



\-Introduction:

This project definitely helps the user to buy anything from the internet because in the **Online Electronics Shop** You Can purchase anything with clicking of some button of the mouse and pressing some keys of the keyboard & entering your credit card no. in that.

By using this project, the user can save his or her time by purchasing the product which time they are wasting by roaming in the market. from here, they can get most probably all the things they want besides fastmoving Entertainment goods. They have various choices in one Collection.



٢ – FUNCTIONAL REQUIREMENTS:

٢,١-User Functional Requirements:

١. User Registration and Authentication:

- Users should be able to sign up for a new account by providing necessary details.
- Existing users should be able to log in securely using their credentials.
- Password reset functionality should be available for forgotten passwords.

٢. Browse and View Products:

- Users should be able to browse through the list of products available on the platform.
- Each product should have a detailed page displaying its description, price, images, and other relevant information.
- Users should be able to view product categories and navigate through them.

٣. Add to Cart:

- Users should be able to add products to their shopping cart from the product detail page or listing page.
- They should be able to adjust the quantity of items in their cart and remove items if needed.

٤. Search and Filter Products:

- Users should have the ability to search for products using keywords.
- Filter options such as category, price range, brand, etc., should be provided to help users narrow down their search results.

٥. Checkout Process:

- Users should be guided through a seamless checkout process.



- They should be able to review their cart, add or remove items, and proceed to the payment stage.
- Multiple payment methods (credit/debit card, PayPal, etc.) should be supported.
- Users should receive confirmation emails after successful purchases.

٦. Feedback and Reviews:

- Users should be able to leave feedback or reviews for products they have purchased.
- Ratings and reviews should be displayed publicly on the product pages to help other users make informed decisions.

٢,٢-Admin Functional Requirements:

٧. Admin Login:

- Administrators should have a secure login interface to access the admin panel.

٨. Product Management:

- Admins should be able to add new products to the platform, including details like name, description, price, images, and category.
- They should be able to edit existing product information and delete products if necessary.
- Bulk upload functionality for adding multiple products at once should be provided.

٩. View Insights:

- Admins should have access to analytics and insights about the platform's performance.
- Metrics such as sales trends, popular products, user demographics, etc., should be available through graphical representations or reports



٣-NON-FUNCTIONAL REQUIREMENTS:

Performance:

- ١٠. **Response Time:** The system should respond to user interactions (e.g., page loads, search queries) within a specified time frame (e.g., <٣ seconds) to ensure a smooth user experience.
- ١١. **Scalability:** The system should be able to handle an increasing number of users and products without significant degradation in performance. It should scale horizontally and vertically as needed.
- ١٢. **Load Testing:** The system should be subjected to load testing to ensure it can handle peak loads and concurrent user sessions without crashing or slowing down.

Security:

- ١٣. **Data Encryption:** User data, including personal information and payment details, should be encrypted both in transit and at rest to prevent unauthorized access.
- ١٤. **Authentication and Authorization:** Secure authentication mechanisms (e.g., multi-factor authentication) should be implemented to verify user identities. Access control should be enforced to ensure users can only access resources they are authorized to.
- ١٥. **Protection Against Common Attacks:** The system should be protected against common web security threats such as crosssite scripting (XSS), SQL injection, and cross-site request forgery (CSRF) through appropriate security measures like input validation, output encoding, and secure session management.



Reliability:

- ١٦. **High Availability:** The system should have a high level of availability, ensuring it remains operational even in the event of hardware failures or maintenance activities. This may involve redundancy and failover mechanisms.
- ١٧. **Backup and Disaster Recovery:** Regular backups of the system's data should be performed, and disaster recovery procedures should be in place to restore the system to a functional state in case of catastrophic events.
- ١٨. **Error Handling:** The system should gracefully handle errors and exceptions, providing informative error messages to users and logging detailed error information for troubleshooting purposes.

Usability:

- ١٩. **User Interface Consistency:** The user interface should be consistent across different pages and devices, following established design patterns and standards.
- ٢٠. **Accessibility:** The system should be accessible to users with disabilities, adhering to accessibility guidelines such as WCAG (Web Content Accessibility Guidelines).
- ٢١. **Multi-device Support:** The system should be responsive and work seamlessly across a variety of devices and screen sizes, including desktops, tablets, and smartphones.

Maintainability:

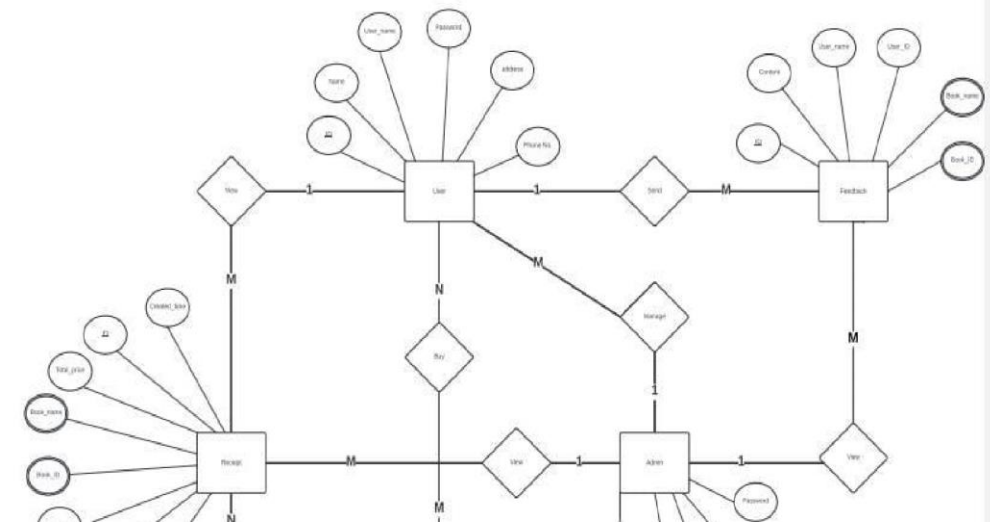
- ٢٢. **Modularity and Extensibility:** The system's architecture should be modular, allowing for easy maintenance and extension with new features in the future.



- ٢٣. **Documentation:** Comprehensive documentation should be provided for developers, administrators, and users, covering system architecture, APIs, data models, and user guides.
- ٢٤. **Code Quality:** The codebase should adhere to coding standards and best practices, facilitating code reviews, debugging, and future enhancements.

SECTION ٤ – DATABASE SPECIFICATION:

٤,١ – ERD MODEL:

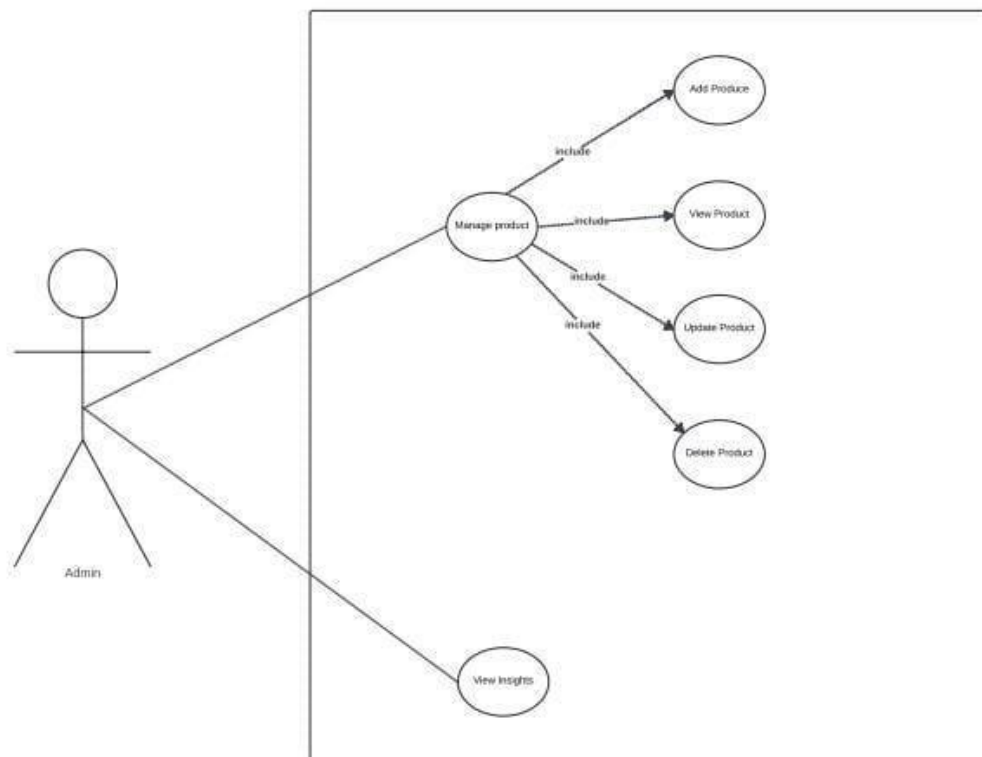




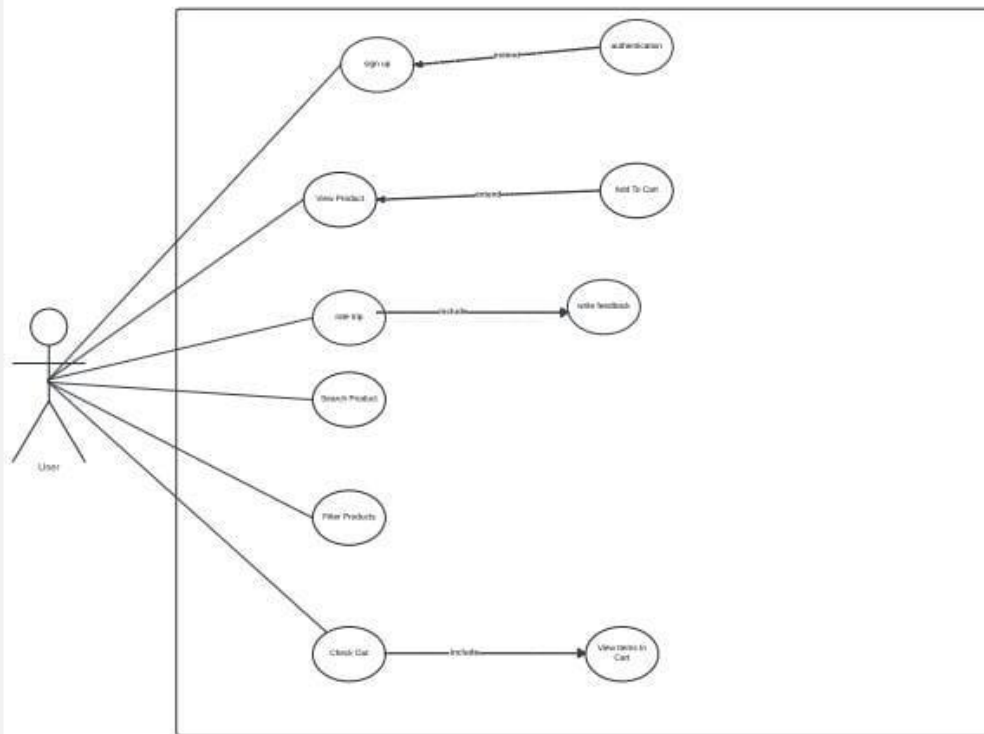
SECTION ٥ – USE CASE DIAGRAM & DESCRIPTION:

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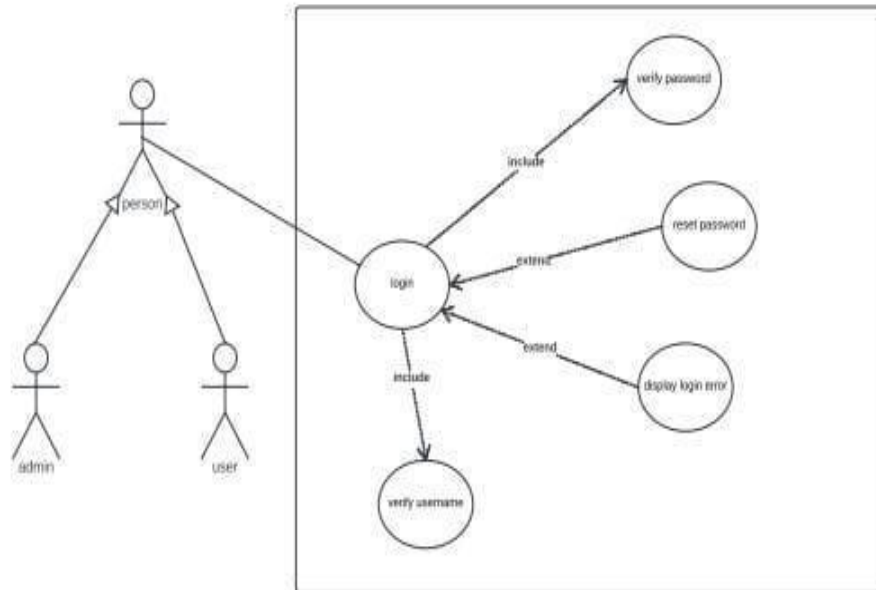
٥-١ ADMIN USE CASE:



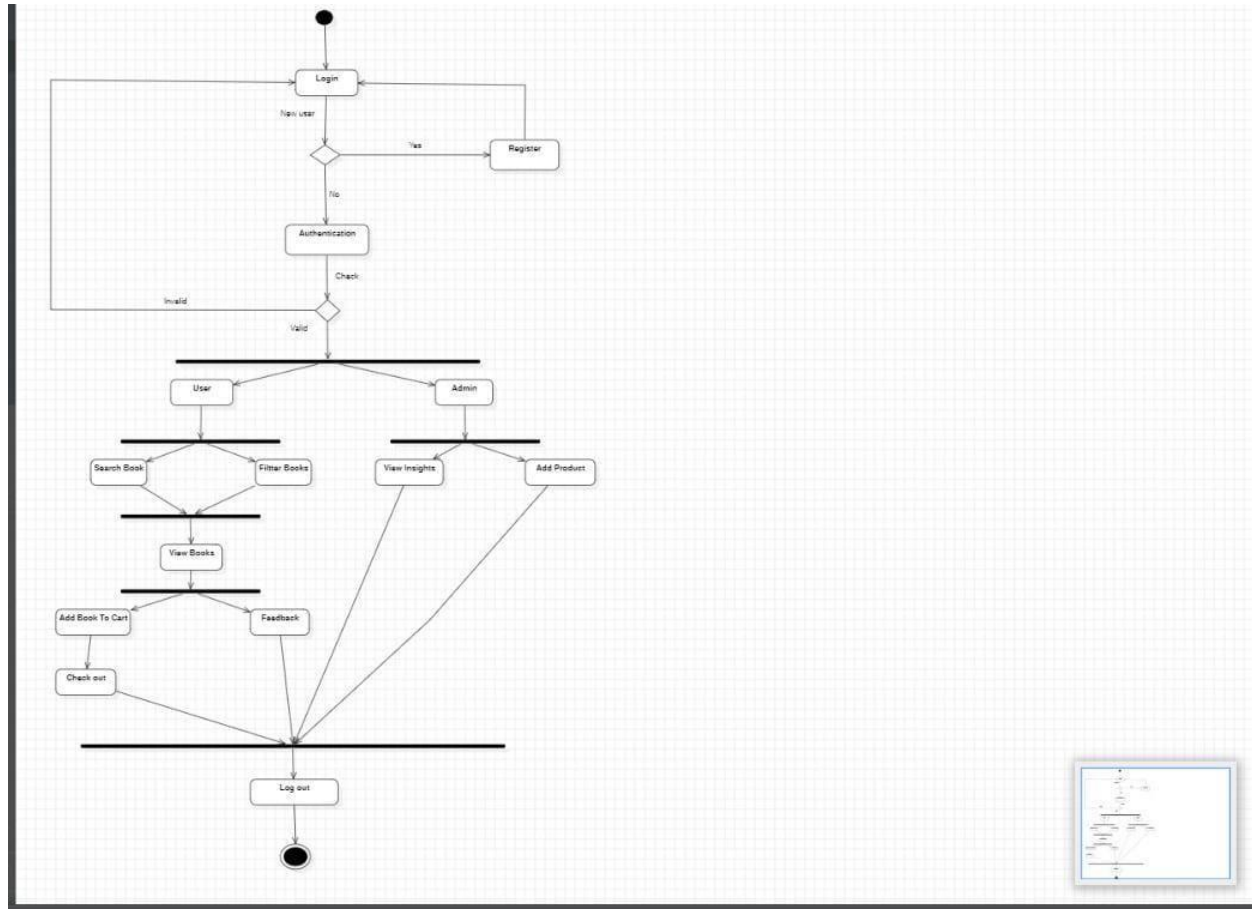
٥-٢- USER USE CASE:



٥-٣- PERSON USE CASE:

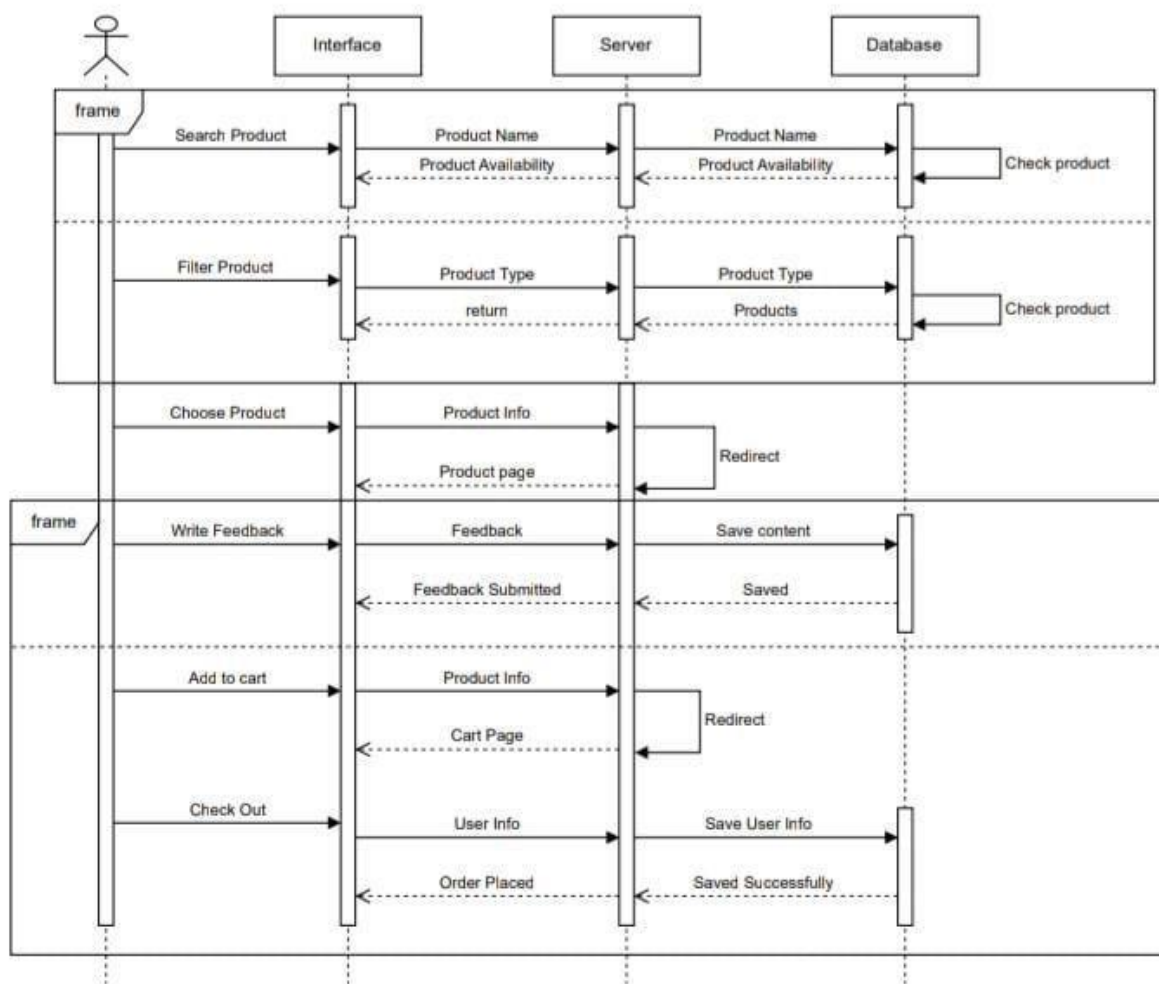


SECTION ٦ – ACTIVITY DIAGRAMS:



SECTION V– SEQUENCE DIAGRAMS:

V- ٢-USER:



V-1 – ADMIN:

