TECHNICAL SPECIFICATIONS – E-DOSSIER SOFTWARE

Sno	Parameter	Requirement
1.	**Platform**	Web Application , Website (The system should be Operating System Independent). Custom-built application using MVC (Model-View-Controller) architecture.
2.	**Server Side**	The application will be hosted on one of the departments server running Windows Server OS.
3.	**Client Side**	The system should be a web based application. Clients will open the application using latest version of modern browsers such as Morzilla, Chrome, Microsoft Edge.
4.	**Capacity**	The application should be able handle a load of simultaneous 750 cadets and 100 instructors.
5.	**Software Language**	HTML, PHP, Java, JavaScript, CSS, Java, React, NodeJS
6.	**Development Tool**	The application should use any modern development framework. Laravel/Code Igniter/Springboot (MVC Architecture)
7.	**Admin Login**	Admin can manage all fields. Menus, Sub-Menus, Categories, Header and Footer etc. Bidder should provide password protected admin area where client can create page feed content and images and publish it instantly.
8.	**Training**	Bidder should provide free training online/offline so client can easily work on backend of the website. Bidder should provide a written working manual with proper content and screenshot of our pages.
9.	**Database**	Industries standard database (RDBMS, MYSQL, Postgresql)
10.	**Optimization**	The website should be optimized for load time, response time, navigation and search
11.	**Performance Optimization**	Implement caching strategies (e.g., Redis) and optimize database queries for performance and scalability.
12.	**Video Support**	Should be able to support Video Content without Plugging
13.	**2 Factor Auth. Biometric Integration**	Biometric Authentication support. The application to use biometric authentication for login of instructors and cadets
14.	**Access Control**	Role Based Access Control (12-15 Roles).Role assignment should be many to many i.e. One role can be given to more than one users and a user can have more than one roles. Specific actions, data access, and system functionality will be tied to each role. Roles can be assigned granular permissions (e.g., read, write, delete, view reports).

15.	**OWASP**	The application should be free of any CVEs released till date and should use secure coding practice for ensuring secure platform.
16.	**Password Storage**	Passwords should be stored using salted hashes (e.g., bcrypt, PBKDF2)
17.	**Access Logs**	Maintain detailed access logs to monitor unauthorized access attempts and system breaches
18.	**Logging and Monitoring**	Enable logging for both successful and failed login attempts, along with system performance monitoring
19.	**Cross-Site Scripting (XSS) Prevention**	Implement protections against XSS attacks, such as sanitizing input and using Content Security Policy (CSP)
20.	**Authorization Levels**	Define and manage multiple authorization levels (e.g., Admin, User, Guest) with distinct access rights
21.	**Data Backup**	Regular automated backups of databases and critical data with redundancy and secure storage. Incremental backup of database with weekly backup of entire source code to NAS.
22.	**Input Validation**	Validate all user inputs both client-side and server-side to prevent injection attacks (e.g., SQL injection)
23.	**Encryption / SSL**	Use encryption for sensitive data both in transit (TLS) and at rest (AES-256). The website should work on https and have scope of integrating Indian Army CA Certificate Services
24.	**Session Management**	Secure session handling with proper expiration, renewal, and secure cookies (e.g., HttpOnly, SameSite)
25.	**Roles**	The application will have following roles Superadmin, cadet, platoon commander, company commander, battalion commander, physical training officer, weapon training officer, adjutant, training team, dcci, viewonly.
26.	**Dynamic Role Assignment**	Admin users will be able to dynamically assign and manage roles for other users
27.	**Army Cyber Group Audit**	Regular security audits and compliance checks with Government policies and frameworks, including PCI DSS, ISO 27001, and NIST Cybersecurity Framework. The bidder shall ensure cyber security clearance from Army Cyber Group.
28.	**CMS**	The admin should be have option to add following parameters dynamically from the user interface such as Adding cadets, instructors, subjects, new camps, new courses, etc

29.	**Exporting Data**	Standard format file used for bulk data migration (uploading / downloading), like Excel, CSV etc
30.	**Seamless Upgrades**	The application should be able to upgrade to latest version without any data loss and outage
31.	**Sidebar**	10-20 sidebar items for each role. 10-20 pages will exist for each role which will have various forms and summary graphs and charts
32.	**Dashboards**	Each role will have dashboard giving details such as personal data, number of cadets, present cadets etc.
33.	**Data Fields**	The application should be able to collect more than 500+ user related fields.
34.	**Usage Statistics**	The language lab software should also have reports that shows the usage of the software by each of the instructor/faculty/teacher
35.	**Additional Features as AMC**	The bidder shall provide 5 additional features per year as part of AMC. The feature should involve providing upto additional 10 pages with requisite data displayed as per requirement.
36.	**Biometric Device**	The bidder shall provide biometric devices for enabling 2FA authentication required before input of results.

USER REQIREMENT SPECIFICATIONS

In addition to the above mentioned technical specifications, the following will form part of the scope of project

1. **About**.   The web application/software will be used to automate the existing paper based dossier system. The application will have role based access. The application will be used for maintaining cadets personal details and automate the data collection of cadet assessment carried out by the instructors.

2. **Roles**.   The application will have following roles. The number of roles may expand in future.

      (a)   Superadmin Role
      (b)   Cadet Role
      (c)   Platoon Commander Role
      (d)   Company Commander Role
      (e)   Battalion Commander Role
      (f)   Physical Training Officer Role
      (g)   Weapon Training Officer Role
      (h)   Adjutant Role
      (i)   Training Team Role
      (j)   Academic Role
      (k)   Chief Instructor Role
      (l)   Admin Role

3. **Super Admin Role**.   The super admin will have rights to create users of all roles and edit details with respect to users login and personal details. The superadmin will also have audit module that tracks the last login time of all users and displays the same on the dashboard. Super admin role will have dashboard displaying all relevant audit logs required to ensure data integrity of data being handled by the application.

4. **Cadet Role**. The cadet dashboard will have dashboard displaying their education, family and personal details. The cadet will login from their cadet number and will be allowed to change their personal detail characteristics. They will have following sidebars and associated forms.
      (a)   Personal Details
      (b)   Education Details
      (c)   Family Details
      (d)   My Performance- View Only (Only Exam marks and PT test performance)
      (e)   Attendance Excel/PDF)

5. **Platoon Commander Role**.   The platoon commander dashboard will have dashboard displaying their cadet details. The platoon commander will login from their appointment name (eg plcdr1) and will be allowed to change their personal detail characteristics. They will have following sidebars and associated forms.

      (a)   Platoon Commander Dashboard

    (b)   Interview Assessment
    (c)   Camps Assessment
    (d)   Officer Qualities Assessment
    (e)   Spot Reports
    (f)   Games and Extra Curricular Activities Assessment
    (g)   Performance of cadets part of the platoon
    (h)   Export Data (Excel/PDF)

6.   **Company Commander Role**.   The company commander dashboard will have dashboard displaying their cadet details. The company commander will login from their appointment name (eg coycdr1) and will be allowed to change their personal detail characteristics. They will have following sidebars and associated forms.

    (a)   Company Commander Dashboard
    (b)   Interview Assessment
    (c)   Camps Assessment
    (d)   Officer Qualities Assessment
    (e)   Spot Reports
    (f)   Games and Extra Curricular Activities Assessment
    (g)   Performance of cadets part of the company
    (h)   Export Data (Excel/PDF)

7.   **Battalion Commander Role**.   The battalion commander dashboard will have dashboard displaying their cadet details. The battalion commander will login from their appointment name (eg bncdr1) and will be allowed to change their personal detail characteristics. They will have following sidebars and associated forms.

    (a)   Battalion Commander Dashboard
    (b)   Interview Assessment
    (c)   Camps Assessment
    (d)   Officer Qualities Assessment
    (e)   Spot Reports
    (f)   Games and Extra Curricular Activities Assessment
    (g)   Performance of cadets part of the Battalion
    (h)   Export Data(Excel/PDF)

8.   **Physical Training Officer Role**. The Physical Training Officer dashboard will have dashboard displaying their cadet physical test details only. The physical training officer will login from their appointment name (eg pto) and will be allowed to change only the PT Test details of all cadets. They will have following sidebars and associated forms.

    (a)   List of Cadets (course and Company Wise)
    (b)   PT Test Performance
    (c)   PT Test Statistics
    (d)   Export Data(Excel/PDF)

9. **Weapon Training Officer Role**. The Weapon Training Officer dashboard will have dashboard displaying their cadet weapon training test details only. The weapon training officer will login from their appointment name (eg wto) and will be allowed to change only the Weapon Training Test details of all cadets. They will have following sidebars and associated forms.

  (a)   List of Cadets (course and Company Wise)
  (b)   Weapon Training Test Performance
  (c)   Weapon training Test Statistics
  (d)   Export Data(Excel/PDF)

10. **Adjutant Role**. The adjutant dashboard will display cadet personal details to include their education and family details. The adjutant will login from their appointment name (eg adjt) and will be allowed to change only the drill test score of cadets and endorse their punishment details. They will have following sidebars and associated forms.

  (a)   List of Cadets (course and Company Wise)
  (b)   Drill Test Performance
  (c)   Parade State
  (d)   Personal Details of all cadets
  (e)   Punishments summary of cadets
  (f)   Create new cadets or delete existing cadets
  (g)   Export Data(Excel/PDF)

11. **Training Team Role**. The Training team Officer dashboard will have dashboard displaying their list of all subjects being taught to cadets including the details of topics covered in each subject. The training team officer will have option to amend and structure the weekly programs of cadets.

  (a)   List of Subjects, exercises and topics
  (b)   Weekly Planner of training events
  (c)   Completion percentage
  (d)   Download subject wise results (View only)
  (e)   Export Data(Excel/PDF)

12. **Academic Team Role**. The academic team Officer dashboard will have dashboard displaying their list of all cadets and their performance in academic subjects. The academic team officer will have option to amend only the academic subject marks of each cadet.

  (a) List of cadets (course and company wise)
  (b) List of Subject and performance in each.
  (c) Performance Statistics
  (d) Export Data(Excel/PDF)

13. **DCCI/Commandant Role**.   The chief instructor role will have option to endorse interview remarks of a cadet. All assessment details will be in view only mode to the DCCI and Comdt.

(a) List of Cadets
(b) Interviews
(c) Assessment
(d) Course Statistics (Summary of all statistics being maintained in the application)

14.   **Admin Role**.   The Admin team Officer dashboard will have dashboard displaying their list of all subjects being taught to cadets including the details of topics covered in each subject. The training team officer will have option to amend and structure the weekly programs of cadets.

(a) All cadets login details
(b) Add low privilege users
(c) Add subjects
(d) Add Cadets
(e) Add Instructors
(f) Logging and Monitoring
(g) Security Monitoring
(h) Export Data(Excel/PDF)

15.   **Security and Data Integrity.**   The developer will ensure that the data integrity and confidentiality is ensured in the application. The following security practices will be implemented in the application for ensuring security of data.

(a)   TLS 1.3 to be implemented for security of data in transit.
(b)   Data at rest encryption for data stored in the application database.
(c)   Biometric authentication for login of instructors.
(d)   Biometric authentication before endorsing assessment of cadets.
(e)   Database audit section displaying date and time of last change carried out.

16.   **Data Backup**.   The application should have auto database backup of incremental data on a daily basis and exporting the entire appl sourcecode to incl database to a local NAS on a weekly basis. The backup tasks to be scheduled automatically and logic should be build into the application.

17.   **Internet Dependency**.   The application should not have any dependency on internet for its functioning and should be able to function in offline mode on the existing compute resources of this office.

18.   **Upgrades and Updates**. The bidder shall upgrade the application and keep it CVE fee against any publicly known vulnerability. The responsibility of patching the application ecosystem will rest with the bidder and cert in this regard shall be submitted twice a year by the bidder.

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