

CSE326: Software Formal Specifications

**Mini Project 1**

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# Introduction

In this project we define a ecommerce model in which a user can browse products and can manage his cart by adding or removing the products and then place and order, while an admin can also manage available products and approve or reject order.

# Design

## 2.1 Classes

We will have 5 classes, namely: Person class, User class, Admin class, Product class and order class

Person class is never directly instantiated however it acts a template for the user class and the admin class which both inherit the Person class.

## 2.2 Objects

## 2.3 Associations

* Admin can manage available products.
* Admin can manage the state of the orders.
* User can place orders.
* User can manage his/her cart.

## 2.4 Constraints

A user can never have more than 10 products in his/her cart.

A user can not remove products from his/her cart if is empty.

A user can only remove an product from his/her if it exists

Admin can not add more than one product with the same id

The total price of an order must be at least 1.

An order must contain at least one product.