Final Year Project Proposal

(Fall 2023)

1) Project Title

   <u>QuickStock</u>

2) Names and IDs of Students

   <u>Amaan Majeed f2020266286</u>

   <u>Munib Ahsan Khan f2020266270</u>

   <u>Usaid Afzal f2020266271</u>

   <u>Hashim Khurshid f2020266272</u>

   <u>Faseeh Ud Din f2020266256</u>

3) Project Advisor (Name, Email Address)

   <u>Sir Noaman Saleem - noaman.saleem@umt.edu.pk (Web Dev)</u>

4) Project Co-Advisor Name (Optional)

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5) Nomination of 5 Evaluation Committee members by the advisor (FYP Committee will

   select two of them)

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6) External Collaboration/Funding (if any) + Paid or Unpaid (Confirmed or Expected)

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7) Project Description (Brief Introduction)
- Domain: Retail management and technology
- Problem: Inventory management challenges and complex credit tracking for store owners
- Solution: Cloud-based POS with stock prediction and facial recognition for credit
- Expected Outcome: Efficient inventory control and streamlined credit management

8) Major Features/Requirements/Objectives (Tentative)
- Functional Requirements:
  - Sales recording and processing
  - Inventory management and stock prediction using machine learning
  - Facial recognition for credit management
  - Cloud-based accounting software with real-time access
  - Data export in PDF/Excel formats
  - User authentication and authorization
  - Profit summary and financial reports
  - User-friendly UI/UX for store owners and customers

- Non-Functional Requirements:
  - Security measures to protect customer data
  - Scalability for handling a growing number of products and users
  - High availability and reliability of the system
  - Efficient and responsive system performance
  - Compatibility with various web browsers and devices

9) Scope of the Project/Proposed System
The project scope includes the development of a fully functional cloud-based POS system with integrated inventory management, machine learning-driven stock prediction, and a camera-based credit system. It covers the design, development, and deployment of the software. Additionally, it includes the creation of user documentation and support during and after deployment.

10) Target Users/Beneficiaries of the Proposed System
The proposed system targets small to medium-sized store owners and businesses in the retail industry. The system is designed to simplify inventory management, reduce stock-related losses, and streamline the credit process. Ultimately, it benefits store owners by increasing efficiency and profitability. Additionally, it can contribute to the overall improvement of the retail sector by promoting data-driven decision-making and better customer credit management.

11) Tools/Technologies (Tentative Listing)
- Programming Languages: Python, JavaScript (for web development)
- Machine Learning Frameworks: TensorFlow or PyTorch for stock prediction
- Web Development Framework: Django (for backend), React (for frontend)
- Database: PostgreSQL or MySQL for data storage
- Cloud Computing Platform: AWS, Google Cloud, or Microsoft Azure for hosting
- Computer Vision Library: OpenCV for facial recognition
- Security Measures: Encryption protocols for data protection
- Version Control: Git for collaborative development
- Documentation: Markdown for user manuals and project documentation