

## **Non-Functional Requirements:**

### **1) Performance Requirements:**

- **Response time:**
- The system should respond to user requests (e.g., registration, exam access) within an acceptable time frame
- **Scalability:**
- The system should be able to load balance up to certain user students during registration period.
- The system should be able to load balance up to certain user students during examination period.

### **2) Security Requirements:**

- **Authentication:**
- Users will be securely authenticated via OTP through email.
- **Data Encryption:**
- We will store sensitive data like password in encrypted form to ensure privacy and security.
- **Session Management:**
- We will manage session via encrypted keys in session storage of browser to ensure session management and reload functionality are used as they should be.

### **3) Usability requirements:**

- **UI Guidelines:**
- System will be user friendly for users who knows basics of basics of online testing and browsing through webpages.
- **User Training:**
- There will be a document provided to help user in navigating our system.
- **Browser Compatibility:**
- The system will be compatible with browsers like Chrome, Firefox, Brave with latest versions.

### **4) Reliability Requirements:**

- **Availability:**
- System will be available most of the time and specially during test slots.
- **Backup and disaster management:**

- We will have backup system with minimum functionalities and backup database which will be updated daily EOD.
- At the time of crash of system, our demo system should be available for users.
- **Monitoring:**
- For monitoring admin users' purpose, we will implement audit-log data which will monitor tasks or actions admin is performing on portal.
- During test runtime, we will expand users of audit-log data to all users to ensure monitoring of every student is available for admin users.

## 5) Maintainability Requirements:

- **Code Maintainability:**
- We will ensure that code is written in well manner with proper comments so in future less maintenance issues will be arisen.
- **Version Control:**
- We will use Git – version control.to track code changes.

## 6) Compliance Requirements:

- **Documentation:**
- We will maintain documentations which will comply how the system is following standard and regulations.

## 7) Performance Criteria:

- For now, we are aiming that our system should be able to register concurrent students in less than 1 sec.
- Also, our system might be able to handle concurrent requests with response time of few sec.

## 9) Usability Testing:

- User groups involved in testing are students, college admins, course instructors, parents.
- We will test our system while considering different scenarios like described above in load-balancing, encryption, session management, load testing and responsiveness.