A public coffee machine

**Functional requirements:**

The system must…

* Maintain inventory records;
* Allow a user to select an item from the menu;
* Support multiple payment methods, including cash and card payments.
* Allow a user to choose their preferred payment method;
* Notify a user when: the chosen item is unavailable, insufficient cash is inserted or the card payment fails;
* Dispense the selected item to the user if all the following conditions are met: the chosen item is available in the inventory, the user successfully complete the payment process, no technical issues occur.

**Non-functional requirements:**

The system should be…

* Available 24/7 to serve users at all times without interruptions;
* Secure, ensuring protection of user data;
* Reliable, with a low failure rate to maintain consistent operations and prevent downtime;
* User-friendly, providing an intuitive interface;
* Fast, completing transactions (selection, payment, and dispensing) within a reasonable time;
* Maintainable, allowing for quick and easy maintenance, including replenishment of stock, updates, and repairs.