

# CS251: Intro to Software Engineering

## Homework 2 – Project Description v1.0



# Toffee

## Introduction

This document describes the initial requirements of the project to be developed during CS251: Introduction to Software Engineering, winter 2023 at Faculty of Computers and Artificial Intelligence, Cairo University. This project will span 3 assignments. This is the initial description received from the client. It might be incomplete or unclear. And in some cases, the client is not sure of what s/he wants. Your job is to ensure full understanding of what the client wants. You can use **questions, interviews, comparison with similar products** or other means to collect information from the client.

## Product Owner

The product owner is the client you will serve and satisfy his or her needs with this project. Your job is to do a system that supports the business, increases the profit and give the customer a competitive advantage. The customer is represented by Dr Mohammad El-Ramly and your TA.

## Customer Description

Sara Tamer and Maya Ayman have business for selling sweets like candy, chocolate, toffee and others. Some of these items are sold in packages and some are sold by kilo. They want to expand by making an online store for their goods. They hired CS251 Company to do their e-commerce web site.

The site will offer a catalog of goods that customers can order. The customer can choose to pay upon delivery or via payment methods like smart wallets. A general user can view the catalog but to buy s/he must register and login. A user can view all items in the catalog, items in a specific category, or search for an item by name or by brand. Registration requires a valid email, a password and an address. Password should follow secure password guidelines. Registration is completed by sending an OTP to the email used, that the user has to enter to complete the registration; otherwise, registration is rejected.

A logged-in user can shop and add items to his or her shopping cart until s/he is finished, then s/he can check-out. Sealed items are sold by unit and the client chooses up to 50 units of each item in one order. Loose items are sold by kilo, and the buyer can buy any amount up to 50 kilos of an item in one order. Shoppers can also buy gift vouchers to give as a gift to someone. A gift voucher has a unique code and can be redeemed once when making an order to reduce the total price by the value of the voucher.

A system admin can update catalog with new items, cancel items or update item info. An item has a name, category, description, image, brand, price and a discount percentage (if any). Admin can view all orders, set loyalty points scheme, suspend a user and view statistics. Statistics provide store owners



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with a view of how the store is doing. This may include daily and monthly sales, sales of each item in a period of time, most popular products, among other statistics.

Buyers can place an order by selecting the items they want and the quantity they want from each item. Then they check-out. They can also view their order history and they can re-order a previous order by clicking "re-corder" button which makes the same exact order with the same exact conditions. When making an order, a buyer earns loyalty points according to the scheme decided by the admin.

Upon making an order, shoppers have to specify the shipping address; if it is the same address registered on their profile or another address (e.g., in case they are buying a gift from someone). If they are paying upon delivery, they have to enter to a valid phone number. An OTP is sent to the mobile number and the buyer has to enter it to verify the phone number. To pay for an order, a buyer can:

- 1) Use one gift voucher or more to pay for their order or part of it.
- 2) Redeem some of the loyalty points to pay for the order or part of it.
- 3) Pay for the order or the remaining amount via payment methods like smart wallets.
- 4) Pay for the order or the remaining amount with cash upon delivery.

The system should adopt a layered architecture, with a database layer, a backend layer that has the business logic and presentation or front end layer. Shoppers can access the system via the web or a mobile app. Mobile app should support Android and iPhone. Admin has a dedicated web app that allows him or her to monitor the system and do that tasks assigned to him or her.

### Useful Tools to Use

- 1- ArgoUML, Creatly, Visual-Paradigm or any suitable tool for creating a use case model and possibly use case descriptions.
- 2- <https://trello.com/> to help you organize your tasks. Divide and assign to team members.
- 3- Software Requirements Specifications and Enriched User Story Template is provided with the project documentation.
- 4- Wire framing tool <https://mockflow.com/>