**LANDMARK STRAIGHT B-TECH PROJECT:RESEARCH**

**Title :** **“ Application that helps to keep past questions on HND program for all departments for Landmark Metropolitan University”**

* **INTRODUCTION:**  
   This application provides an interface to store past questions for students creating a robot and user-friendly platform. This analysis aims to identify and stipulate the functional and non-functional requirements, adhering to best practices. By clearly defining these requirements , we ensure that the application not only meets the need of students but also incorporates industry standard practices, for security, usability, performance and scalability.
* **OBJECTIVE**

The objective are as follows:

* User-Interface:

Implementing a user-friendly and intuitive interface to streamline online onboarding, profile management and question management

* Security:

Implementing an automated system that depicts encryption protocols.

* Student-Empowerment:

Implementing a powerful tool that aims in supporting students in their academic endeavors, improve academic performance and enhance overall learning experience

* Streamline the process of searching for relevant questions across multiple sources by offering a single platform where students can find a wide range of past questions.
* **Functional Requirements:**

1. **User Registration and Authentication:**

* Users must be able to register and create accounts to access the platform
* Two factor authentication or similar security measure should be implemented
* Users should be able to recover their passwords if forgotten

1. **Question Repository:**

* An application providing a searchable repository of past questions
* Questions should be categorize into Schools, Departments, Courses and topics .
* Users should be able to browse and access questions based on requirements.
* Questions should be tagged with metadata(e.g exam type, year) for easy filtering

1. **Question Upload:**

* Authorized users( e.g Administrators, teachers) should be able to upload questions
* Questions must pass through a review session by the super-admin before being uploaded for usage by the users.
* Uploaded questions should be categorized and properly tagged.

1. **Question Management:**

* Questions should be versioned controlled to track changes
* Authorized users should be able to update, edit and delete questions
* **Non-Functional Requirements:**

1. **User Interaction:**

* Users should be able to mark questions as favorites for quick access
* Users should be able to rate questions and usefulness of a question.

1. **Performance:**

* Implementing a fast and responsive search functionality
* Caching mechanisms should be implemented to improve response time for frequently accessed questions

1. **Scalability:**

* Designed to handle increasing number of users and growing question database
* Horizontal scaling techniques such as load balancing and clustering should be considered.

1. **Compliance:**

* Design an application to comply with relevant data protection and privacy regulations such as GDPR or CCPA.

1. **Reliability:**

* Regular backups of the system database should be performed to prevent data loss
* Error handling and login mechanisms should be handled to identify and resolve issues

1. **Usability:**

* Implementing an intuitive and user friendly interface with easy navigation and search capabilities.