The **NSU Certificate Verification Portal** ensures the authenticity of student certificates through a seamless QR-based verification system. Users can scan the QR code printed on a student's certificate, which will generate a verification link. Clicking the link will open a verification page displaying the student's full details.

On the **admin side**, authorized personnel can manage student records with the following features:

* **Bulk Data Import**: Upload multiple student records via an Excel file.
* **Manual Entry**: Add individual student records through a form submission.
* **Approval System**: Review and approve student records before they become verifiable.

**Certificate Verification Process**

1. **Admin Generates Certificate Record while approving student record**
   * A **QR code** is generated for each certificate.
   * The QR code **contains a verification link** (e.g., https://nsu-verify.com/showStudentDetails/67d8161883885852890a7a9a).
   * The certificate is printed with the QR code.
   * The admin will e-sign the generated certificate document and save it in storage path.
2. **User Scans the QR Code (Using Any QR Scanner App)**
   * The QR scanner redirects the user to the **verification page** (e.g., https://nsu-verify.com/showStudentDetails/67d8161883885852890a7a9a).
3. **Verification Page Displays Student Details**
   * Laravel fetches and displays the certificate information from MongoDB.

**Functional Requirement**

• User Authentication & Role Management – Secure login system with role-based access for faculty, and administrators.

• Certificate Issuance & Approval – Certificate to go through an approval & eSign workflow before issuance.

• Digital Verification – Certificates will have QR codes or blockchain-based verification to ensure authenticity and prevent fraud.

• Certificate Templates – Predefined certificate formats for printing in hard copy.

• Search & Record Management – A centralized database for searching, storing, and retrieving issued certificates.

• Audit & Logs – Maintain activity logs to track all actions performed by users for transparency and compliance.