IUBAT- International University of Business Agriculture and Technology

4 Embankment Drive Road, Sector 10, Uttara Model Town, Dhaka 1230

Theory Assignment on
Online Election System
(Team Name: System builder)

Submitted by
Sammi Akter
ID: 20103038
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Submitted to
Rashedul Islam Rana
Assistant Professor
Department of Computer Science and Engineering, IUBAT

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PART-A(Analyze feasibilities of the User and Functional requirements)

Project Overview:

In an era characterized by technological advancement and the digitization of various processes, the transition to online election systems is an imperative step towards promoting transparency, efficiency, and accessibility in the electoral process. The Online Election System (OES) is a comprehensive software solution designed to revolutionize the way elections are conducted. This project seeks to provide an overview of OES, outlining its key features, objectives, and benefits.

Feasibility Assessment:

- **Technical Feasibility:** We thoroughly analyzed and could work together. For example, we wanted to allow real-time collaboration in filesharing. We had to ensure that different technologies like Flutter and Firebase could work together nicely.

  We thoroughly analyze the technical feasibility of implementing the proposed functionalities. For the online voting system, we assessed the platform's compatibility with various web browsers and devices to ensure a seamless voting experience for users. Additionally, we evaluated the available technologies for file sharing to ensure that large files could be uploaded and downloaded efficiently. Regarding individual mentoring class schedules, we assessed the technical feasibility of generating and displaying schedules dynamically based on user inputs.

- **Operational Feasibility:** We thought about how our system would fit into the current way things are done in the institution. We wanted to make sure that our system didn't cause any problems or confusion. It needed to fit right in. We collaborated closely with administrators, mentors, and students to understand their needs and pain points regarding voting, mentoring, and file sharing. By involving stakeholders in the requirements-gathering phase, we ensured that the proposed features would enhance the overall operational efficiency and user experience.

- **Economic Feasibility:** We checked if it made sense to build this system. We looked at how much money it would cost to create and run the system compared to the benefits it would bring. We wanted to make sure it was worthit. We considered the costs associated with software development, server hosting, maintenance, and potential upgrades. To justify the investment, we estimated the system's potential benefits, including time savings for administrators, improved communication through file sharing, and a streamlined voting

process.

Decision Rationale:

Our feasibility assessments played a pivotal role in shaping the design and scope of our project. For instance, based on technical feasibility, we decided to integratereal-time collaboration in file sharing as we confirmed the availability of appropriate tools. This choice enhanced the system's functionality and user experience. Considering operational feasibility, we also ensured that the system seamlessly integrated with the institution's existing processes, making adoption smoother for users. Economic feasibility guided our resource allocation, enabling us to deliver a valuable solution within budget constraints.

PART-B(Justifying the Logical Structure)

Logical Structure Analysis:

- **Choice of Technology Stack:**
  - The user interface is coded in Flutter.
  - The database is created using Firebase.
  - The software is tested using unit testing and system testing.

  The requirement for a robust, contemporary, and scalable architecture led to the choice of Flutter for the user interface and Firebase for the database.

- **Component Organization:** We divided our system into three main parts: one for voting, another for class scheduling, and one more for file sharing. This helps us work on each part without messing up the others.

- **Testing Strategies:** We use the V model as a software process model. The adoption of unit testing and system testing was a strategic choice to ensure the reliability and quality of the system. Unit testing helps validate individual units of code, enhancing the system's robustness and minimizing the likelihood of bugs. System testing validates the entire system's functionality and interactions, ensuring that all components work harmoniously. This

  A rigorous testing approach enhances the overall stability of the system andimproves the user experience.

User and Business Needs:

User Needs:

- **Easy Voting Process:** Users want a voting system that's simple to use. The system's design makes sure the voting process is clear and straightforward, helping users cast their votes without confusion during executive selections.

Business Needs:

- **Efficient Elections:** The institution needs a voting system that runs elections smoothly. The system's organisation, with features like candidate info input and result publication, ensures a well-organized and effective election process.

Conclusion:

In the journey of crafting our Student Society Management System, we embarked on a quest to ensure that our system not only meets user needs but also functions seamlessly. This report dives into how we assessed the feasibility of user and functional requirements, justifying our decisions and demonstrating the crucial role of feasibility analysis in system development.