

Notes - Design Product Listings

Step 1: Define the Scope

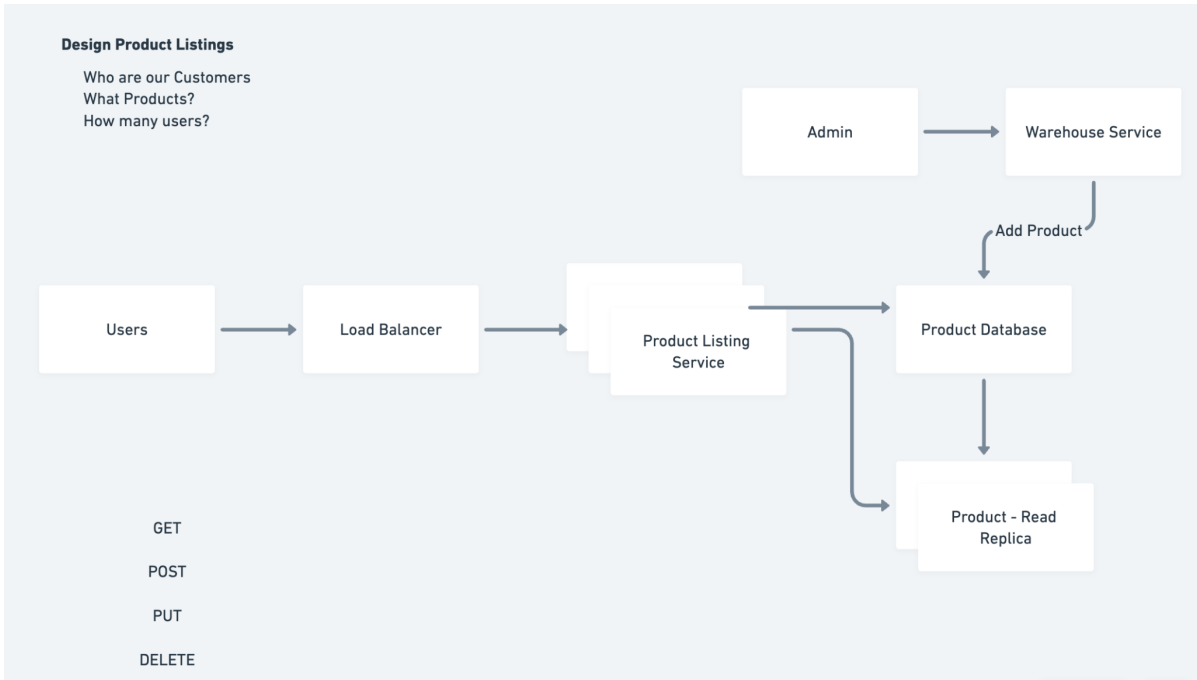
Functional Requirements

1. Product Card / Row \Rightarrow Name, Price, Image, Description, Reviews, Rating, Seller Name, Qty?
2. Filters \Rightarrow What do we filter on, Single / Multiple Filters at a time
 1. Category
3. Sorting \Rightarrow Sort by which column?
4. Pagination \Rightarrow Number of products per page,

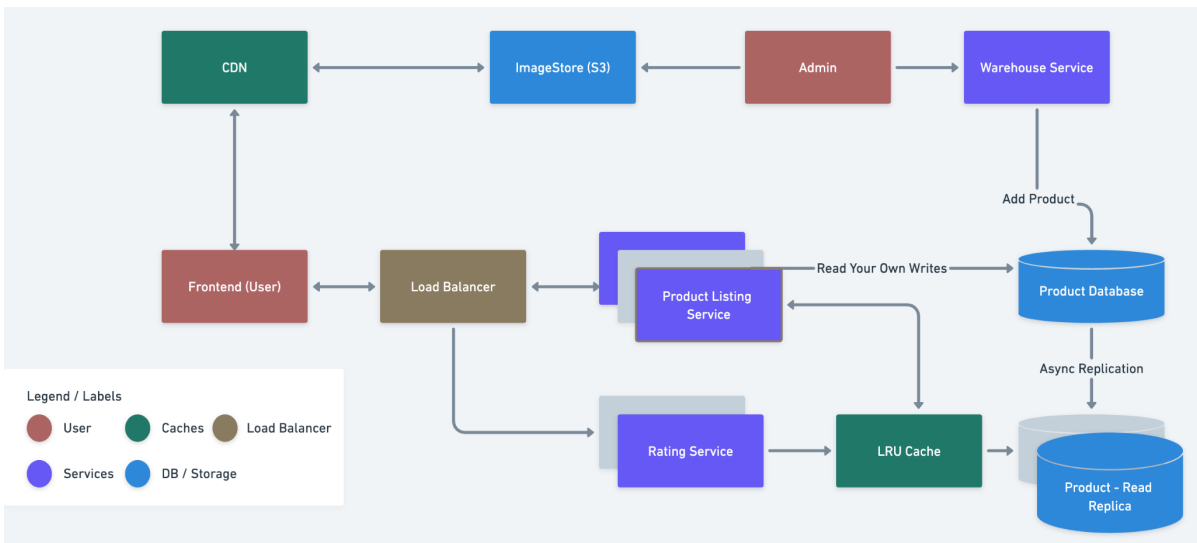
Non-Functional Requirements

1. Low Latency: 200 ms
2. Availability vs Consistency: Highly Available, Eventually consistent (Price should be consistent)
3. Scalability: 10 rps, 1000 rps, ,1 user, 10 M users
 1. DAU \Rightarrow Daily active users
 2. MAU \Rightarrow Monthly active users
4. Type of device: Web / Android / iOS

Step 2: High-Level Design



Step 3: Deep-Dive Into Design:



Database Tables

Products Table

1. productId
2. name
3. description
4. price
5. brand
6. categoryId

Category Table

1. CategoryId
2. CategoryName

ProductImages

- ProductId
- ImageId
- ImageType

S3 URL for storing images:

s3://abhiShop/products/<product_id>/images/<image_id>.<image_type>