

**Cairo University  
Faculty of Computers and Information**

**CS251**

**Software Engineering I**

**Project Description**

**2017**

**Version 1.0**

**Project Team**

**Staff: Dr Amr Kamel a.kamel@fci-cu.edu.eg**

**TAs: Eng Mohamed Samir m.samir@fci-cu.edu.eg  
Eng Desoky Abd El-qawy d.abdelqawy@fci-cu.edu.eg  
Eng Omar Khaled Ali Ragab o.khaled@fci-cu.edu.eg  
Eng Mahmoud Mohsenn m.mohsen@fci-cu.edu.eg**

**Eng Mena Yousef m.youssef@fci-cu.edu.eg**

**Eng Dina Ezzat d.ezzat@fci-cu.edu.eg**

**Eng Sherif Zahran s.zahran@fci-cu.edu.eg**

**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.
* 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**

* Students from the same lab will be divided into groups; each group consists of 3 to 5 members.
* Your team will register their names with the TA and **you CANNOT change teams** after registration.
* 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:**

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| --- | --- | --- | --- |
| **Phase** | **Deliverables** | **Deadline** | **Mark** |
| Phase 1-a | Initial SRS Document | 28 October | 1 |
| Phase 1-b | Final SRS Document | 4 November | 6 |
| Phase 2-a | Initial SDS Document | 25 November | 1 |
| Phase 2-b | Final SDS Document | 2 December | 6 |
| Phase 3 | Implementation and testing | 16 December | 6 |
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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 out of the scope! If you would like to add new features think about its importance for the system. You can take your TA’s opinion about any new feature you would like to add

**Details**

* Each team will read and understand the given project system description.
* Think with your team the functionalities in the project.
* Create a Use case diagram contain all use cases in the project.
* For each use case create a use case table that describe this use case and its flow of event.
* **REMEMBER THAT USE CASE REPRESENTS A USER GOAL. SO YOUR USE CASES SHOULD REPRESENT A MEANINGFUL GOALS FOR THE USERS.**
* List **all the functionality** in the project 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.
* 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.
* **Please find the SRS template attached with phase 1 documents. You should fill this template and deliver it in both phase 1-a and phase 1-b**
* **In phase 1-a you should deliver a first draft for your functional requirements and use cases**
* **After phase 1-a you can ask the TA for his opinion about your work in phase 1-a then in phase 1-b you should enhance what you delivered in phase 1-a (based on your TA’s comments) and deliver a full SRS document**
* **In phase 2 you are required to deliver your SDS document**
* **In phase 3 you are required to convert your class diagram to java classes and implement some functions**
* **These functions are:**

1. **Login (any type of users)**
2. **Register (any type of users)**
3. **Add Store (Store owner)**
4. **Add product to the system (Administrator)**
5. **Add product to store (Store owner)**
6. **Add brand to the system (Administrator)**
7. **Suggest product (Normal users or store owners)**
8. **Buy product (Normal users) [Using voucher cards]**
9. **Explore products in store (Any type of users)**
10. **View specific product details (Any type of users)**
11. **Explore number of views to each product in a store (Premium store owner)**
12. **Get the most viewed product in a store (Premium Store owner)**
13. **Provide voucher cards (Administrator)**

* **You need to implement at least 10 of these functions. You will guarantee bonus grades if you implemented all functions (the bonus grades not determined yet)**
* **Creativity in implementing this requirement is more than welcomed (and will be encouraged by bonus grades also) 😊**
* **You may find that you need to edit your class diagram or sequence diagrams after implementing some requirements. So re-submit your class diagram and sequence diagrams again. So after phase 3 your implementation should reflect your class diagram and sequence diagrams**
* **You should use VCS (Git) to organize your work with your team**
* **Doing unit testing (using testng tool) for each function make you guarantee bonus grades**
* **You don't need to worry about creating a good user interfaces. You can just use your java console to view anything you want. So you may firstly show 2 options, login or signup. Then after login you will show menu containing the actions that the user can take (according to current user’s type)**
* **Also, you don't need to worry about creating a SQL database and how you will connect your db to your code. You can store the data in just arraylists or files.**

**Project overview**

The project will be an online store platform. This platform will help customers to buy or explore products and small stores (businesses) to market for their products and get more customers.

This platform is much like Amazon store but here our platform will focus on both online and onsite stores and both small business and big businesses.

This platform consists of 6 main modules

**1- Users management module**

To use the platform, you should register in it. The user can register as a normal user (buyer) to explore or buy products or as a store owner. The store owner has a store (real onsite store) and will register in the platform to put products and market for it.

The platform also should contain administrator users who should be able to manage brands or stores data also the administrator should be able to provide voucher cards to the store.

**2- Stores**

Store owners can add one or more stores in the platform. Each store should has a name, address and any data that verify the store existence. However the user can add online store which will offer only online products (we will talk more about online products in the next module) and in this case the users doesn’t need to enter store address.

So we have 2 types of stores normal (onsite) stores which offer some products and online stores which offers only online products.

3- **Products**

Any product in the system should has a name, price, category, brand name (you can think about more attributes for the products). Also, any product has a type, and there are 2 types of products normal products and online products. Normal products just like any product you may expect (PCs, TVs, …, etc) but online products like online software, online games, voucher keys.

Please be noted that administrator only should be able to add new products to the system and store owner can add products (part of platform’s products) to his store. The store owner can suggest adding new products to the platform

4-Brands

A Brand is a type of products manufactured by specific company (or group of companies). Each product should have a specific brand and the administrator should be able to add new brands to the platform. The store owner can suggest adding new brands to the platform

5- Payments

The platform should support different types of payments. The initial payments types are pay on delivery (pay the price when the product arrived to the customer), visa payments or voucher cards.

6- Statistics

The platform should provide some statistics to the store owner. The target of these statistics is to provide a vision about the market to the store owner. These Statistics like

* Number of users explore his products.
* Number of user buy his products.
* The most ordered products.
* The most ordered brands.

You can think about more statistics that will be useful for the product owner

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.**

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