Cairo University  
Faculty of Computers and Information



**CS251**

**Software Engineering I**

**Project Description**

**2019**

**Version 2.0**

**Project Team**

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**Introduction**

* In this project you will collect the requirements, design and implement a non-trivial software system. You will practice the concepts you learned during the course.
* This document states the different project phases and their details.
* Project 3 phases are: Requirements, Design, and implementation and testing.
* Your project customer (whom you can check requirements with) and coach is your TA.

**Project Logistics**

1. Students from the same lab/TA will be divided into groups; each group is 3-4 members.
2. TAs are your clients and they will assign you a project.
3. Your team will register their names with the TA and **you CANNOT change teams** after registration.
4. Academic honesty is assumed. All work submitted must be original and written by your team (Not copied from students, the net, outside sources). Plagiarism will be penalized.

* Soon, you will be our colleague and we will be proud of you.
* Professional conduct and practice is essential in your career.

**Project Phases:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Phase** | **Deliverables** | **Deadline** | **Mark** |
| Phase 1-a | Listing the mistakes/missing items. The submission should be the: Initial SRS Document (Introduction and Requirements sections of CS251-SE2014-Phase1-SRS-Template-v1.0) **augmented** with a listing of all the mistakes/missing items within it | November 2nd, 2019 |  |
| Phase 1-b | Final SRS Document | November 14th, 2019 |  |
| Phase 2-a | Initial SDS Document |  |  |
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# Phase 1: SRS Document

* Project description is included at the end of this document.
  + TA will act as your product owner.
  + Your role is to understand the main features and requirements of the product.
  + Think about the missing details and discuss them with TA.
  + Ensure that you fully understand what the product owner needs.
  + Do not add any extra major features on your own. It is beyond the scope!

# Details

* Each team will read and understand the given project system description.
* You will be given also an initial SRS document contains initial requirements you need to read and criticize it.
* Make sure that **all the functionalities are listed correctly** with a number from 1-5 that express the complexity of the functionality. 1 is easy and 5 is complex.
* Make sure to think in any **missing details**, further sub-features and discuss with the TA if needed.
* For each functionality, a Use Case Table will be provided that describes the functionality in details. Document should contain all the functionality covering the requirements.
* You should determine the related non functional requirements and explain them. We expect at least **2 x team size** non functional requirements.
* Use case diagram and any further points in the template should also be filled.
* You will **submit** work on **2 stages**.
  + **In first time**, you will submit document with listing all the **mistakes/missing** in all the sections (functional requirements, non-functional requirements, use case model, use case descriptions).
  + Then, in stage 2, you will submit the updated document considering all the mistakes (**fix** all the listed **mistakes**, **add** any **missing** details/requirements, **augment** with an analysis level **class diagram** [mainly classes/multiplicities/relationships], **augment** with a **traceability matrix** that relates the requirements, with their relevant use cases, with their relevant classes from the class diagram). Don’t hesitate to ask TA / Visit him in office hours.
* Check the sample SRS document provided. (More helpful examples are also included).

# Phase 2: SDD Document

* In this phase we will work on the Software Design Document.
* You will work given the SRS document you developed on the first phase.
* **You must consider TA comments on your requirements document. Also consider the requirements check list, so your design should respect your final SRS document and the requirements check list**
* SDD document has some elements. These are:
  + **System decomposition**: a breakdown of your system into components. You should provide a component diagram that shows how you decompose the system.
  + **Class** **diagram** **and** **responsibilities**: a static model of the classes in your system.
  + **Sequence** **diagrams**: describing how use cases are implemented through method calls. You are required to deliver ***2 \* team size*** sequence diagram each representing a use case flow of events.
* There will be 2 stages of delivery.
  + In draft submission, teams should provide an initial version of **all** diagrams.
  + In final submission, after the TA comments on the model and sends corrections, the team will submit the final version of **all** diagrams.
* Check the **SDD Document** template attached (CS251-SE2015-Phase2-SDD-Template.docx).
* Submission is done through acadox but the team must use GitLab (or others) to store and update all their project work.
* **You should use Git for team collaboration. Git** history must show that the team is using it frequently and **all** members use it.

**Policy Regarding Plagiarism:**

**Students have collective ownership and responsibility of their project. Any violation of academic honesty will have severe consequences and punishment for ALL team members.**

1. تشجع الكلية على مناقشة الأفكار و تبادل المعلومات و مناقشات الطلاب حيث يعتبر هذا جوهريا لعملية تعليمية سليمة
2. ساعد زملاءك على قدر ما تستطيع و حل لهم مشاكلهم فى الكود و لكن تبادل الحلول غير مقبول و يعتبر غشا.
3. أى حل يتشابه مع أى حل آخر بدرجة تقطع بأنهما منقولان من نفس المصدر سيعتبر أن صاحبيهما قد قاما بالغش.
4. قد توجد على النت برامج مشابهة لما نكتبه هنا أى نسخ من على النت يعتبر غشا يحاسب عليه صاحبه.
5. إذا لم تكن متأكدا أن فعلا ما يعد غشا فلتسأل المعيد أو أستاذ المادة.
6. فى حالة ثبوت الغش سيأخذ الطالب سالب درجة المسألة ، و فى حالة تكرار الغش سيرسب الطالب فى المقرر.