



Introduction to CS491/2 Senior Design Project I/II

Sep 21, 2020, Monday

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Course Description

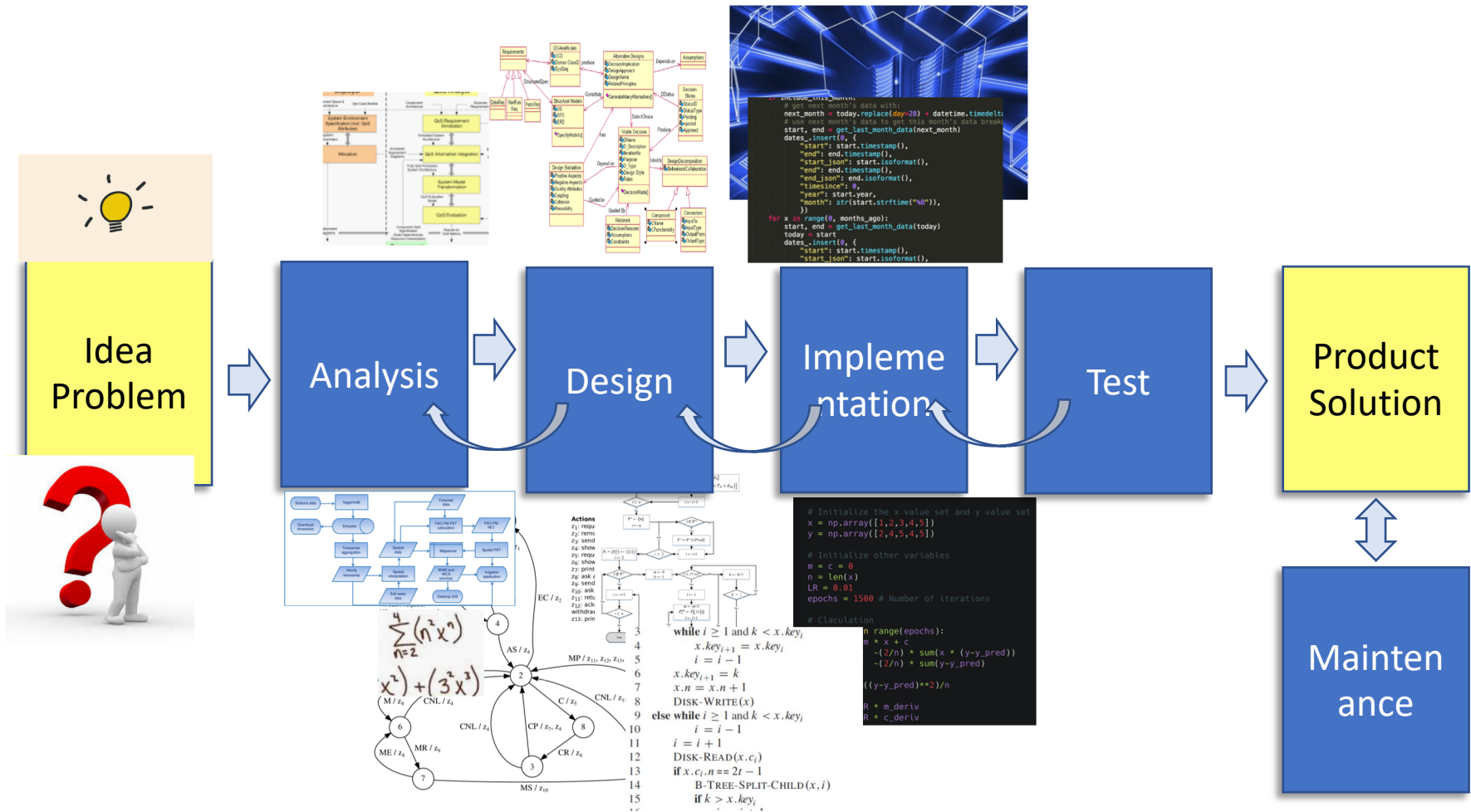
- Capstone **design** project
- **Technical** and **innovative**
- **Group** project
- Emphasizing **engineering design** principles on a specific topic in any field of computer science and engineering
 - **creative** components in design
- Two semesters

Course Description

- Students develop their project **idea** themselves.
- Opportunity to enhance **innovation** and **entrepreneurship** skills.
- You should try to use all knowledge and skills you acquired in your computer engineering education. It is culminating engineering projects.
- There will be a project **fair** at the end as well.
- There will be **awards** in different categories. Various companies sponsor them.



Steps of a typical project



Course Work

- CS491

- Project specification
- Analysis
- High level design
- Oral presentation + demo

Some implementation
Prototyping
Learn tools
Try and See
Code small pieces

- CS492

- Low level design
- Final report
- Oral presentation + demo

Implementation

Process

- Before submitting project specification
 - **Form a team** of 3,4, or 5 students
 - Come up with a innovative project idea (**The hardest part**)
 - **Identify and formulate a novel problem**
 - Develop (novel) initial solution ideas
 - Choose a **supervisor**
 - Supervisor:
 - Assesses the project
 - It is a capstone design project
 - Time and number of members suitable
 - It is innovative
 - Then, assigns you to one of the **Innovation Experts**

Either the problem or
the Solution must be
novel

<http://www.cs.bilkent.edu.tr/CS491-2/current/innovation/experts.html>

Meeting with innovation experts

- Prepare a presentation describing your project
- It should last about 20-30 minutes
- Make an appointment
- Visit the innovation expert
- Present your project
- Ask for suggestions
- Have him/her fill the *Assessment of Innovativeness Form*

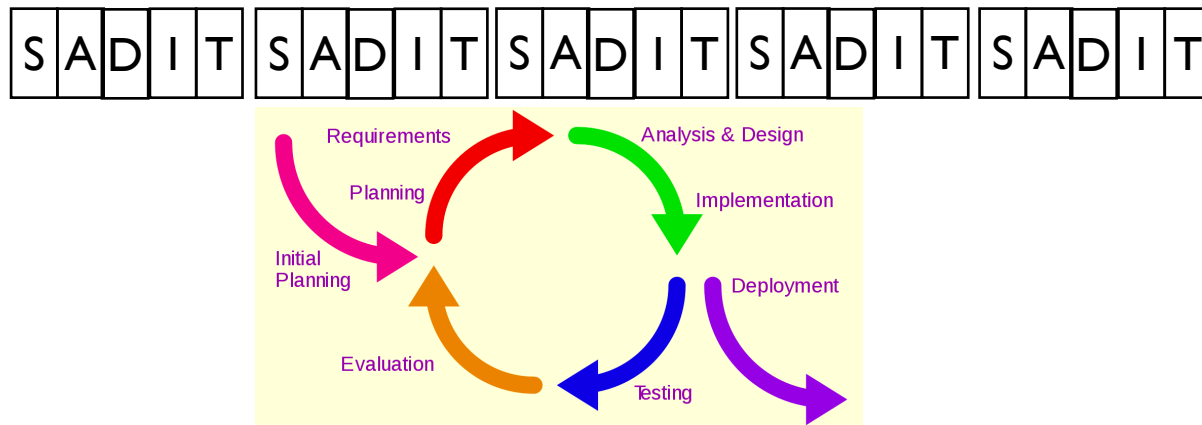
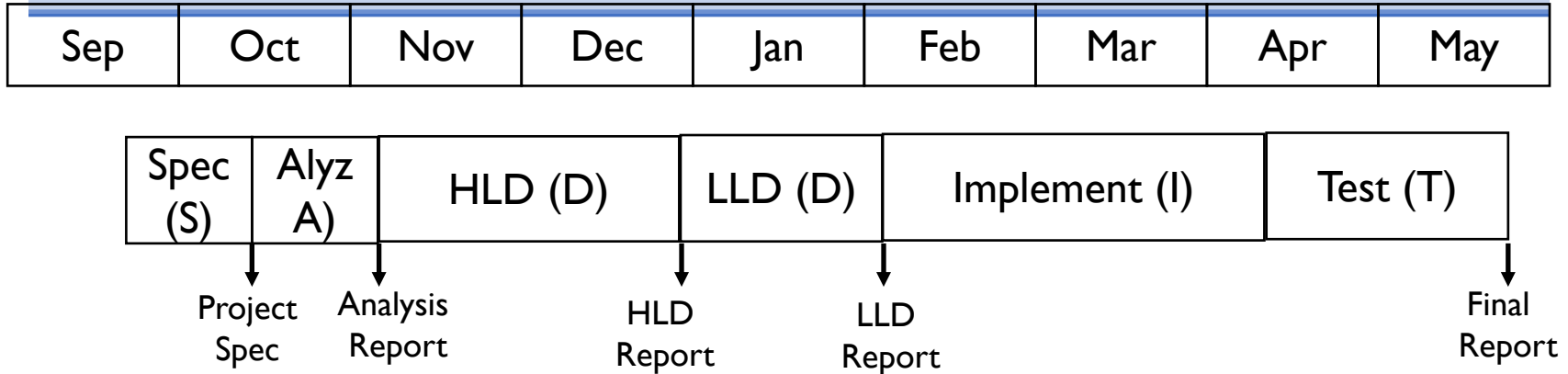
Evaluation of Innovativeness

- Innovation expert will fill in the following form:
- [Assessment of Innovativeness Form](http://www.cs.bilkent.edu.tr/CS491-2/assessment_of_innovativeness.doc)
 - http://www.cs.bilkent.edu.tr/CS491-2/assessment_of_innovativeness.doc
- Questions:
 - What is the nature of the innovation in the project?
 - Are there similar products, systems, services, or technologies in the market?
If there are what are the differences in relevant aspects such as cost, efficiency and usability?
 - Who are the potential users?
- Grade: out of 20. It is 20% of your CS491 grade.
- Return the form to your project supervisor.

Import dates for 2020-2021

- CS491
 - Project Specification: **Oct 12, 2020, Monday.**
 - Analysis Report: **Nov 9, 2020, Monday.**
 - High Level Design Report: **Dec 21, 2020, Monday.**
 - Presentation and Demo: Last week of semester of final exam period
- CS492
 - Low Level Design Report: **Feb 8, 2020, Monday.**
 - Final Report: **April 30, 2020, Friday.**
 - Presentation and Demo: Last week of semester or final exam
- CSFair: Before or after final exams.

Use Iterative Model



from: https://en.wikipedia.org/wiki/Iterative_and_incremental_development

CS492 in Fall

- CS491-492 will be offered **once** per year.
- CS491 in Fall and CS492 in Spring
- Just for Fall 2020, CS492 will be offered for the last time in Fall 2020.
- Dates for CS492:
 - Low level design report: Monday, Oct 5, 2020.
 - Final report: Dec 18, 2020.
 - Presentations and demos: last week of semester or final exam week.
 - No CS Fair.

CS Fair 2021

- We will have a project fair, **called CS Fair**, at the end 2020-2021 academic year for 2020-2021 projects.
- Date: last week of Spring 2021 or just after final exams.
- If face-to-face: Bilkent Hotel.
- If online: zoom based organization.

Project web page by each team

- Each team is required to prepare a webpage for their project.
- It should contain:
 - Description of the project
 - Team members, supervisor, jury members, innovation expert.
 - All reports.
 - Screen shots, demo.
- Email the URL of the webpage to course TA by the end of the 3rd week of the semester (Oct 9, 2020).

Seminars

- Meet 1-2 hours per week for seminars.
- This is the first of these seminars.
- Attendance to the seminars is required. There may be a quiz at the end as well.
 - Your attendance + quiz performance will be part of your CS491 grade.
- Seminars are only in CS491.

Related Web Pages

- You can find detailed course information, related documents and forms, and what is expect from the following pages:
 - CS491 course webpage:
 - <http://www.cs.bilkent.edu.tr/CS491-2/CS491.html>
 - CS492 course webpage:
 - <http://www.cs.bilkent.edu.tr/CS491-2/CS492.html>
 - Details for the current academic year:
 - <http://www.cs.bilkent.edu.tr/~cs4912/2020-2021>
 - CS Fair webpage:
<http://www.cs.bilkent.edu.tr/~csfair/csfair2020/doku.php/home>



- Thank you for listening.

- Questions?