



# SOFTWARE REQUIREMENTS

Vending Machine

Group 1

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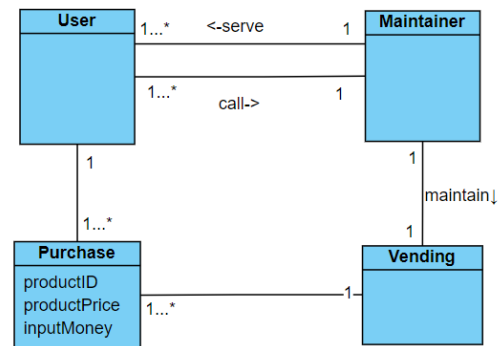
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## System Objective

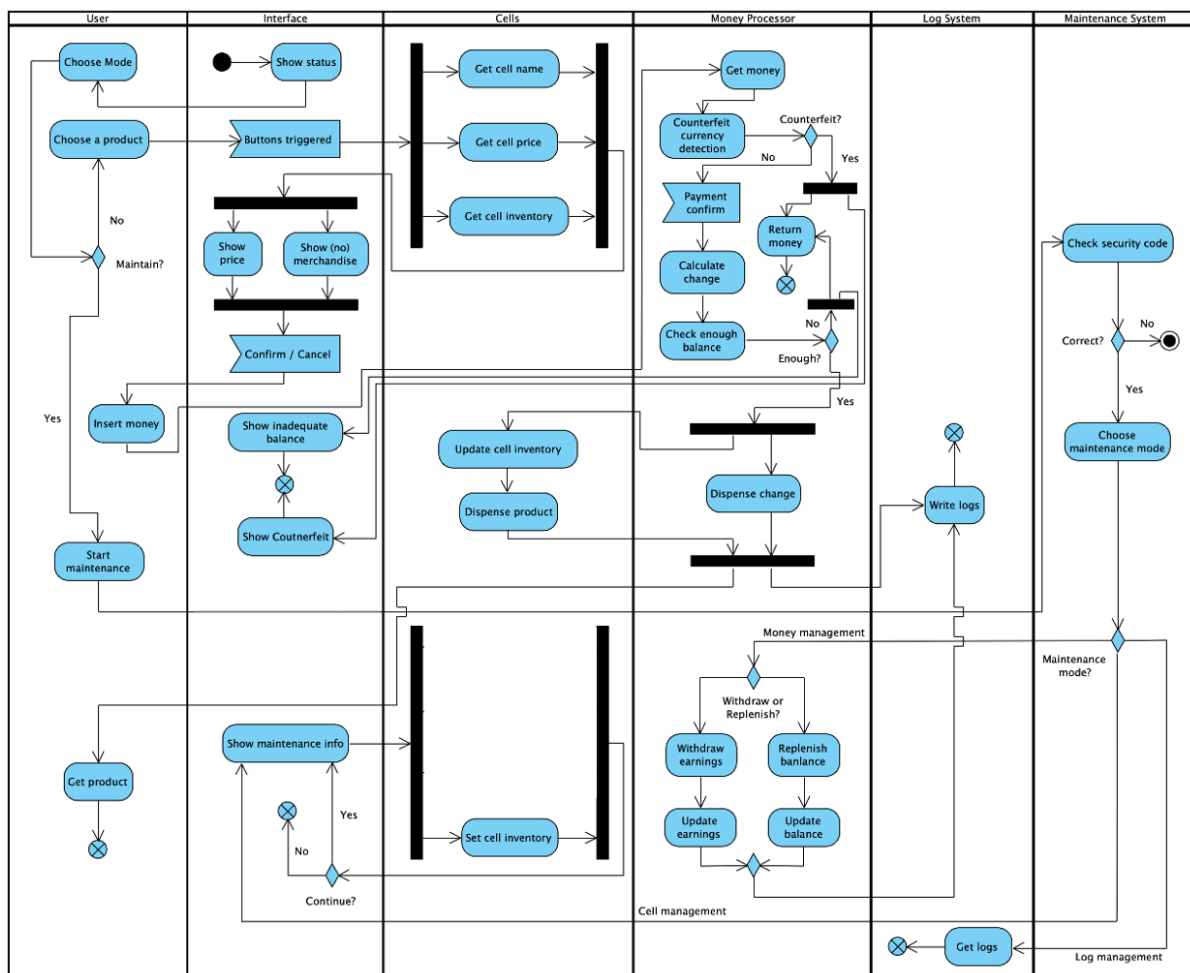
In this project, we are developing software that simulates a vending machine. The software will take care of the graphic interface, simulate the physical environment of the vending machine, and ensure smooth buying for the users and convenient maintenance of the maintainers.

## Domain Analysis

The participants of activities related with a vending machine can be categorized into User, Maintainer, Purchase and Vending.



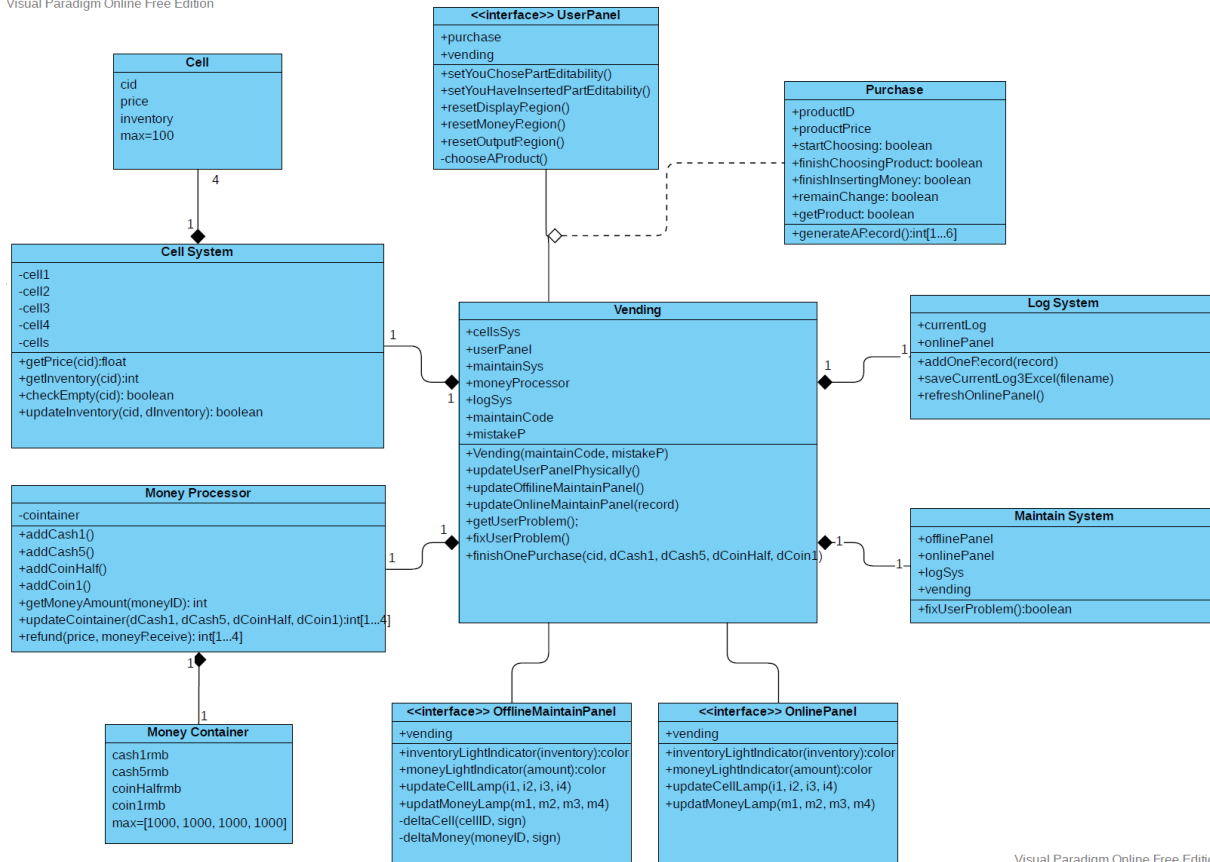
Here is the sequence of activities for using the vending machine:



## System Architecture

From the information above, we will design a software system that allows the user to buy and maintainer to maintain. And the vending machine will serve as the controller that connects user interaction with the system.

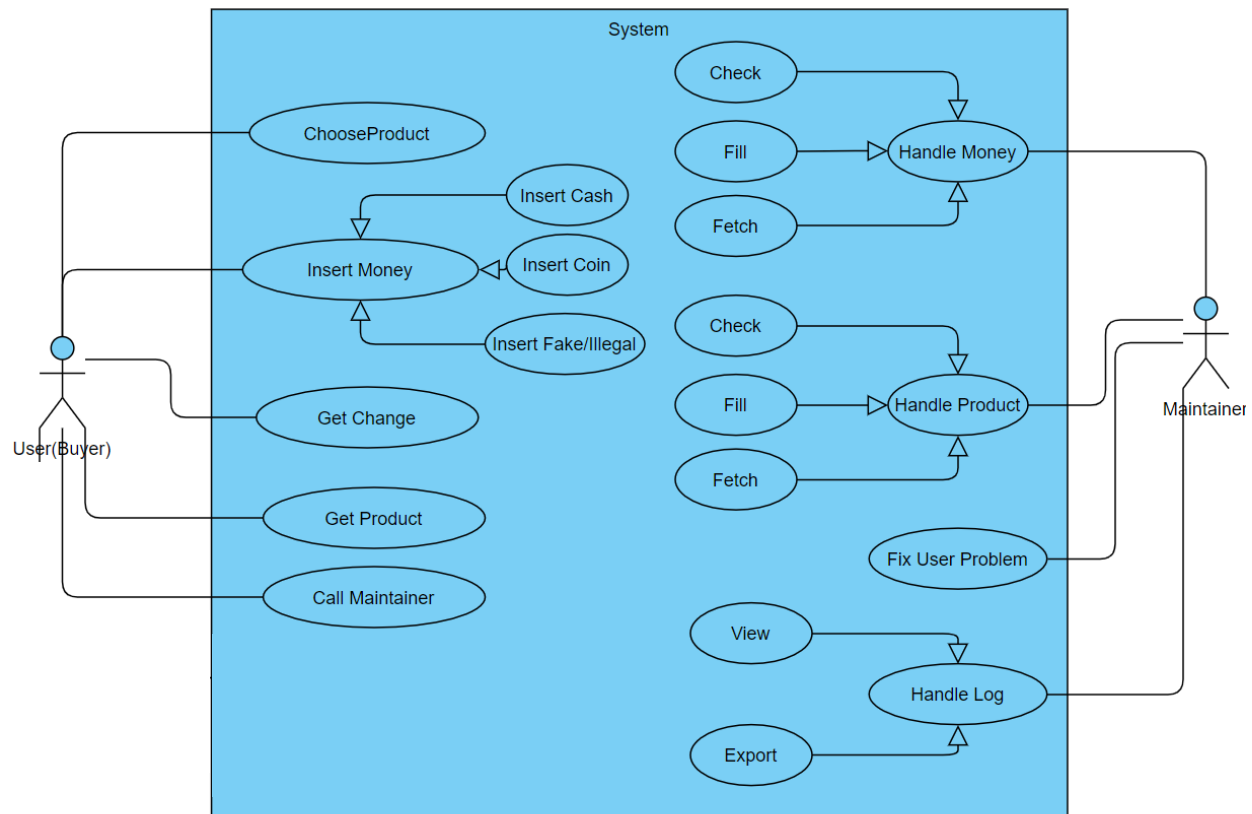
Visual Paradigm Online Free Edition



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## Use Cases

The system can achieve the following use cases from the user's and the maintainer's perspectives:



## Software Requirements

### R1: User Panel

- R1.1: The user should be able to select one of the products
  - R1.1.1: The user should be able to see whether there is inventory left for every product.
  - R1.1.2: The user should be able to select those products which are not empty only.
  - R1.1.3: The user should know the price of the product he/she chooses.
- R1.2: The user should be able to insert cash and coins
  - R1.2.1: If the user inserts fake or illegal money, don't accept it.
  - R1.2.2: The user should know how much money he/she has inserted.
  - R1.2.3: The user cannot insert money again after the inserted money is not less than the price of the product.
- R1.3: The user should be able to get the change after inserting a correct amount of money.
  - R1.3.1: If the change is not enough, the vending should give the money back to the user and don't output product.
  - R1.3.2: If the money in container is enough for change, the vending machine should output coins of correct amount as change.
- R1.4: The user should be able to get the product after inserting a correct amount of money.
  - R1.4.1: If the product is not out, the user should be able to contact the maintainer.

## R2: Maintain Panel

- R2.1: The maintainer should be able to see and answer the user's call.
- R2.2: The maintainer should be able to replenish and withdraw money from money container.
- R2.3: The maintainer should be able to replenish and withdraw product from the cell
- R2.4: The maintainer should be able to see the purchase log.
  - R2.4.1: The maintainer should be able to export the purchase log.

## R3: Vending

- R3.1: The system should have a fixed probability of error.