**Low Level Design for Flipkart Shopping Application**

1.Low Level Design:

Low-Level Design is a **phase in the software development process where detailed system components and their interactions are specified**. It involves converting the high-level design into a more detailed blueprint, addressing specific algorithms, data structures, and interfaces.

2. Quadrant to specify trivial/novel, small or large:

a. Login/Signup:

Significance: Small

* It is considered as small because user authentication is a fundamental aspect of shopping application.
* However, the basic functionality of allowing users to login or signup with an email address and password is relatively simple.
* It needs a small attention to remember the password details for user validation purpose.

b. Product Search and Filtering:

Significance: Large

* Product search and filtering are essential for helping users to find specific products quickly and efficiently.
* But the complexity lies in implementing robust search algorithms, integrating various filters and ensuring accurate results.
* It may seem like a common feature, the effort required to develop and maintain a sophisticated search and filtering makes this feature so large.

c. Cart Management:

Significance: Small

* The shopping cart feature is relatively straight forward in its functionality.
* This involves design for user interface for managing the cart items, handling interactions such as adding or removing items and ensuring synchronization form backend to frontend.
* While it requires attention to detail and usability considerations, the complexity of the cart management is generally lower compared to larger features.

d. Order and Delivery:

Significance: Large

* When user intend to purchase the products it redirects to checkout process.
* The checkout process is of highly important as it involves sensitive user information.
* This process handles various task such as payment details, updating inventory levels and generating invoices.
* Coordinating delivery involves logistics planning, carrier integration, package tracking and ensuring timely and accurate delivery to consumers.
* Integrating with external shipping carriers, handling exceptions such as order cancellations and customer support will increase complexity to this feature.

e. Reviews:

Significance: Trivial and small

* Reviews plays a crucial role in providing feedback and insights to other users considering a purchase.
* But sometimes, the specific brand also defines the consumers to buy a product or not.
* Integrating reviews with product pages and ensuring that they contribute positively to the overall user experience are essential consideration.