Университет ИТМО

Факультет ПИиКТ

Архитектура программных систем

Лабораторная работа №1

Выполнили:

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Преподаватель:

**Задание**

Выбрать любую реально существующую систему и описать её в терминах UML. Желательно, чтобы система была не полностью информационной, но опиралась на информационную систему как показано в примере на лекции (Point of sale). Необходимо описать границы системы на разных уровнях, а также описать сценарии использования для нескольких Акторов.

## Требования к системе

Jingdong(P2P)

**Функциональные:**

*Требования владельца сайта:*

*1.  The website must provide the ability to edit products. List products, edit prices, delete products*

*2.  The system should provide statistics on sales volume.*

*3.  The website must display the customer's evaluation of the product and the shopping experience.*

*4.  The homepage of the website should contain the contact information of the merchant and the logistics information of the goods.*

*5.  The website must contain advertising banner blocks so that the website owner can collect advertising fees.*

*Требования пользователей сайта:*

*1.  The website must be able to search for products by name and have the ability to search for vague information.*

*2. The website must be able to sort products by price, evaluation, distance and other factors.*

*3. The website should allow customers to evaluate products*

*4. This website shall guarantee the entire transaction process.*

**Нефункциональные:**

*1. The website must run normally in a modern browser (Chrome, Firefox, Edge, IE...). There are apps that can run on Android and iOS (recent versions)*

*2. The site must be accessible to users on the Internet-by typing in the address and using a search engine on the Internet to search for results.*

*3. The website needs to require sellers to register with their real names as a guarantee.*

*4. The website must operate stably and can host up to 80 million users (China's online shopping is basically popular).*

*5. The backend of the website must be written in JAVA or PHP. Apps should be written in Kotlin and Swift.*

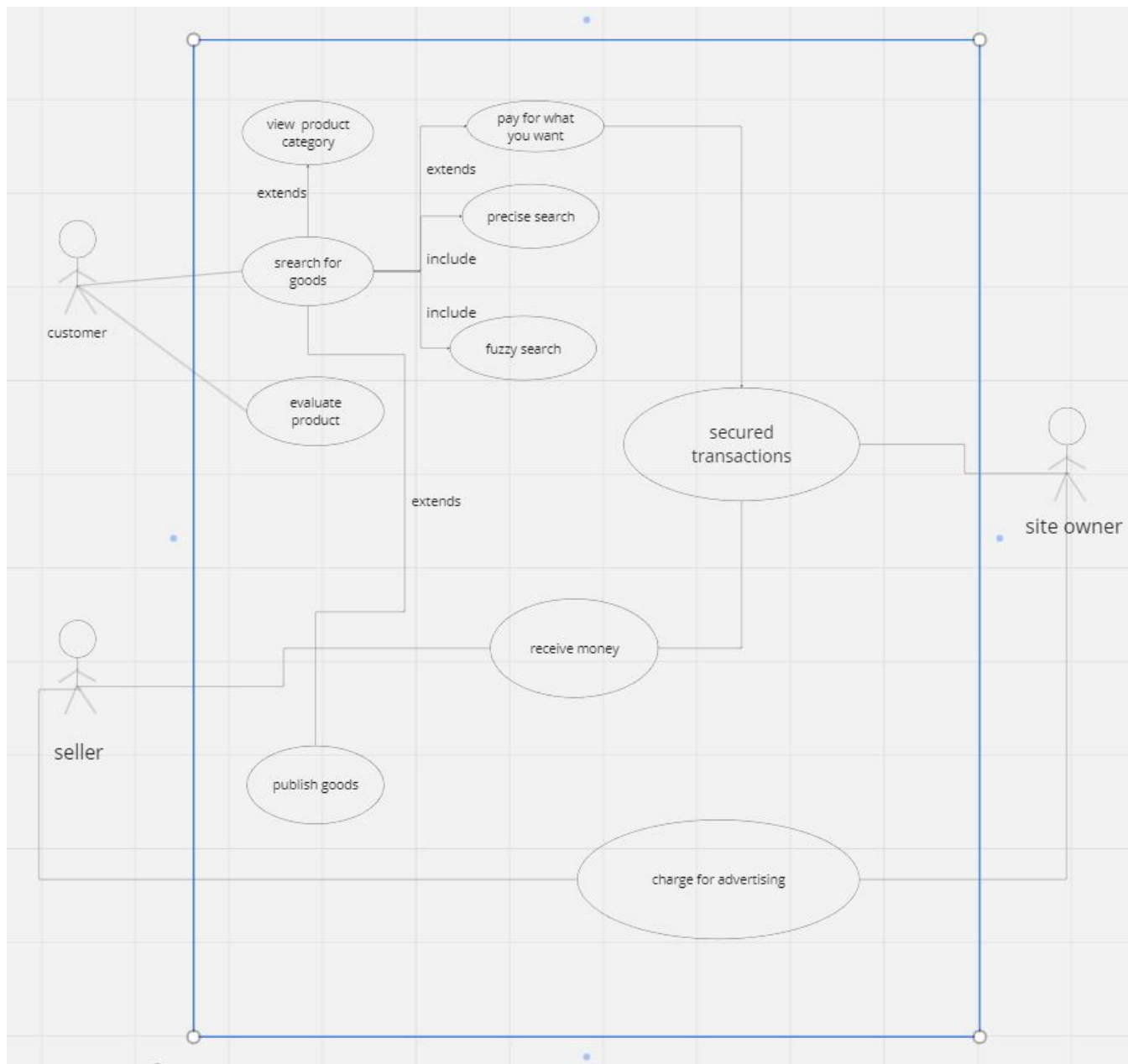| № | ID | Полезность | Трудоемкость, человеко-час | Стабильность |
|---|----|-----------|---------------------------|--------------|
| | | | | |

| | | *Требования владельцев сайта* | | |
|---|---|---|---|---|
| 1 | FR1 | Should have | 2 | Low |
| 2 | FR2 | Must have | 5 | High |
| 3 | FR3 | Can have | 1 | Mid |
| 4 | FR4 | Must have | 3 | Low |
| 5 | FR5 | Should have | 2 | Low |
| | | *Требования пользователей сайта:* | | |
| 1 | FR6 | Should have | 3 | High |
| 2 | FR7 | Must have | 4 | Mid |
| 3 | FR8 | Can have | 3 | Mid |

| 4 | FR9 | Should have | 2 | High |
|---|-----|-------------|---|------|
| 5 | SR1 | Mush have | 10 | Low |

*Нефункциональные требования*

| 1 | N1 | Should have | 8 | Low |
|---|----|-------------|---|------|
| 2 | N2 | Should have | 10 | Low |
| 3 | N3 | Must have | 3 | High |
| 4 | N4 | Should have | 7 | Low |
| 5 | N5 | Must have | 2 | High |

| Имя прецедента | Search for goods |
|---|---|
| ID прецедента | 1 |
| Краткое описание | Customers search for products by product |

| | |
|---|---|
| | name(Support fuzzy search). |
| **Актёры, задействованные в прецеденте** | Customers |
| **Предусловия** | Customers want to buy something and there are some sellers who sell something customers want. |
| **Основной поток** | 1. Customer search goods by name.<br><br>2. Customer enter the goods' page |
| **Постусловия** | Customer read the info of goods |
| **Альтернативные потоки** | If there is no goods which customer wants, site will show similar goods. |

| | |
|---|---|
| **Имя прецедента** | Publish goods |
| **ID прецедента** | 2 |

| | |
|---|---|
| **Краткое описание** | Seller publish the goods on the site |
| **Актёры, задействованные в прецеденте** | Seller |
| **Предусловия** | The seller is already registered on the website |
| **Основной поток** | 1. Sellers prepare the info and photos of goods.<br><br>2. Sellers set the key words of goods.<br><br>3. Sellers publish goods. |
| **Постусловия** | The good is published. |
| **Альтернативные потоки** | The product is illegal and not allowed to be published. |

| | |
|---|---|
| **Имя прецедента** | Guarantee the transaction |
| **ID прецедента** | 3 |

| | |
|---|---|
| **Краткое описание** | The site owner (third party) guarantees the transaction. |
| **Актёры, задействованные в прецеденте** | Site owner |
| **Предусловия** | нет |
| **Основной поток** | 1. The owner collects the info of the customers and sellers.<br><br>2. Collect the seller's deposit.<br><br>3. Collect payments from customers.<br><br>4. Transfer the money to the seller's account when both parties agree. |
| **Постусловия** | After the transaction is completed, the user can evaluate the seller and the product. |
| **Альтернативные потоки** | The transaction fails, the owner collects the message and handles it accordingly |

**Вывод:**

I have understood what a use case is and how we find it in our lives.

Understand how to read UML diagrams based on information or your own UML diagrams. This is a good method at work. I will try to use UML to analyze various requirements in the future.