12 – Sprint 2 Planning Document due
Thu, Oct 12 – Sprint 2 begins
Thu, Nov 02 – Sprint 2 Review (Demo) Meetings
Fri, Nov 03 – Sprint 2 Review (Demo) Meetings
Mon, Nov 06 – Sprint 2 Retrospective due
Tue, Nov 07 – Sprint 3 Planning Document due
Tue, Nov 07 – Sprint 3 begins
Thu, Nov 30 – Sprint 3 Review (Demo) Meetings
Fri, Dec 01 – Sprint 3 Review (Demo) Meetings
Mon, Dec 04 – Last Day to work on project
Mon, Dec 04 – Sprint 3 Retrospective due
Mon, Dec 04 – 6:30-9:00 pm - Final Project Presentations [HAAS G066]
Tue, Dec 05 – 6:30-9:00 pm - Final Project Presentations [HAAS G066]
Wed, Dec 06 – 6:30-9:00 pm - Final Project Presentations [HAAS G066]
Thu, Dec 07 – 6:30-9:00 pm - Final Project Presentations [HAAS G066]
Mon, Dec 11 – Second Peer Evaluation due
(Unless otherwise specified, all project documents are due by 11:59pm on the date indicated.)

You may be as creative as you like in finding a project. Some projects will be determined by team members based on their interests. Some projects will be suggested by faculty based on their research. Some projects will be suggested by people and/or organizations on campus or in the community.

**Resources Available**

If your team needs access to some departmental resource – such as a server, some other equipment, or software, please submit a request to your Project Coordinator. This will be submitted to CS Computer Facilities Manager Ron Castongia and Instructional Technologist Victory Soe for approval.

In addition, through the generous support of some of our department's Corporate Partners, there is some funding available for teams if they need some hardware or software or to incur some other expense while working on their project. If this would help you, please submit a request to your Project Coordinator. This will be submitted to CS Computer Facilities Manager Ron Castongia for approval.

We will move as quickly as possible on your request. At the end of the semester, any hardware or software becomes the property of the department (to be used by future Software Engineering teams). If there is a need to purchase a license for any product or service, DO NOT do this yourself. The license must be owned and paid for by Purdue. If your request is approved, the license will be purchased on a Purdue purchasing account.

**Project Charter**

**Problem Statement:** Short and succinct (one or two sentences)
**Project Objectives:** What the project will achieve
**Stakeholders:** Persons who will be actively involved with the project (e.g. project sponsor, types of users, etc.)
**Project Deliverables:** The major results or services that will be produced, what are the specific things the software will do

**Guidelines for submitting the Project Charter (and other documents throughout the semester):**

1. Please submit your work as a PDF document.
2. Please make sure to have the following information on the cover page of each document:
   A. Team Number (These have been assigned and are available through blackboard).
   B. Names of all team members (in alphabetical order)
   C. Project Title

**Helpful information for Project Charter submission (useful for writing other documents as well):**

1. Please include a reasonable amount of detail in each part. For example, if you are trying to describe the objectives of your project using just a couple of sentences, then your description might not be clear or complete.
2. Use bullet points rather than paragraphs, where appropriate (for example, to mention multiple objectives for your project, multiple stakeholders, or multiple deliverables).

**Product Backlog (Requirements Document)**
Form the functional requirements into “user stories” (e.g. “As a < >, I would like to < >.” or “Make system faster.” etc.)

Include all user stories that you plan to implement on your system. Since Scrum is an Agile method of software development, we expect teams to modify and add to these user stories throughout the semester. Plan on continually updating your Product Backlog.

Create as many user stories as you would like, even if there is not time in the semester to finish all of them. It is better to have too many user stories than too few. We will grade your software project based upon the amount of work produced in the Sprints. You do not necessarily have to finish your product to receive full credit. A software product is never complete. If your team runs into problems along the way (even toward the end of the semester), submit a Product Backlog item to fix it. This does not necessarily mean the error will be fixed during the semester.

Include non-functional requirements (quality attributes) as well.

**Sprint Planning Document**

Collectively, the team decides which user stories it will implement in the current Sprint of the project. The team will then break down each user story into separate tasks (program the back-end, program the front-end, etc.). Each task will be assigned an estimated time (in hours or units) and list the “owner” of that task. This process will help each team member better understand what everyone is responsible for. Each team member should be given an equal amount of work based on task estimates.

**Sprint Retrospective Document**

As a team, submit a document answering the following three questions:
What went well during the last Sprint?
What didn’t go well during the last Sprint?
How should the team improve for the next Sprint?

**Note to those of you whose project involves the Android SDK:**

Do not download the Android SDK to your CS account. The Android SDK is available in /p/android-sdk/ on CS-managed Linux machines.

**Ownership of Your CS 30700 Team Project**

At the conclusion of CS 30700 you team will have full ownership of your project. It does not belong to the Department of Computer Science or Purdue University.

**Purdue opens up intellectual property rules for students**

“Interpreted strictly, the intellectual property policy states any invention created with the use of Purdue resources is subject to university ownership. The new interpretation offers students clear ownership rights as long as the resources used were part of a course and were available to all students in the course; that the student was not paid by the university or a third party; and the class or project was not supported by a corporation or government grant or contract.”

**Purdue Student Intellectual Property Rules for Course-Generated Innovations**

“The University permits a student to retain title to Intellectual Property that the student creates for credit and without compensation in a University course through the use of course-wide resources, provided that the Intellectual Property is not burdened by any pre-existing contractual obligation of the University.”