Architecture Design Exercise:

Team:

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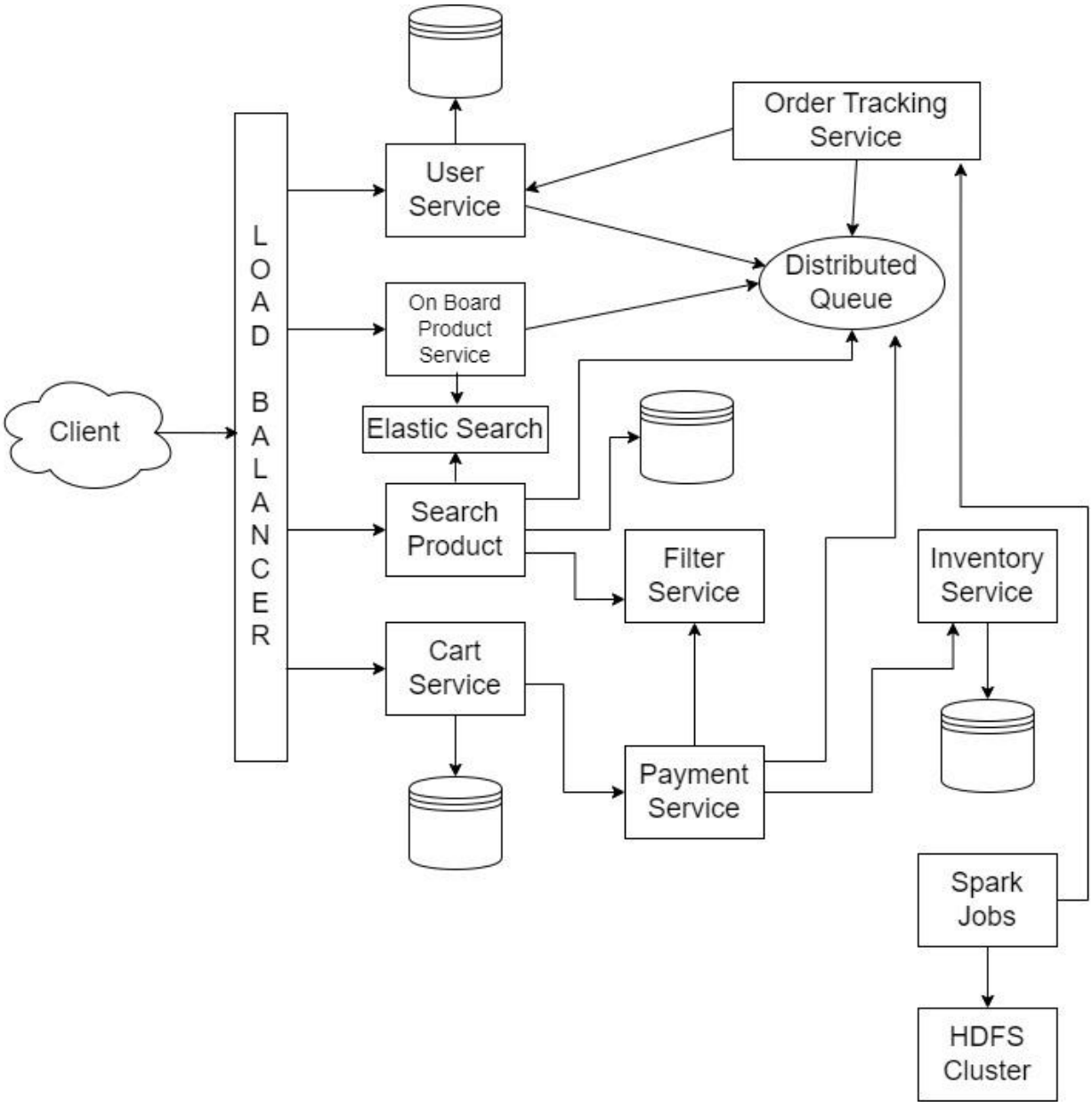
Architecture Diagram:



Data Flow Diagram:

Use cases:

1) How does the buyer buy an item?

- The buyer first logs in to the system using the correct email address and password.
- On successful logging to the system, the buyer selects the seller and then gets a list of all the items that the seller is selling.
- The buyer has options to select from which seller he wants to buy.
- The buyer selects the item he wants to buy and then adds it to the shopping cart.
- The buyer then pays for the item in the cart and the order is completed.

2) How does the buyer check out an item from the shopping cart?

- The buyer navigates to the shopping cart and selects the proceed to payment option.
- The buyer is then allowed to input his/her payment details and the payment type.
- The buyer is then prompted to enter his address and allowed to complete the checkout process and is directed to payment options to complete the transaction successfully.

Components explanation:

1. **Load balancer:** A load balancer is a device that acts as a reverse proxy and distributes network or application traffic across a number of servers. Load balancers are used to increase capacity (concurrent users) and reliability of applications.
2. **Search:** A user will search for the product desired, and add the product to the cart.
3. **Inventory Service:** This confirms that the product is available for sale, and the user can proceed to the checkout step.
4. **Cart Service:** Any product in the cart can be used to “place” an order. After this step, the buyer is redirected to the payment service where he can finish the payment.
5. **Payment Service:** This enables the user to buy the product, which triggers the order tracking service
6. **Order tracking service:** this displays to the user about the status of the current order.