

Birla Institute of Technology & Science, Pilani
Work Integrated Learning Programmes Division
First Semester 2024-2025

Mid-Semester Test
(EC-2 Regular)

Course No. : SESAPZG685
Course Title : Software Product Management
Nature of Exam : Closed Book
Weightage : 30%
Duration : 2 Hours
Date of Exam : 22 SEP 2024 FN

Note to Students:

- Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
- All parts of a question should be answered consecutively. Each answer should start from a fresh page.
- Assumptions made if any, should be stated clearly at the beginning of your answer.

Q1. Which mistake by Nokia led to its decline in its customer base? Detail it out. [2]

Lack of Innovation
Poor User Experience
Delayed Response

Q2. Explain the source of innovation in TrueCaller application that provides the caller ID details in mobile phone? [2]

Focus on Customer Needs

Drucker emphasized the importance of understanding customer needs and creating value for them. TrueCaller's innovation stems from addressing a significant customer need: identifying unknown callers and protecting users from spam calls. By focusing on this critical pain point, TrueCaller created a valuable service that resonates with its users.

Q3. Describe the bottom 3 layers of Product Market Fit for Gmail. [3]

Minimum 2 points in below layers.

Target Customer
Individual Users
Businesses and Organizations
Technologically Savvy Users

Underserved Needs

Storage Capacity
Spam Filtering
Search Functionality
User Interface and Experience
Integration with Other Services

Value Proposition

Generous Storage
Effective Spam Filtering
Powerful Search Capabilities
Intuitive User Interface
Integration with Other Google Services
Security and Compliance

Q4. As a co-founder, create a lean startup canvas and story board for an automated product that detects, identifies and notifies to the authority the suspected actions in public places across the city. Ex: Traffic violations [4 + 4]

LEAN CANVAS: (Min 2 points in each point below)

#####Problem

Traffic Violations:
Public Safety:
Resource Inefficiency:
Lack of Real-Time Data:

#####Solution

Automated Detection System: AI-powered cameras and sensors that detect and identify traffic violations and suspicious activities.
Real-Time Notification: Immediate notification to authorities via a dedicated platform or app.
Data Analytics: Providing insights and trends on public place activities to improve future policing strategies.
Integration with Existing Systems: Compatibility with existing law enforcement systems for seamless integration.

#####Key Metrics

Detection Accuracy:
Response Time:
Incident Reduction:
User Adoption:

Unique Value Proposition (UVP)

Real-Time Monitoring:

High Accuracy:

Efficient Resource Allocation:

Data-Driven Insights:

#####Unfair Advantage

Advanced AI Technology:

Strategic Partnerships:

Scalability:

#####Channels

Direct Sales: Selling the system directly to law enforcement agencies and local governments.

Partnerships: Partnering with technology companies, security firms, and urban planning organizations.

Government Tenders: Participating in government tenders for public safety projects.

Customer Segments

Law Enforcement Agencies: Police departments, traffic police, etc.

Local Governments: Municipalities, city councils, etc.

Private Security Firms: Companies providing security services in public places.

#####Cost Structure

Hardware Costs: Cameras, sensors, and other hardware components.

Software Development Costs: Development and maintenance of AI algorithms and software platforms.

Marketing & Sales Costs: Expenses related to marketing, sales, and partnerships.

Operational Costs: Ongoing operational costs including maintenance, updates, and support.

#####Revenue Streams

Subscription Fees: Monthly or annual fees for using the system.

One-Time Licensing Fees: Initial licensing fees for the software and hardware.

Data Analytics Services: Offering data analytics services to authorities for additional revenue.

Government Grants: Potential grants from government agencies for public safety initiatives.

STORY BOARD: (Min 2 points in each release)

Release 1:

1. Real-Time Detection of Traffic Violations

Description: Implement AI-powered cameras to detect traffic violations such as running red lights, speeding, and ignoring stop signs in real-time.

2. Accurate Identification of Suspected Actions

Description: Develop advanced AI algorithms to accurately identify suspicious activities such as loitering, vandalism, or potential threats to public safety.

3. Real-Time Notification to Authorities

Description: Create a notification system that alerts law enforcement agencies in real-time about detected incidents.

4. Integration with Existing Law Enforcement Systems

Description: Ensure seamless integration of the monitoring system with existing law enforcement databases and communication systems.

5. User-Friendly Interface for Law Enforcement

Description: Design an intuitive interface for law enforcement personnel to monitor detected incidents, view footage, and manage alerts.

Release 2:

6. Data Analytics for Incident Trends

Description: Develop analytics tools to provide insights into incident trends, helping authorities strategize better policing efforts.

7. Privacy and Security Compliance

Description: Implement robust privacy and security measures to protect citizen data and comply with relevant regulations (e.g., GDPR).

8. Scalability and Flexibility

Description: Design the system to be scalable across different locations within a city or region, with flexibility to adapt to varying environmental conditions.

Release 3:

9. Maintenance and Update Mechanisms

Description: Develop mechanisms for regular software updates, hardware maintenance, and troubleshooting to ensure continuous operation.

Priority: Medium

10. Training and Support for Law Enforcement

Q5. Define must have and performance gainers for online education product for kids [3]
3 points in each section.

Must-Haves

Engaging and Interactive Content

User-Friendly Interface

Safety and Security Features

Personalized Learning Paths
Progress Tracking and Reporting
Accessibility Across Devices
Customer Support

Performance Gainers
Gamification Elements
Virtual Field Trips and Interactive Simulations
Real-Time Feedback Mechanisms
Collaborative Learning Tools
Parent-Teacher Communication Tools
Customizable Content Options
Offline Access Capabilities

Q6. Imagine you are the product manager of Quick Delivery Ecommerce product. Ex: Blinkit
Explain the below questions with example and justify.

a. What value addition you bring in your product? [3]

Any 3 points.....

Personalized Recommendations:
Multi-Language Support:
Wider Product Range:
Fresh Produce Quality Guarantee:
Dynamic Pricing:
Eco-Friendly Packaging:
Integration with Other Services:
Community Engagement:

b. How to analyze the customer pain points from the last product release? [3]

1. Collect Feedback Data
2. Categorize Feedback
3. Identify Common Themes
4. Prioritize Pain Points
5. Analyze Root Causes
6. Develop Solutions
7. Validate Solutions
8. Communicate Changes

Ex:

Bug Reports: Multiple users reported that the app crashes when trying to upload large files.

Navigation Confusion: Several users found it difficult to navigate between different sections of the app.

Slow Loading Times: Users complained about slow loading times for certain features.

c. How to retain the existing customers?

[3]

Any 3 points below

1. Provide Exceptional Customer Service
2. Build Strong Relationships
3. Offer Loyalty Programs
4. Enhance User Experience
5. Provide Value-Added Services
6. Show Appreciation
7. Analyze Customer Data

d. If competitor is delivering goods faster than your product, what is your action? [3]

- Analyze the Competitor's Strategy
- Optimize Your Logistics
- Invest in Technology
- Enhance Customer Communication
- Offer Competitive Delivery Options
- Monitor and Adjust