**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