

# Term Project Description

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## 1. Objective

You will design and model a software system to solve a problem throughout the semester. You will work in groups of 2-4. By the help of this project, you will gain experience in teamwork and practice object-oriented software engineering tools and techniques. No coding is expected but your project should be ready to be coded at the end. You will submit interim reports about every 2-3 weeks.

## 2. Project Stages and Deliverables

These are the steps and the deliverables of the project that you should commit:

**Step 0 – Moodle registration:** You have to register to the course Moodle page. The enrollment key will be given in the class. All the course material, project documents, and announcements will be shared on Moodle. **Any student, who hasn't been enrolled in the course Moodle page within the specified dates, will get 0 for the project grade.**

**Step 1 – Project teams:** You will work in groups of 2-4 students in the project. You will make your own teams. The teams may contain students from both formal and evening education. In case you don't have any friends to make a group, send an e-mail to the TA, we will assign you a group. Build your teams and send an e-mail to the TA with the information below, within the announced dates. Just one e-mail from each group is required. Note: You have to perform the term project even if you did the project last year. You have to select a topic different than you did last year, in this case.

Subject: OOAD Project Team

Details: Names, surnames, and student IDs of team members

**Step 2 – Project topics:** Select a topic from the list below. There will be a quota for each topic, and first-come-first-served principle will hold. After constructing your teams, make an initial meeting with your team members to select your project topic and determine the scope. Write a short description of your project (about one paragraph) and send an e-mail to the TA by the announced date.

- Social Network
- Conference Management System
- E-Commerce
- Reservation Management System
- Automation System (hospital, student, etc.)
- Online Game
- Online Media Browser

**Step 3 - Requirements elicitation (Chapter 4):** You will determine the functional requirements of your system, write a set of scenarios, develop a use case model, and build user interface mock-ups of your application. As the deliverable of this step, you will fill in the specified parts of Requirements Analysis Document (RAD – Section 4.5.3).

**Step 4 - Analysis (Chapter 5):** You will construct an object model and a behavior model from the use case model. As the deliverable of this step, you will complete Requirements Analysis Document (RAD – chapter 4.5.3) by adding object model and dynamic model and updating previous sections.

**Step 5 - System design (Chapters 6 and 7):** Determine the design goals, perform subsystem decomposition by selecting an architecture and a framework for realizing the system, and address issues such as data storage and access control. The deliverable of this step is System Design Document (SDD - chapter 7.5.1)

**Step 6 - Object design (Chapters 8 and 9):** Determine design trade-offs, identify additional solution domain objects to fill the gap between the system design and the implementation. Apply software reuse techniques such as design patterns. The deliverable of this step is Object Design Document (ODD - chapter 9.5.1)

Tentative calendar for the term project is given in the below table. The plan may slightly change during the semester and the exact deadlines will be announced later in the lectures and Moodle.

Project stages	Tentative deadline	Deliverable
Step 0 – Moodle registration	Week 5	Any student, who hasn't been enrolled in the course Moodle page within the specified dates, will get 0 for the project grade.
Step 1 – Project teams	Week 3	E-mail
Step 2 – Project topics	Week 4	E-mail
Step 3 – Requirements elicitation	Week 7	Requirements Analysis Document (RAD) (partial)
Step 4 – Analysis	Week 11	Requirements Analysis Document (RAD) (complete)
Step 5 – System Design	Week 13	System Design Document (SDD)
Step 6 – Object Design	Final exams week	Object Design Document (ODD)

### 3. CASE Tools

While designing your software, you will use UML notation. To be consistent, you have to use computer-aided software engineering (CASE) tools to draw your UML diagrams. There are a dozen of CASE tools, some of them are web-based and some are desktop applications. You are free to choose any CASE tool. Some of them are listed below.

- [Visual Paradigm](#), [Together](#), [UMLet](#), [StarUML](#), [ArgoUML](#), [Umbrello](#), [draw.io](#), [creately](#), etc.

For developing user interface mock-ups, you can use the following or similar tools:

- [Balsamiq](#), [mockupbuilder](#)

### 4. Report Templates & Submission

- You will use the following MS Office Word templates for each document. You can use other word processing tools but you have to include the same content in a similar format.
  - [Requirements Analysis Document \(RAD\)](#)
  - [System Design Document \(SDD\)](#)
  - [Object Design Document \(ODD\)](#)
- Reports will be written in English. Use automatic spell-checking facility of your word processor.
- You will make your submission through the Moodle. If the file size exceeds 1 MB, you can send as e-mail.

- You will submit your reports in pdf format. If you have additional files, compress them in a zip archive.
- Only one of the group members will upload.
- Name your report file (and submission file) as **GroupX\_RAD.pdf / GroupX\_SDD.pdf / GroupX\_ODD.pdf** where X is your group number.
- Use CASE tools while drawing diagrams (do not use general-purpose painting tools).
- If your diagrams are too large to fit in report page, you should also attach a high resolution image file for each large diagram, in your submission. Unreadable diagrams will not be graded.
- See the following guidelines while writing your reports:
  - [Requirements elicitation guidelines](#)
  - [Analysis activities guidelines](#)

## 5. Grading

Term project grade constructs the 30 % of the course grade. Each report will contribute equally (10 %). While evaluating your reports, [these criteria](#) will be used and your report pdf file will be annotated using those comment codes. **Any student, who hasn't been enrolled in the course Moodle page within the specified dates, will get 0 for the project grade.**

### Late submission policy

Deadline for project report submissions is **23:59 pm** at the specified date. For each additional day, **25% cut-off** will be applied.

### Academic honesty policy

Do not copy the codes/text/figure/idea/etc. of any others (and from the Internet) without credit. You can borrow ideas and use partial codes from elsewhere, in case you give proper citation.

**Dr. Zeynep ÇİPİLOĞLU YILDIZ**