Annexure II: Form B - Market and Financial Feasibility

1. Proposed Title:

"Priority-Based Queuing Management System: Design, Implementation, and Evaluation"

2. Market Feasibility

a. Market Analysis

• Target Audience:

- Hospitals and clinics seeking efficient patient flow management.

- Emergency response centers requiring priority-based queuing.

- Healthcare institutions aiming to improve patient satisfaction and service delivery.

• Market Need:

- Increasing patient load in healthcare facilities necessitates efficient queue management to reduce wait times and prioritize emergencies.

- Growing demand for systems that categorize patients based on urgency (e.g., emergencies, regular cases) while ensuring fair and optimized care.

• Competitive Landscape:

- Current systems offer basic queuing functions; however, they lack advanced features like urgency-based prioritization, real-time updates, and integration with hospital management systems.

b. Market Potential

• Market Size:

- The global healthcare IT market was valued at $300 billion in 2022 and is projected to grow significantly, with queuing systems being a niche but essential segment.

• Trends and Opportunities:

- Increased digitization in healthcare operations.

- Rising focus on patient-centric care.

- Advancements in AI and IoT providing opportunities to enhance queue management with real-time data and analytics.

c. Customer Segmentation

• Primary Segments:

- Hospitals, clinics, emergency care centers, and healthcare service providers.

• User Needs and Preferences:

- Hospitals require systems that efficiently manage patient flow and prioritize critical cases.

- Users prefer intuitive systems with features like real-time notifications, easy categorization, and seamless integration with existing IT systems.

3. Financial Feasibility

a. Cost Analysis

• Development Costs:

- Software Development: ₹50000- ₹80000 (includes system design, algorithm development, and interface design).

- Hardware: ₹10000 - ₹20000 (if integrated with IoT devices for tracking).

- Testing and Quality Assurance: ₹1000- ₹3000.

- Miscellaneous Costs: ₹5000 (includes setup, regulatory compliance, and operational expenses).

• Operational Costs:

- Maintenance and Updates: ₹2500 annually.

- Customer Support: ₹6000annually.

- Marketing and Promotion: ₹8000annually.

• Total Investment Required:

- Initial Investment: ₹80000- ₹90000

b. Revenue Model

• Revenue Streams:

- Subscription Fees: Hospitals pay for monthly or yearly subscriptions for accessing the system.

- Licensing: Licensing the system to healthcare networks and chains.

- Integration Fees: One-time fees for integrating with existing systems.

• Pricing Strategy:

1. Red (Emergency Cases):
    - Highest priority, immediate attention.
    - Pricing: ₹5,000 - ₹8,000 per consultation or treatment.
2. Yellow (Regular Cases):
    - Medium priority, requires timely care but not urgent.
    - Pricing: ₹2,000 - ₹3,500 per consultation or treatment.
3. White (New or Low-Priority Cases):
    - Lowest priority, can wait longer or schedule later.
    - Pricing: ₹800 - ₹1,500 per consultation or treatment.

c. Financial Projections

• Break-Even Analysis:

- Expected to reach break-even within 2-3 years based on market penetration and user acquisition.

• Profit and Loss Projection:

- Year 1: Loss of ₹30000 - ₹50000.

- Year 2: Profit of ₹20000 - ₹45000.

- Year 3: Profit of ₹80000- ₹100000

• Return on Investment (ROI):

- Estimated ROI of 25-35% by the end of the third year, assuming successful implementation and adoption.

4. Feasibility Verification

• Consultation with Guide:

- Guide's Name: Prof. Swati Singh

- Comments:

- Signature: _____

- Date: _____

5. Additional Remarks

- Scalability: The system can be expanded with additional features like multilingual support and advanced analytics.

- User Adoption: High potential in healthcare markets due to the growing emphasis on patient satisfaction.

- Market Trends: Aligned with increasing digitization and patient-centered healthcare delivery.

- Risk Management: Ensure data security, compliance with healthcare regulations, and robust backup mechanisms.

- Feedback Integration: Regular updates based on user feedback to enhance functionality and user experience.

6. Approval

• Researcher/Student Signature: _____

• Date: _____

• Institutional Approval (if applicable):

- Signature: _____

- Name: _____

- Designation: _____

- Date: _____