

During week 1, read the attached SLDC startup guide to see how the SLDC Phases pair with each week's activities and deliverables. We only have one design week (4), but often designs are produced as a preliminary and then a detailed design document.

You can deliver the preliminary design in week four and then create the detailed design document in Week 5 to include with your final deliverable. Since we only have eight weeks, consider using agile User Stories and Use Cases in your Requirements Documents (Week 2) - these products should drive your Test Strategy and Test Plan in Week 3. Finally, I highly suggest you get a collaboration site like Slack, GitHub & Zoom / Skype to meet at least twice a week to plan, coordinate, and review deliverables. You can use Google Docs to create a single document online and track edits. Using a simple online program like REQTest (<https://reqtest.com/>) to track the requirements, bugs, and defects will help you during testing. Consider adopting Github as your configuration management tool and code collaboration site. Microsoft Project is also available online for a small fee. The tool is great for developing your Gantt, cost resources, scheduling activities, and calculating earned value management metrics. These programs also create some nice reports (hint).

Your final report should contain at least the following sections (Required & Graded Documents):

1. Overview - including a summary of individual contributions
2. Project Plan (Week 2)
3. Requirements Specification (Week 2)
4. System Specification (Week 8 - Detailed Design)
5. User's Guide (Week 3 + 8)
6. Test Plan and Results (Weeks 3 + 8)
7. Design and Alternate designs (Week 4 + 8)
8. Development History (Week 8)
9. Conclusions including lessons learned, design strengths, limitations and suggestions for future improvement

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Team	Student	Role	Week Lead
1	Adamson, Nurudeen	Project Manager (PM)	Week 2
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4	Tadesse, Biruk	Test Director (TD)	Week 3
4	Agyemang, Samuel	Software Designer (SD)	Week 4
4	Hopper, Alex	Software Designer (SD)	Week 4
4	Medina, Julian	Requirements Manager (RM)/ User Experience (UX)	Week 5
5	Dougherty, Luke	Project Manager (PM)	Week 2
5	Cowher, Zackary	Test Director (TD)	Week 3
5	Jones, Joshua	Software Designer (SD)	Week 4
5	Hernandez, Luis	Requirements Manager (RM)/ User Experience (UX)	Week 1
6	Pugh, Matthew	Project Manager (PM)	Week 2
6	Truong, Ada	Test Director (TD)	Week 3
6	LaMothe, Glenroy	Test Director (TD)	Week 3
6	Tedla, Siddhartha	Software Designer (SD)	Week 4
6	Workneh, Yosef	Requirements Manager (RM)/ User Experience (UX)	Week 1
	Drop		
	Add		

Good evening; some of you have asked for further guidance - here is the answer to some of your questions - for more assistance, post to Ask-the professor.

**Ambiguity** – generally, that is what most computer scientists deal with throughout their careers. You are not likely to receive a series of simple sequential steps to perform. Instead, you will be supplied with a problem to solve. So, the objective of this course is to prepare you for the enviable challenge you each will face in the workforce.

**Project Management** – First, I want you to embrace project management's rigor and support for software development. Foremost projects help you to identify the scope, schedule, and cost of completing a project. (read cost as resources human or otherwise). You have a limited schedule that constrains your scope. Consequently, be careful about what problem you intend to solve during the course. Needless to say, developing specific requirements, use-case diagrams, etc., will be critical to a successful project.

**SDLC** – The System / Software Development Lifecycle is a systematic way of creating an end product. I want you to understand the overlapping roles and functions of the team at various points in the cycle to deliver a solution to your stated problem. The phases will also assist you in developing a rigorous way of adhering to the scope, schedule, and cost constraints I mentioned earlier.

**Architecture** – during the SDLC, you will create a high-level and detailed-level design document. A significant function of a computer scientist is to design the components and functional relationships of the final system and then deliver that design to coders who produce the modules, units, etc., for the final project. Using top-down design and bottom-up development, you should be able to ‘divide and conquer’ your project.

**Development** - to make this easy on your peers, please use the Eclipse IDE ( Eclipse IDE for java Developers) and one of the following languages: **Java & C/C++ IDE, JavaScript/TypeScript IDE, PHP** - I strongly suggest using **Java**

- The Java IDE, includes a Git client, XML Editor, Maven, and Gradle integration.
- Maven
- Spring Boot Eclipse Integration
- Spring Boot Download (Full Framework for standalone apps with REST, Cloud, Web APIs)
- Java Swing (GUI, Simple )
- SQLite Database (Fast Lite, integrated)
- MySQL Workbench Database (Backend Server like AWS)

Each development phase, deliver workable code as a Project (with all dependencies) and a compiled Java ARchive (JAR) file that I can evaluate.

Each code delivery send me a Project Export as a [JAR File](#) and a [Zip File](#)

**Overlap** – yes, there is a symbiotic relationship between the roles. If the project was a house, you can see that the plumbing could not happen until after the foundation and framing. You would most certainly need blueprints to know where to install the lines and some original requirements to know how many bathrooms are required. As a result, you will need to work together – often meet to work through the SDLC. You can’t cross over into someone else’s lane because you are a team! You are all working together to deliver the end solution – the moment you think it is not your job is when you fail as a team. I’ve seen this where testers don’t get involved until AFTER the code is delivered when they should have worked with the developers and requirements / UX managers to determine the acceptance criteria.

**Project Management Role** – The PM is the gatekeeper for schedules, deadlines, and coordination between parties. Your deliverables will be the Project Plan, Integrated

Master Schedule, Requirements Acceptance, Test Report Acceptance, and Quality Gate Reviews throughout the entire project. The PM answers to the Project Champion and Product / Solution User. Think of the PM as the single arbitration point for decisions and documentation. A major role of the PM is managing the risk register – identifying risks, handling risks, and monitoring the outcome.

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**Roles** – In week one, your research and report on your assigned role. Identify all the functions and report to your team what you think you will be doing, what deliverables (documents), etc., you will be delivering, and who you will work with – i.e., activities, reviews, etc. As in the real world, you are not likely to be familiar with everything your teammate needs to do, but you will know when it is not done!

Please use the link below to get an idea of some of the projects that have been done elsewhere. It will be easier to start with key Statement of Work (SOW) or Statement of Objectives (SOO) such as this one: <http://inpressco.com/wp-content/uploads/2014/06/Paper1431936-1938.pdf> Some Example Projects are listed below but you can research the WEB to find many examples to work from or create one from your ideas.

<https://electronicsforu.com/electronics-projects/software-projects-ideas/computer-engineering-projects-ideas>

See the recommended refresher training

Attachment(s):

See the average project submission attached

Team 4 Example

Training Material

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Some Example Projects are listed below, but you can research the web to find many examples to work from or create one from your ideas.

<https://electronicsforu.com/electronics-projects/software-projects-ideas/computer-engineering-projects-ideas>

Generally, I look for an application that will **consume data through an interface or file, conduct advanced computation, storage, and analytics, and then output a solution for display or report.**

For example, mobile computing applications in Android are also popular. You can use Android frameworks and simulators to develop a product integrated with smartphone components (email, camera, GPS, etc.).

Also, a few others...

**Just so you know - please do not use the solutions provided at the site, only the project Ideas.**

<https://nevonprojects.com/project-ideas/software-project-ideas/>

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Posted Mar 13, 2024 12:01 AM

I plan to host a weekly meeting on **Thursdays at 8 p.m. to share information from an Option Book, provide feedback, and answer your questions. Attendance and the book are optional.**

Modern Systems Analysis and Design 9th Edition, Kindle Edition

by Joseph S Valacich (Author), Joey F. George (Author), Jeffrey A. Hoffer (Author)

Format: Kindle Edition

Terrence Mentzos is inviting you to a scheduled Zoom meeting.

Topic: My Meeting

Time: Mar 14, 2024 08:00 PM Eastern Time (US and Canada)

Every week on Thu, until Apr 25, 2024, 7 occurrence(s)

Mar 14, 2024 08:00 PM : Recording (Passcode: R&DKk1c!)

Mar 21, 2024 08:00 PM

Mar 28, 2024 08:00 PM

Apr 4, 2024 08:00 PM

Apr 11, 2024 08:00 PM

Apr 18, 2024 08:00 PM

Apr 25, 2024 08:00 PM

Please download and import the following iCalendar (.ics) files to your calendar system.

Weekly: [https://us02web.zoom.us/meeting/tZl0fu6hqjsvGNaQGhPfa3Q-](https://us02web.zoom.us/meeting/tZl0fu6hqjsvGNaQGhPfa3Q-SEud5myCaFiW/ics?icsToken=98tyKuGuqzltE9CVtRuFRpwAGYr4KPPwiGJYjY1crTjtMyZSM)

[SEud5myCaFiW/ics?icsToken=98tyKuGuqzltE9CVtRuFRpwAGYr4KPPwiGJYjY1crTjtMyZSM](https://us02web.zoom.us/meeting/tZl0fu6hqjsvGNaQGhPfa3Q-SEud5myCaFiW/ics?icsToken=98tyKuGuqzltE9CVtRuFRpwAGYr4KPPwiGJYjY1crTjtMyZSM)  
[TK7BcdXNudyCfvR](https://us02web.zoom.us/meeting/tZl0fu6hqjsvGNaQGhPfa3Q-SEud5myCaFiW/ics?icsToken=98tyKuGuqzltE9CVtRuFRpwAGYr4KPPwiGJYjY1crTjtMyZSM)

Join Zoom Meeting

<https://us02web.zoom.us/j/86597940522?pwd=SE0vdjVOcFZTeCtRcmpSUWRYYY1IzUT09>

Meeting ID: 865 9794 0522

Passcode: 669748

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One tap mobile

+13017158592,,86597940522#,,,,\*669748# US (Washington DC)

+13052241968,,86597940522#,,,,\*669748# US

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Dial by your location

- +1 301 715 8592 US (Washington DC)

- +1 305 224 1968 US

- +1 309 205 3325 US

- +1 312 626 6799 US (Chicago)

- +1 646 558 8656 US (New York)

- +1 646 931 3860 US

- +1 564 217 2000 US

- +1 669 444 9171 US

- +1 669 900 9128 US (San Jose)

- +1 689 278 1000 US

- +1 719 359 4580 US

- +1 253 205 0468 US

- +1 253 215 8782 US (Tacoma)

- +1 346 248 7799 US (Houston)

- +1 360 209 5623 US

- +1 386 347 5053 US

- +1 507 473 4847 US

Meeting ID: 865 9794 0522

Passcode: 669748

Find your local number: <https://us02web.zoom.us/u/kPLHjQ9B2>

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## SDLC Framework

Mar 13, 2024 12:01 AM

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I've worked in software development for 15 years. During that time, I gained experience in Software Development, Test, Engineering, Program Management, and now Requirements. It isn't easy managing a cross-functional team in these work roles. To overcome this obstacle, development organizations (DO) specify processes and transition gates of the SDLC. However, we are not a DO; most likely, few of you have this experience. So, I adapted elements of the U.S. Department of Agriculture's Farm Service Agency's (FSA) SDLC framework. To make this easier, I include only the document templates and checklists required for this course. I also developed a timeline with role responsibilities. In addition to the required and graded documents listed in the course, you will find additional project status and process documents. These ungraded document templates are added to guide your management of SDLC activities. Think about applying the ones listed in the attached SLDC startup guide. But please use the attached templates for educational purposes only! During week 1, read the attached SLDC startup guide to see how the SLDC Phases pair with each week's activities and deliverables. We only have one design week (4), but often designs are produced as a preliminary and then a detailed design document.

You can deliver the preliminary design in week four and then create the detailed design document in Week 5 to include with your final deliverable. Since we only have eight weeks, consider using agile User Stories and Use Cases in your Requirements Documents (Week 2) - these products should drive your Test Strategy and Test Plan in Week 3. Finally, I highly suggest you get a collaboration site like Slack, GitHub & Zoom / Skype to meet at least twice a week to plan, coordinate, and review deliverables. You can use Google Docs to create a single document online and track edits. Using a simple online program like REQTest (<https://reqtest.com/>) to track the requirements, bugs, and defects will help you during testing. Consider adopting Github as your configuration management tool and code collaboration site. Microsoft Project is also available online for a small fee. The tool is great for developing your Gantt, cost resources, scheduling activities, and calculating earned value management metrics. These programs also create some nice reports (hint).

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Attachment(s):

Ref Files

videos

SDLC

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You are assigned to one of five teams. There may be changes initially as students are added or dropped from the course. **You MAY change work roles, but I discourage switching teams.** You will work together to deliver the Software Development Lifecycle products throughout the course. You will also evaluate each other at three points in the course. Additionally, should you have a concern with a team member,

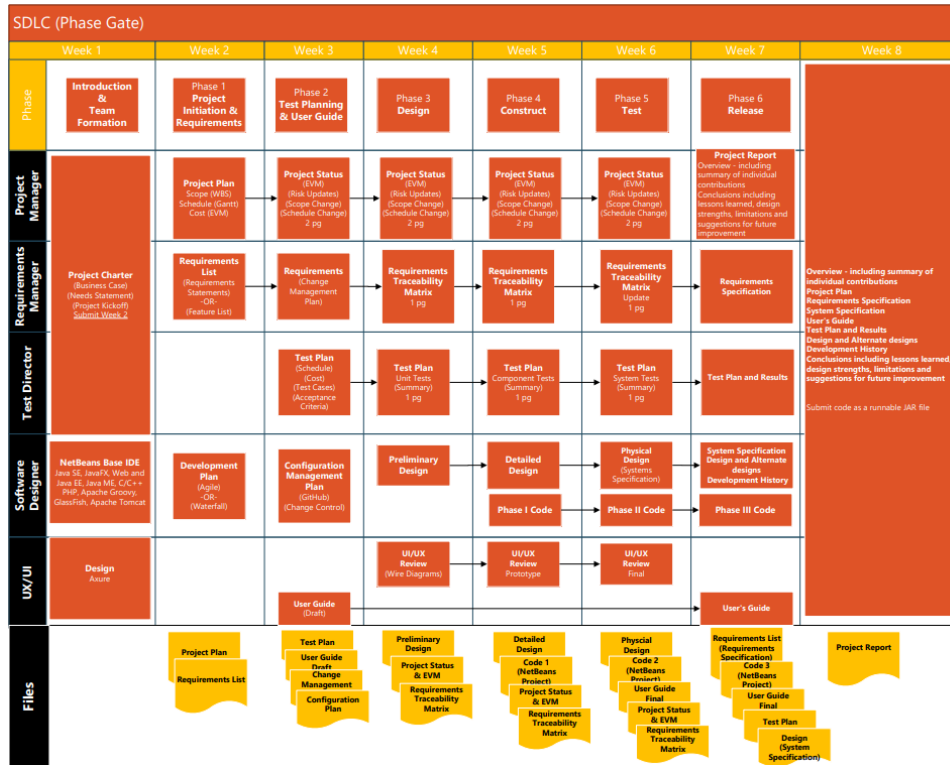
First, try to address it at the team level.

If you can't fix the issue, please let me know.

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			Lead
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Attachment(s):



CMSC 495

Team Assignments

Fall 6381 2023

V1.xlsx (12.89 KB)

Welcome to CMSC 495

Current Trends and  
Projects in Computer  
Science

Mar 6, 2024 12:01 AM

Instructor: Terrence Mentzos

Start: March 13, 2024

End: May 07, 2024

Welcome to CMSC 495 Current Trends and Projects in Computer Science. I applaud you all for completing a truly exceptional UMGC computer science program. As a capstone to your previous development projects, there will be an emphasis on integrating concepts, practical application, and critical thinking. In this course, each team will replicate the Software Development Lifecycle (SDLC) to deliver a fully

functioning computer application. The course is relatively rigorous, and you will conduct all phases of project management. The goal is to research, plan, conduct, and complete collaborative computer-related projects in compliance with scheduled deadlines.

Additionally, you will work in teams to design, develop, test, implement, and document your application. I suggest you focus on delivering an achievable project and emphasize adhering to the SDLC to demonstrate competency. I will make it easier by providing a framework of processes, procedures, and templates to guide your activities. I strongly suggest selecting team members to perform primary and alternate work roles. While the weekly lead will coordinate the efforts of the particular SDLC phase, all members should collaborate to meet deliverable deadlines and submit a quality product. As an outcome of this course, you will be equipped to work in teams and understand the demands of the SLDC and project environments.

<https://www.eclipse.org/downloads/packages/release/2020-06/r/eclipse-ide-java-developers>

Or Cloud DevOps Version ORION Eclipse

<https://www.ibm.com/cloud/continuous-delivery/pricing>

**Virtual Tools:** I suggest you agree on a virtual team collaboration site to coordinate assignments and review products. You will each submit the SAME assignment weekly to your individual assignment links. [Virtual Collaboration Sites](#) These sophisticated project and software development sites provide a way to collaborate, assign tasks, and maintain code and document versions. Most have a free trial, and some are relatively inexpensive.

**Team Assignments:** The first week – Mid-week, assign the work roles to your team members. You will see your team assignments posted after this welcome letter. The roles are.

. **Project Manager (PM)** [ Project Charter, Project Plan, Schedules & Peer Reviews]

. **Test Director (TD)** [Test Plan, Test Script / Steps, Acceptance Testing, and Defect Handling]

. **Software Designer (SD)/ Software Engineer (SE)/** [Preliminary & Detail Designs, Software Architecture & Components]

. **Requirements Manager (RM)/ Technical Writer (TE)** [High Level and Detail Requirements – Traceability Matrix]

. **User Experience/Training Manager (UX)** [ User experience objectives, testing, and Training Manual]

Note: If the team does not assign the roles by mid-week, I will post them on Saturday. If you desire a team change, identify a swap or let me know, and I will see if a swap is possible.

**Professor Availability:** the best way to contact me is via text (571-501-1968). Use the Ask the Professor link for more detailed questions, and I will answer your questions for the entire class. You can also email me as well. I am also available to discuss your concerns via telephone, but please leave your name, question, and contact number via text first. I will provide it the next day if I cannot call you back immediately.