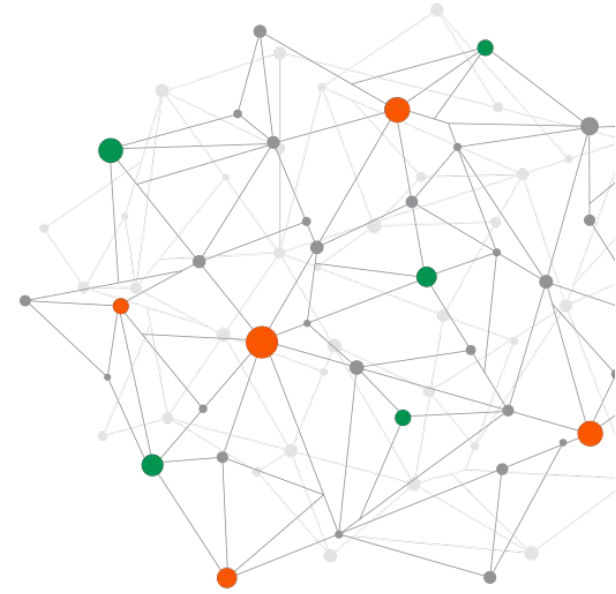


# ACP Software Architectures Capstone project guidelines





# Objectives of Capstone Project

1. To give you an opportunity to begin the development of the architecture design of a software system using the concepts presented in the class.
2. Working in teams, your team will take the initial steps in defining the architecture for a software system of your choice.
3. To put into practice the essential concepts of architectural thinking presented throughout the course. Specifically, the intent is to foster deeper thinking about what motivates architectural design decisions, architectural reasoning, trade-offs, and creating architectural documentation.
4. The project will mirror the architecture design process in practice, to include identifying key architectural drivers for your system, creating the design, possibly experimenting, documenting, and evaluating the design.
5. Outcome should be a well written report which will be published on the web/internet, along with a presentation



# Timeline

<b>Prep</b>	Release of Project Guidelines, Problem Statements and Templates	<b>July 5th - July 8th</b>
<b>Prep</b>	Project selection and team formation	<b>July 5th - July 10th</b>
<b>Week 1: Project Briefing</b>	<ul style="list-style-type: none"> <li>Describe project context</li> <li>Identify core requirements</li> </ul>	<b>July 13th, July 14th</b>
<b>Week 2: Project Proposal Submission</b>	<ul style="list-style-type: none"> <li>Submit Project Proposal</li> <li>Identify the architectural style(s)</li> </ul>	<b>July 20th, July 21st</b>
<b>Week 3: Draft Report Submission</b>	<ul style="list-style-type: none"> <li>Document your architecture</li> <li>Capture decisions in ADR</li> </ul>	<b>July 27th, July 28th</b>
<b>Week 4:</b>	<ul style="list-style-type: none"> <li>Describe the next steps for refining the architecture.</li> </ul>	<b>Aug 3rd, Aug 4th</b>
<b>Week 5: Final Report Submission and Presentations</b>	<ul style="list-style-type: none"> <li>Final report submission</li> <li>Project Presentations</li> </ul>	<b>Aug 6th Aug 10th, Aug 11th</b>



# Selection of a Topic/Project

- Go through each of the case studies given by Talentsprint and evaluate them. You can also discuss and evaluate them with your peers. Note down your preference rating for each project from Most to Least preferred based on your interest and experience.
- Share your project preference in the survey form shared by TS team within the given deadline. Based on the survey responses, you will be assigned a capstone project and grouped into a team.
- You can also choose to form your own teams, send us an email with the list of cohort members in the team and the team's project preference.
- **Note:** In case you do not want to work with any of the provided case studies, you can choose to submit your own case study using the BYOP template provided. You can start working with it only after it is reviewed and approved by the TalentSprint team.



# Deliverables (1 of 3)

## Project Proposal

- Abstract, introduction of the problem statement, project details, approach to solve the problem

## Draft Report

- The purpose of the draft report review is to provide an opportunity for your team to get feedback regarding your progress on the final project from the course instructors.
- The document does not need to be in a completed final format, but the general outline of your architecture design document should be in place.
- At a minimum the design document should include an almost-complete draft of the system context; the functional and quality attributes you are basing your design on, candidate styles/patterns, and key design decisions and rationale you have made at this point or are considering.



# Deliverables (2 of 3)

## Final Project Report

- The deadline to submit the final report is Friday 6th August 2024, before the project presentations are conducted the following weekend.
- The final report should be approximately a 10-12 pages document + 1 title page, which should have the name of the project and the team members.
- Each team should prepare an architectural design document (as a final report) that contains all the activities described in the previous slide, including architectural system context, architectural drivers and diagrams, ADRs, planned architectural activities, etc.
- You should use the guidelines for producing an architecture document as presented in the class on Architecture Documentation.



# Deliverables (3 of 3)

## Oral Presentation to the cohort and mentors

- The final presentations will be held on August 10th and 11th 2024, in the Zoom classroom.
- Each group will be given 15 minutes to present followed by 5 minutes of questions.
- The final presentation should summarize the four elements of the report described previously.
- Focus your presentation on one or two key (high priority, difficult, contentious) architectural design decisions you are considering achieving the qualities required of the system.
- More details on the presentation will be provided as the date gets closer.



# Capstone project grading

<b>Week 1</b>	Project Briefing and Initiation	
<b>Week 2</b>	<b>Project proposal</b>	<b>10%</b>
<b>Week 3</b>	<b>Draft project report</b>	<b>10%</b>
<b>Week 4</b>	General mentor session	
<b>Week 5</b>	<b>Project Report</b> <b>Project presentation</b>	<b>65%</b> <b>15%</b>





# Interaction

- Mentors will be available during the weekends, to clarify any doubts.
  - **Saturday - 15 mins, and Sunday - 15 mins will be provided to each team**  
(This is a tentative plan. The final schedule will be decided based on no. of teams formed and published soon.)
- Weekly office hours can be scheduled with the Talentsprint mentors for guidance.
  - Each slot will be of 15 mins
  - Come prepared with specific questions for effective usage of the time.



# Role of Mentors

- Mentors will review the project proposal to evaluate and guide the teams on the approach to working on the project.
- Mentors will review the progress every weekend during the checkpoint meetings and advise accordingly. They will also be able to clear any doubts or answer any questions about the expectations of the project.
- Mentors will not write the project proposal, or project report for the participants.



# Important Guidelines

1. The project has to be delivered as a group (minimum 4 and maximum 6 members per group).
2. We will facilitate the formation of groups based on your project preferences.
3. More than one group can work on the same project.
4. Mentoring sessions to help you with the Capstone Project will be conducted as per the Program schedule (will be published soon).
5. Presentations will be evaluated by your peers and mentors.

# Thank You



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