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Project

Amazon

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1: Feasibility Study & Project Proposal

i. Introduction

Amazon is a company that sells things online. It started as a bookstore, but now it sells almost everything. Amazon is very big and has a lot of customers. It is one of the most successful companies in the world. It sells a wide variety of products, including electronics, clothing, and home goods.

ii. Problems

Before Amazon, there were a number of problems that people faced when shopping for products. These problems included:

- **Convenience:** It was not always easy to find the products you were looking for. You had to go to different stores, and you might not be able to find what you were looking for in one place.

- **Price:** The prices of products could vary widely from store to store. It was difficult to know where to get the best deal.

- **Limited Selection:** The selection of products was limited in many stores. You might not be able to find the products you wanted, or you might have to settle for a product that was not exactly what you were looking for.

iii. Background

Amazon is a global company that was founded in 1994 by Jeff Bezos. The company started as an online bookstore, but it has since expanded to sell a wide variety of products, including electronics, clothing, and home goods. Amazon is one of the most successful companies in the world, and it is estimated to have a market capitalization of over $1 trillion.

iv. Proposed solution

Here are some of the proposed solutions that Amazon has offered to address the problems

- **Convenient shopping experience:** Amazon makes it easy to find and buy products online. You can order from home and have the items delivered to your door.

- **Competitive prices:** Amazon offers competitive prices on a wide variety of products. This is because the company has a large and efficient distribution network.

- **Wide Selection:** Amazon offers a wide variety of products from a variety of sellers. This allows you to find the products you want, even if they are not available in your local store.

v. Work Plan

An Amazon work plan typically includes the following elements:

1. Define the goals of the project and be clear and concise. The work plan should be clear and concise so that everyone can understand it

2. Identify the tasks that need to be completed. What specific steps need to be taken to complete the project? Break the project down into smaller, more manageable tasks

3. Estimate the time and resources that will be needed. How long will it take to complete each task? What resources will be needed? be as realistic as possible when making these estimates.

4. Create a timeline. When will each task be completed? When will the project be completed? Be sure to build in some buffer time for unexpected delays.

5. Assign tasks to team members. Who will be responsible for each task? Make sure that the tasks are assigned to people who have the skills and experience to complete them.

6. Track progress and make adjustments as needed. How will you track progress? How will you make adjustments as needed? It's important to regularly review your work plan and make changes as needed.

2: Project requirements

A. Functional Requirements

❖ User Requirements

1. Ability to search for and easily find products on the website or app.

2. Secure and easy checkout process.

3. Option for fast and reliable delivery, including same-day or next-day delivery.

4. Access to a wide range of products at competitive prices.

❖ System Requirements

5. A search functionality that allows users to search for products by various criteria, such as keywords, categories, and filters. The search functionality should also be fast and accurate, with relevant results displayed at the top of the search results page.

6. A secure payment gateway that integrates with various payment methods and ensures the confidentiality and integrity of user data. Additionally, the checkout process should be intuitive and user-friendly, with clear instructions and prompts.

7. Integration with shipping and logistics providers to enable fast and reliable delivery options. The system should also provide accurate tracking information and alerts for customers to track their orders in real-time.

8. An inventory management system that enables the listing and updating of a wide range of products, with accurate pricing information and real-time stock updates.

9. A robust order management system that tracks the status of orders from placement to delivery, with automated notifications and updates for customers.

10. Integration with various payment methods, including credit/debit cards and digital wallets, to provide customers with a range of payment options. The system should also ensure the security of payment transactions and comply with relevant regulations and standards.

11. Integration with a customer review and rating system that allows customers to rate and review products and provides a rating system that can be used to sort search results by user rating.

12. A return and exchange management system that enables customers to initiate returns or exchanges easily, with clear instructions and prompts, and provides real-time updates on the status of their returns or exchanges. The system should also ensure accurate and timely processing of refunds or exchanges.

B. Non-Functional Requirements

1. Performance: The delivery status tracking system should provide real-time updates on package location and estimated delivery time within 30 seconds of a tracking request being made, with a 99.9% uptime rate.

2. Scalability: The delivery status tracking system should be able to handle at least 1 million tracking requests per hour, with the ability to scale up to 10 million requests per hour as the business grows.

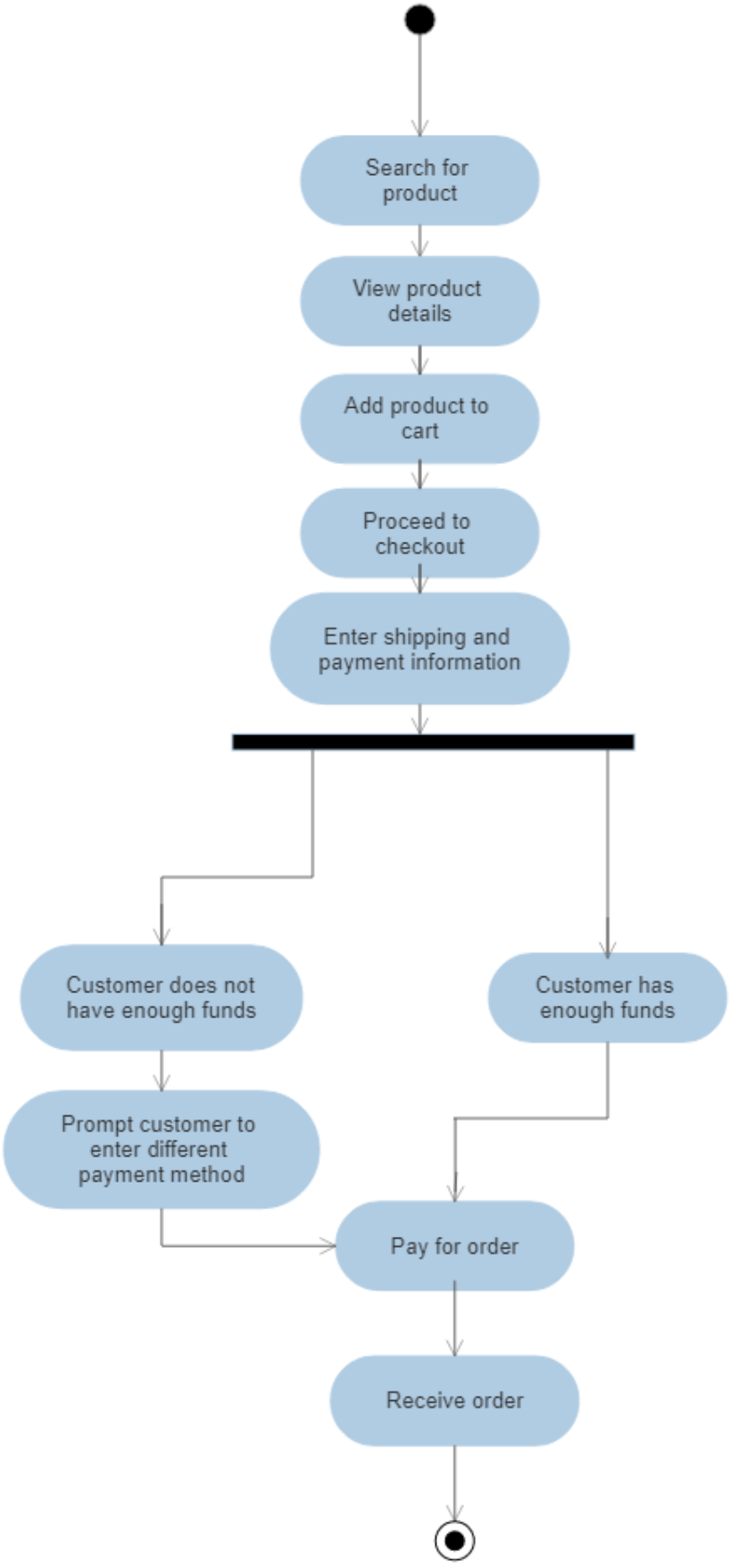
3. Security: The delivery status tracking system should use end-to-end encryption to protect tracking information during transit and at rest. The system should also comply with relevant data protection laws, such as GDPR, and undergo regular security audits to ensure compliance.

4. Reliability: The delivery status tracking system should have a mean time between failures (MTBF) of at least 10,000 hours, with a mean time to repair (MTTR) of no more than 1 hour in case of any disruptions or failures.

5. Usability: The delivery status tracking system should be designed with a user-centric approach, with clear and concise tracking information displayed in a user-friendly interface. The system should also provide options for filtering and sorting tracking information based on user preferences.

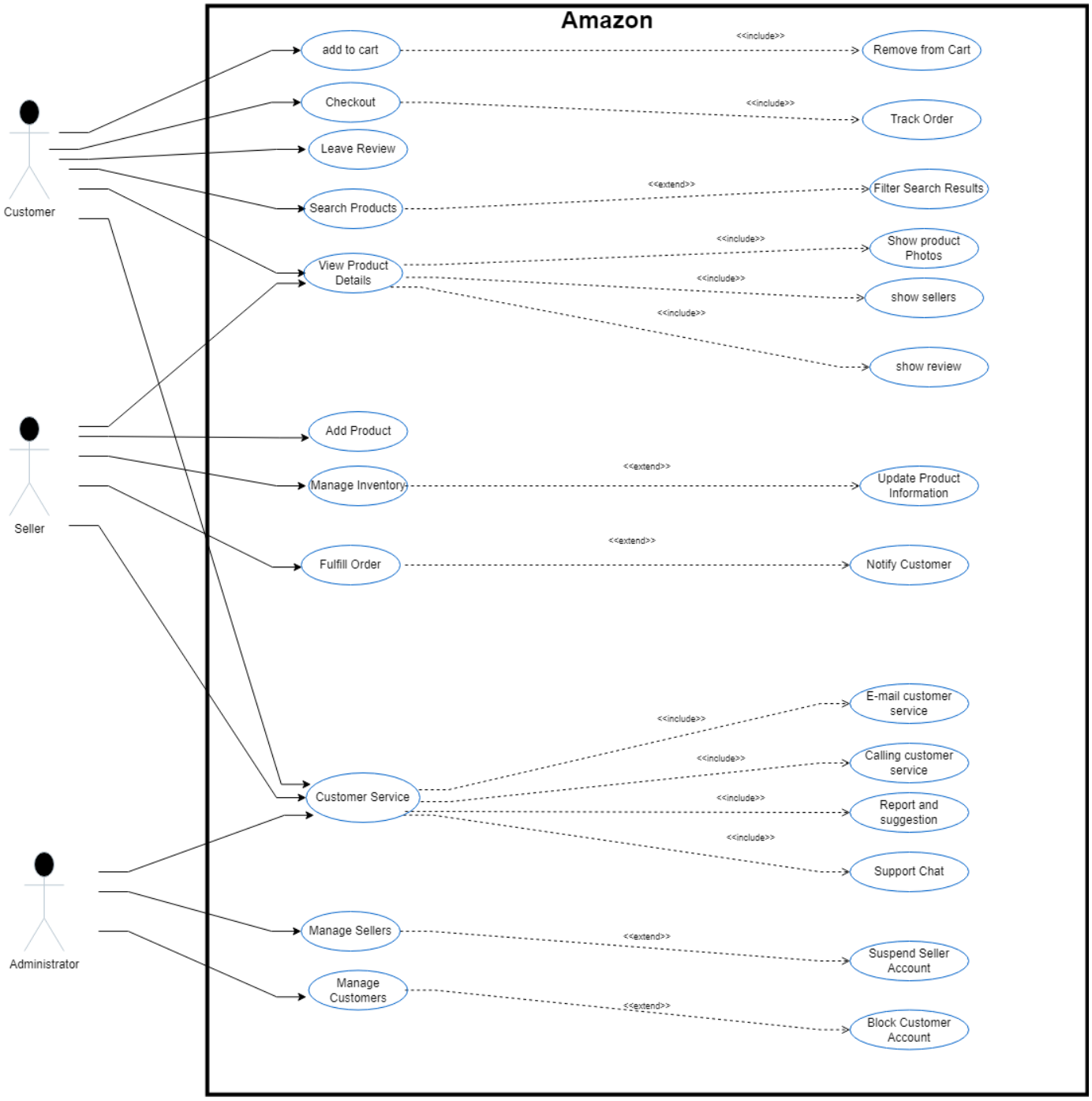
6. Accessibility: The delivery status tracking system should comply with WCAG 2.1 Level AA accessibility standards to ensure accessibility for users with disabilities. The system should also provide alternative text descriptions for images and other visual elements and support assistive technologies such as screen readers.

3: Activity diagram (Amazon Ordering system)



4: Project Use Case Modeling

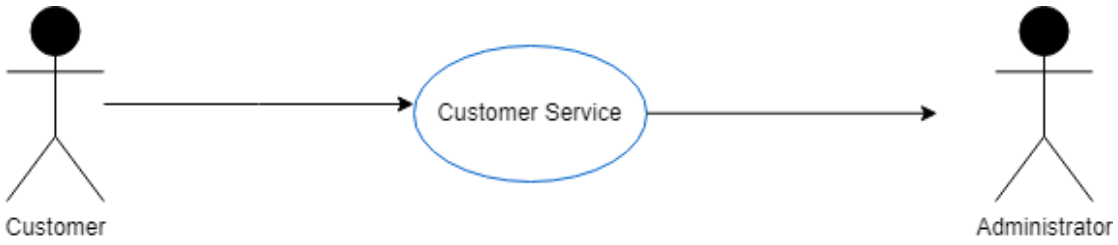
a. Use case Diagram



b. Use Case Table 1

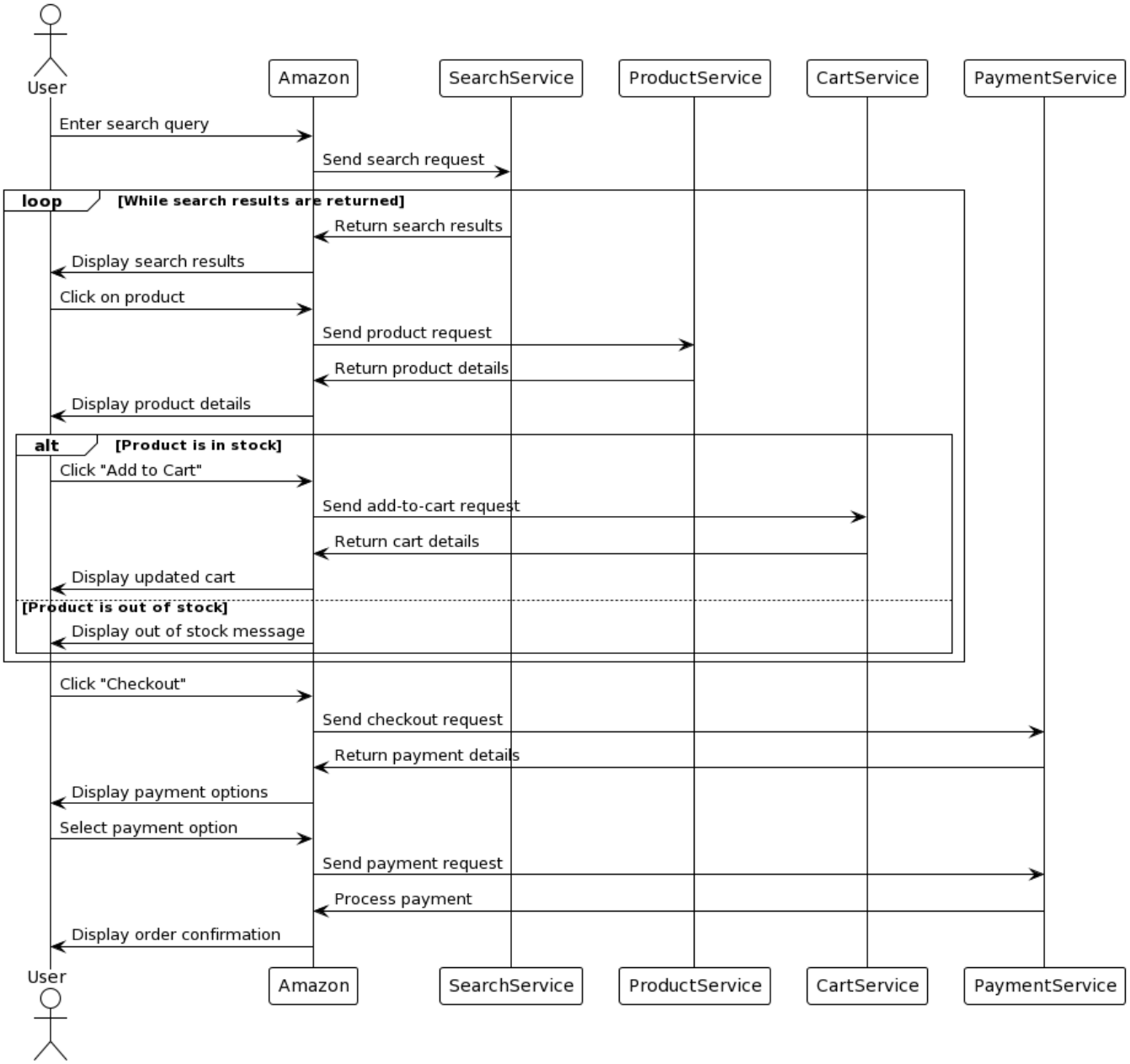
Amazon: View product details	
Actors	Customer, Seller
Description	The "View product details" use case Let the user see the product photo, who sell it and reviews.
Data	The data can include: Photo about the product, the sellers and the prices, review and Rating.
Stimulus	User click on the product he wants showing the product details.
Response	Information about the product selected, photos, sellers and prices, reviews and rating.

c. Use Case Table 2



Amazon: Customer Service	
Actors	Customer, Administrator
Description	The "Customer Service" use case Let the user contact and communicate with Amazon support team to solve his problems include: refund problems, pay problems, delivery problems, etc.
Data	The data can include: User information, product photo and order number.
Stimulus	When user click on the Customer Service, he can choose the contact way he likes, by E-mail, making a call, or support chat.
Response	An assist from the Amazon support team to the customer.

5: Sequence Diagrams



6: Class Diagram (Amazon Ordering system)