

**UNIVERSITY OF THE PHILIPPINES MANILA**  
**COLLEGE OF ARTS AND SCIENCES**  
**DEPARTMENT OF PHYSICAL SCIENCES AND MATHEMATICS**

CMSC 121: Web Programming  
Second Semester A.Y. 2020-2021

**MACHINE PROBLEM**

**Specifications:**

Create a web application (preferably using Django framework) for a STORE/SHOP of any theme. The application will be used to make purchases (by customers) and manage the goods sold in the store (by the store admin). It should contain the following features:

1. Customer Account Management
  - a. Allow a public user to register a customer account.
  - b. When a customer account is created, an email verifying the registration is sent to the account owner. The account is immediately usable.
  - c. There must be a default admin account that comes with the application.
2. User authentication and session management
  - a. After registration, a user can login (i.e. start a session) a customer account using only the credentials they provided in the registration process.
3. Viewing of goods
  - a. A public user, customer, or admin must be able to access the listing of goods. The listing can include description, photos, etc.
  - b. A public user, customer, or admin must be able to find goods through search queries.
  - c. The user should be able to view a more detailed page on a good they are interested in.
4. Purchasing of goods
  - a. Only a customer can purchase goods.
  - b. When picking goods to purchase, the customer adds goods to their cart. In this process, they also indicate quantity and other possible details if you have (e.g. color, customer requests, etc.). Multiple goods can be added to the cart.
  - c. To finalize the purchase:
    - i. The customer checks out their cart. This should show all the items in the cart. The customer can remove goods and modify the quantity and other details (if any) of each good. When ready, the customer will proceed to payment methods.
    - ii. Payment methods will allow the customer to pick over multiple modes (credit, cash on delivery (COD), etc.). Depending on the method selected, other required input will be prompted. For example, when credit is selected, the user

will be asked for the credit card number, name of holder, month of expiration, CVC, etc.

- iii. After the payment method is finalized, the user will be prompted for the delivery process.
  - iv. When all above three steps are completed, the customer is shown a summary of their purchase, payment, and delivery address. They must have an option to go back and edit some details. The purchase is then confirmed.
  - v. After confirmation, an email is sent to the customer containing an invoice in PDF format.
  - vi. The contents of a customer's cart must remain intact over their sessions. That is, when they logout and login again in the middle of making a purchase, the cart must be retained.
5. Management of goods
- a. Only the admin can manage goods.
  - b. An admin can add goods.
  - c. An admin can remove goods.
  - d. An admin can edit details of goods (description, photo, etc.).

**Additional Notes:**

- 1. Try to improve the user experience as much as you can. All above functionalities are the baseline. You can add from there (e.g., discount coupons, payment gateway integrations, etc.).
- 2. The shop can sell anything. It is up to the group what kind of shop it will be.
- 3. All of the contents in the site must be appropriate.