

1. User Stories

- As a customer, I want to see the categories of electronic devices to select one.
- As a customer, I want to see the products available in each category to choose which one to buy.
- As a customer, I want to add products to the shopping cart to purchase them.
- As a customer, I want to provide my contact information and address to receive my purchase.
- As customer, I want to see a Mac computer in the catalog to buy it
- As customer, I want to see the last version of the Lenovo computers.
- I as a *tech enthusiast*, want to see in the catalog *the latest laptops*, because *I am looking to upgrade my current setup*.
- I as a *photographer*, want to see in the catalog *high-resolution cameras*, because *I need professional equipment for my work*.
- I as a *student*, want to see in the catalog *affordable smartphones*, because *I am on a budget and need a reliable device*.
- I as a *gamer*, want to see in the catalog *gaming PCs and accessories*, because *I want to build a powerful gaming rig*.
- I as a *traveller*, want to see in the catalog *lightweight laptops*, because *I need something portable for work on the go*.
- I as a *parent*, want to see in the catalog *durable tablets for kids*, because *I need a safe and reliable device for my child*.
- I as a *music lover*, want to see in the catalog *high-quality headphones and speakers*, because *I care about sound quality when listening to music*.
- I as a *remote worker*, want to see in the catalog *devices with long battery life*, because *I need technology that supports my productivity throughout the day*.
- I as a *content creator*, want to see in the catalog *video editing equipment*, because *I need tools to improve the quality of my online content*.

2. Object Programming principal analysis

Class design:

Each class is only having one responsibility:

- Catalog: managing product categories and list
- Shopping cart: handles adding, viewing, and storing products selected by the user.
- Checkout: Deals with user information and finalizing purchases.

Inheritance:

- Analysis: In cases where the categories could expand, would be better to create a new class as product to manage better the information, due to the class can be extended by specific product types.

- Avoids code duplication and reusability through inheritance, keeping your codebase cleaner and easier to extend.

Open- Closed Principle:

- The program must be open to be able to still expand the functionalities without having the necessity to change the existing code.
- Allows for future growth and changes without breaking existing functionalities.