Term Project Requirement

A significant size software development as team in one of the following areas:
- 2D animation-based Java program (more complex than a typical CMSC3103 term project); e.g., animation-based 2D game
- JSF-based Web server programming (more complex than a typical CMSC4373 term project); e.g., interactive tutorial, online store
- Android application program (more complex than a typical CMSC4303 term project); e.g., any android app

Development Team
- 5~7 members per team
- ALL members must have acquired the knowledge of the project topic by having already completed the corresponding course in the past; CMSC 3103 (OO), CMSC 4303 (Android), or CMSC 4373 (Web). Concurrent enrollment does not satisfy this condition.
- All members must agree on the day/time and place of the Scrum meetings:
  - Twice a week, minimum 20 minutes per meeting
  - Place: a physical place or video-based conference which allows sharing of computer desktop (e.g., Google+ Hangout)

Software development based on Scrum agile methodology
- Each member must work on code development. Members who do not contribute in the programming part of the project will not pass this course.
- **Workload distribution**
  - Each member must be responsible for developing some features (modules) exclusively so that, at the completion of the project, it must be clear each member's contribution to the project
  - If a feature is completed by co-work of multiple members, then credits will be equally divided to all participating members.
- Elect a Scrum master (team leader) who is responsible for Scrum meetings, team progress reports, and delivery of the final product, etc.
- Elect a Product owner: more than one member may share this role
- 1 sprint = 2 weeks
- Scrum meeting: a minimum of two meetings a week

The Proposal Presentation (Video presentation only)
- Video-based presentation: max 10 minutes per team
- Team presentation: each member must participate in (not necessarily equal amount of time)
- Dress code: <u>business casual</u>
- Audience: the instructor and classmates (This tells you the technical level of the presentation)
- The contents of presentation:
    - Features of the product by using the highlights of the product backlog
    - Workload distribution: Each member presents her or his responsibility in this project.
    - Highlight of Scrum Team Working Agreement; meeting places/times
    - Program development environment (IDE, source code control and share, etc)
- Scrum master submits via D2L **by 11:59pm, September 3, Thursday:**
    - Product backlog with workload distribution (task assignment to members)
        - Individual contribution and performance is evaluated based on this task assignment
    - Scrum team working agreement; dated and signed by all members. Submit a scanned copy in PDF.
    - YouTube link for the proposal presentation

During each Sprint: Refer to the schedule for submission dues
- At the beginning of each Sprint: create (add a new sheet in the same Excel file) a Sprint backlog for the current Sprint (a template is provided – you may add more columns as needed)
- At the end of each Sprint: **Scrum master** submits via D2L:
    - updated Sprint backlog
    - updated attendance roll (a template is provided)
    - Progress report as team (video presentation is not required if ALL members can attend the class)
    - updated team contribution log: each member's contribution to the team beyond her or his responsibility.
        - Scrum master compiles this log (you may use a shared file so that each member can add).
        - Contributions include (but is not limited to):
            - helping other member
            - suggestions, ideas, resolving conflicts
            - helping team report, documentation, research poster, video production
- In the middle of each Sprint: **Each member**:
    - Progress report as individual (video presentation is not required if attend the class)

Progress Presentation – Team and Individual:
- **Team progress** presentation at the end of each Sprint:
  - This presentation must focus on "achievements" since the last presentation
    - Thus, the main presentation must be the program demo
    - Do NOT show or explain the program code.
    - If ALL members can attend the class meeting (@4:15pm), the team presentation may be done at the class. The presentation must be given seamlessly and professionally similar to video presentation.
  - Video - Max time limit: 10 minutes, Min video quality: 720p
    - Post YouTube link at D2L
  - Each member must participate in the presentation (not necessarily equal amount of time)
- **Individual progress** presentation in the middle of each Sprint
  - Video presentation including the program demo as individual achievements since the last presentation.
    - Show technical details of your work, but do NOT show and explain the code. You must use diagrams or graphs to show design, algorithms, or architecture.
    - If you can attend the class meeting (@4:15pm), you may give presentation at the class. The presentation must be given seamlessly and professionally similar to video presentation.
  - Video - Max time limit: 3 minutes, Min video quality: 720p
    - Post YouTube link at D2L

Final Presentation (Video presentation only)
- Team presentation:
  - o Similar to the team progress presentation, but this presentation is for the entire project based on the finished program.
  - o The program demo only; show how the program works
  - o Dress code: business casual
  - o Min video quality: 720p
  - o Recommended video length: 3 minutes for each member + 3 minutes for team common things
- Individual presentation:
  - o Similar to the individual progress presentation, but this presentation is for the entire project based on the finished program.
  - o Include program demo, but main emphasis must be on the technical contents and internal design of the project; e.g., cool ideas implemented, design patterns, architecture, algorithms, DB design, etc
    - ▪ Do NOT show and explain the program code.
    - ▪ For some critical parts of the project, use UML diagrams (class relation and sequence) or ER diagrams to show technical aspects of the project.
  - o Dress code: <u>business casual</u>
  - o Min video quality: 720p
  - o Recommended video length: 4 minutes
  - o Video-base oral presentation will be evaluated using this presentation. Refer to the rubrics.

Schedule

Due time: 4:15pm if in-class presentation, 11:59pm if video presentation

Sprint#	Date (Thu ~ Wed)	To do
	8/20~9/2	prepare proposal
	9/3 Thu, 11:59pm	**Proposal Presentation**
1	9/3 ~ 9/16 • 9/10 Thu • 9/17 Thu	 Individual progress report Team progress report
2	9/17 ~ 9/30 • 9/19 Sat, 11:59pm • 9/24 Thu • 10/1 Thu	 Library Research Due Individual progress report Team progress report
3	10/1 ~ 10/14 • 10/8 Thu • 10/15 Thu	 Individual progress report Team progress report
4	10/15 ~ 10/28 • 10/22 Thu • 10/29 Thu	 Individual progress report Team progress report
5	10/29 ~ 11/11 • 11/5 Thu • 11/12 Thu	 Individual progress report Team progress report
6	11/12 ~ 11/25	Wrap up the project; Work on deliverables; No progress report during this sprint
	12/1 (Tue), 4:15pm	**non-IVE students must attend for course evaluation.**
	12/3 (Thu), 11:59pm	**All deliverables due**

Project Deliverables (Team): Scrum Master submits via D2L
- Final presentation video: Post URL via D2L
- Put the following items <u>in one folder</u> and compress it to submit.
    - The program: project folder of the corresponding IDE
    - Updated Product Backlog and all Sprint Backlogs
    - Attendance roll of all Scrum meetings
    - Teamwork contribution log (compile and merge into one file for all Sprints)
    - Research poster
        - PowerPoint: a template is provided
        - Abstract: a template is provided.
- **Due: December 3 Thursday, 11:59PM**

Project Deliverables (Individual): Each member submits via D2L
- Individual presentation video: Post URL via D2L
- Due: same as Team deliverables submission

Statement: This term project requirement serves as information, not as a contract. As class progresses, the instructor may revise requirements as needed according to the "philosophy" of agile development methodologies. Changes will be immediately announced via D2L.