Acropolis Institute of Technology and Research, Indore

Department of Computer Science and Engineering

B. Tech. IV Semester

Jan - June 2025

Lab Assignment On Software Engineering [CS 403]

Submitted To:

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Synopsis on

Title of Case Study

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Synopsis

TITLE: Agency-Customer E-Commerce Platform

INTRODUCTION:

In today's world, technology plays a vital role in education, work, and daily life. However, the high cost of premium electronic devices like laptops, smartphones, and tablets makes them inaccessible for many students, freelancers, and small business owners. At the same time, government agencies across India seize large quantities of such electronics every year—products that are often brand-new or lightly used. These items are meant to be auctioned, but due to complex tender processes and lack of public awareness, they often remain unsold or are only available to large-scale buyers.

This gap between available products and potential consumers presents a significant opportunity. That's where Setu comes in.

Setu is a digital platform designed to act as a bridge between verified government agencies and individual customers. It enables agencies to legally list seized electronic goods, while allowing everyday users to purchase these products at affordable, fixed prices—without the hassle of traditional auctions. The platform ensures full legal compliance, secure transactions, and transparency by verifying every listing and providing proper documentation for each item sold.

By connecting supply with demand in a simple and accessible way, Setu aims to make high-quality technology more affordable, reduce electronic waste, and support government efforts to distribute seized goods efficiently. Whether it's a student in need of a laptop for online learning or a freelancer looking for a better phone, Setu is here to provide a smart, legal, and budget-friendly solution.

2.1 PROJECT BENEFITS:

- Affordable access to premium electronic products
- 100% legal and verified product listings
- Easy and secure platform for government agencies to sell seized goods
- Fixed pricing model (no bidding or auctions)
- Reduces electronic waste through reuse of seized products
- Promotes digital inclusion for students, freelancers, and startups
- Transparent and secure transactions
- Real-time order tracking and notifications
- Customer feedback and rating system
- Streamlined admin and complaint management dashboard

2.2 PROJECT SCOPE

- Targeted at agencies looking to sell products in bulk or individually

- Useful for customers seeking genuine products at competitive rates

- Can be scaled to various product categories

- Supports integrations with delivery services and payment

3 PROBLEM STATEMENT

Every year, government agencies in India seize thousands of valuable electronic goods such as laptops, smartphones, and tablets. However, due to limited public awareness, complex auction procedures, and restrictions on individual buyers, these products often remain unsold or underutilized. As a result:

- Individual customers miss out on affordable access to high-quality tech.
- Government agencies struggle to efficiently dispose of seized goods.
- Valuable resources are wasted
- There is no centralized, transparent, or user-friendly system for the public to purchase these products legally and securely.

There is a clear need for a platform that bridges this gap between seized goods and potential buyers in a legal, efficient, and accessible way.

4. Objectives:

- To provide affordable access to premium electronic goods through a legal and verified platform.
- To simplify and streamline the disposal process of seized goods for government agencies.
- To ensure secure, transparent, and ¡user-friendly transactions for individual customers.
- To reduce electronic waste by promoting the reuse of legally seized tech products.

5. Intended Users

- Students – looking for affordable laptops, tablets, and smartphones for online learning and academic use.
- Freelancers – in need of cost-effective tech tools to support their remote work and creative projects.
- Startups & Small Businesses – seeking budget-friendly devices to equip their teams during early growth stages.
- General Consumers – anyone interested in purchasing premium electronics at reduced prices legally.
- Government Agencies – looking for a secure and efficient platform to list and sell seized electronic goods.

6. Existing System

Currently, the process of selling seized electronic goods in India is managed through traditional public auctions and government tenders. These auctions are often:

- Offline or poorly digitized, making access difficult for individual buyers
- Complex and time-consuming, requiring formal registration and documentation
- Limited to bulk or commercial buyers, excluding general consumers
- Not widely advertised, so most people are unaware they exist
- Lacking transparency, with little clarity on product condition or legal proof

As a result, many high-value electronic products remain unsold, and individual users miss the opportunity to purchase premium tech at affordable prices. There is no centralized, user-friendly platform that connects government agencies directly with the public for the legal sale of these goods.

PROCESS FLOW:

- For Government Agencies:

1. Agency Registration – Agency signs up and submits required verification documents.
2. Admin Approval – Platform admin verifies documents and approves the agency.
3. Product Listing – Agency lists seized electronic goods with legal documents and product details.
4. Product Goes Live – Listed items become available for customers to view and purchase.
5. Order Fulfillment – Once purchased, the agency processes and ships the product to the customer.

- For Customers:

1. Customer Sign-Up – User creates an account on the platform.
2. Browse Listings – User views available seized goods with descriptions and prices.
3. Product Selection – User selects a product and reviews its legal verification and condition.
4. Make Payment – User pays through a secure payment gateway.
5. Order Tracking – User receives real-time updates on order status and delivery.
6. Feedback – After receiving the product, user leaves a review to help others.

6.2 LIMITATIONS:

- Limited public awareness of the platform
- Dependence on government agency participation
- Inconsistent availability of seized products
- Lack of product warranty or after-sales support
- Initial trust issues among new users
- Delivery challenges in remote areas

7. PROPOSED SYSTEM

The proposed Setu platform aims to address the gaps in the existing system by offering a centralized, secure, and user-friendly platform for purchasing verified government-seized electronic goods. Key features of the proposed system include:

- Centralized Marketplace – A single platform for listing and purchasing seized electronics, accessible to all users.
- Verified Listings – All products are legally verified and come with proper documentation, ensuring trust and transparency.
- Fixed Pricing Model – No auctions, just clear, affordable prices for each product, making the buying process straightforward.
- Customer-Friendly Experience – Simple registration, easy browsing, and seamless checkout with secure payment options.
- Real-Time Updates – Track orders with real-time notifications and updates on delivery status.
- Environmentally Conscious – Promotes reuse of seized goods, helping reduce electronic waste.

7.1 SYSTEM FEATURES

- User Registration/Login – Secure sign-up and login for agencies and customers.
- Product Listings – Agencies list seized goods with legal details and images.
- Fixed Pricing – Clear, affordable prices with no bidding.
- Secure Payment – Safe payment gateway for transactions.
- Order Tracking – Real-time tracking of orders.
- Customer Reviews – Feedback system for product ratings.
- Admin Dashboard – Manage listings and handle complaints.
- Notifications – Real-time updates for users.
- Legal Documentation – Verified products with legal proof.
- Mobile Optimization – Platform accessible on all devices.

7.2 PROCESS FLOW

User/Agency Registration
2. Product Listing by Agencies
3. Product Search and Filter by Customers
4. Order Placement and Payment
5. Order Dispatch and Notifications

7.3. HARDWARE REQUIREMENT

- System: >i3 Processor
- RAM: 4-8 GB
- Hard Disk: 1 TB
- Display: Standard VGA

7.4. SOFTWARE REQUIREMENT

- OS: Windows 10/Linux/macOS
- Frontend: React.js, Tailwind CSS
- Backend: Node.js, Express
- Database: MongoDB/PostgreSQL-
APIs: Telegram Bot, Gemini, Google Vertex AI- Payment: Razorpay/Stripe

EXPECTED OUTCOMES

Affordable products for end-users
- Better visibility and direct selling for agencies
- Streamlined purchase and delivery cycle
- Enhanced customer trust and platform engagement

8. Conclusion:

Setu provides a unique solution to the challenges of purchasing government-seized electronics by offering a secure, transparent, and affordable platform for both consumers and government agencies. By bridging the gap between seized goods and potential buyers, Setu makes high-quality tech accessible to a wider audience, reduces e-waste, and helps government agencies streamline the sale of seized goods.

With features such as verified listings, fixed pricing, secure payments, and real-time tracking, Setu ensures a seamless and reliable experience for customers. The platform also supports digital inclusion by making premium technology available to students, freelancers, and startups at affordable prices.

Setu is poised to revolutionize the way people access tech, offering a legal, sustainable, and customer-friendly alternative to traditional auctions and tenders. As the platform grows, it will continue to empower users, reduce waste, and contribute to a more equitable digital ecosystem.

9.1 LIMITATIONS

- Internet required
-Depends on agency participation and inventory updates

9.2. FUTURE ENHANCEMENTS

-Mobile app integration
-Dynamic pricing features
-Chat support for buyers
-Delivery partner integration

10. REFERENCES

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Acropolis Institute of Technology and Research, Indore

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UML Diagrams on

Title of Case Study

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UML Diagrams