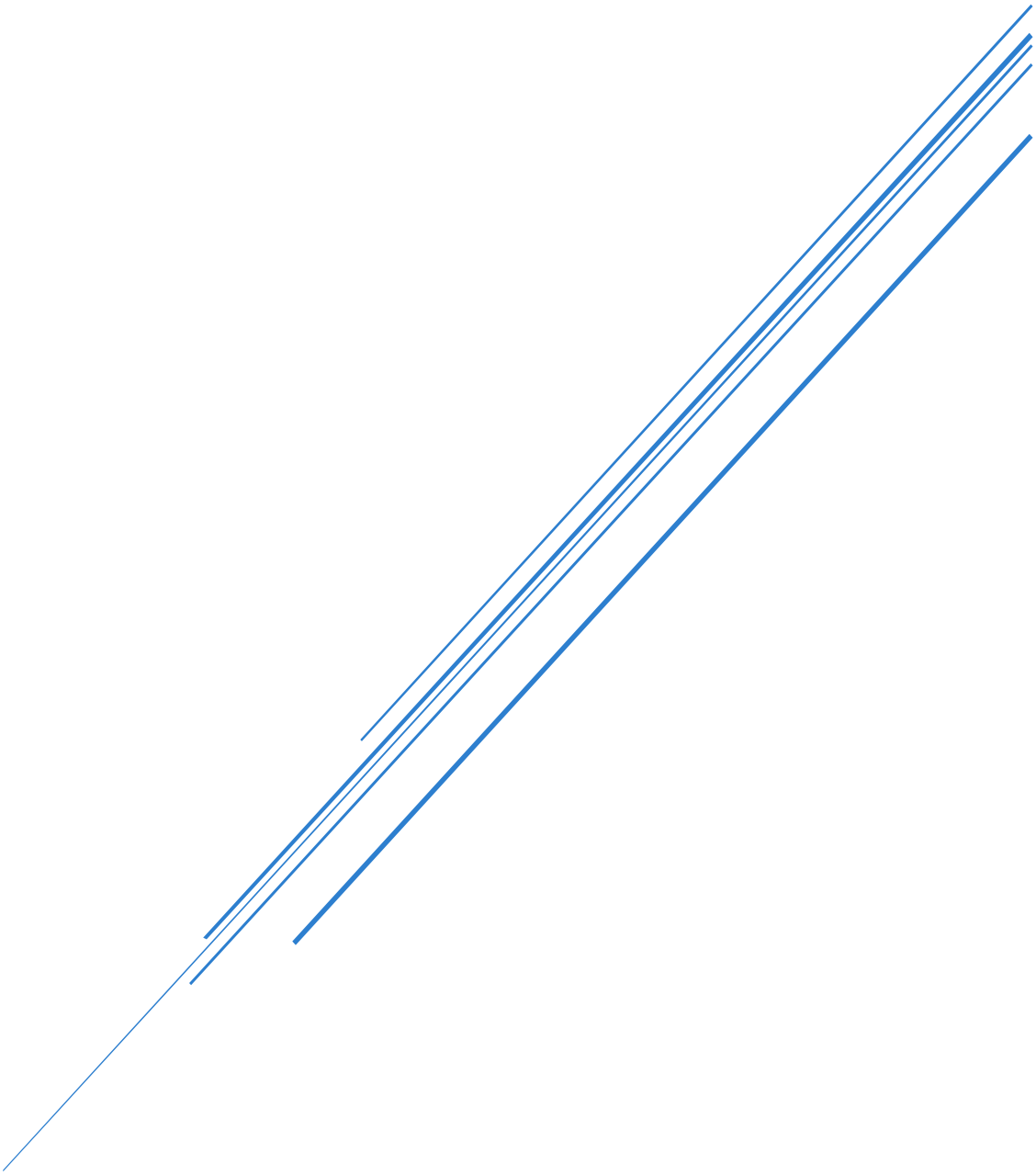
SOFTWARE REQUIREMENTS SPECIFICATION: HSS (HEALTHCARE STAFF SECURE)

Team: CyberTransformers



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1. **Purpose of this Document**
   This document defines the software requirements for the Healthcare Staff Secure (HSS) system. It outlines what the system should do, how it should behave, and the constraints it must operate under. It is intended for developers, testers, project managers, and stakeholders to ensure a clear and unified understanding of the software functionality and goals.

2. **Executive Summary**
   HSS is a secure, web-based Identity and Access Management (IAM) platform for healthcare institutions. It facilitates user registration and authentication, access control, alert management, scheduling, compliance tracking, and reporting—tailored specifically to healthcare roles and departments.

3. **Overall Description**
   - **Product Perspective**
     - HSS integrates with existing hospital systems and offers secure, role-based access to system features. It emphasizes patient data protection, compliance, and efficient staff coordination.

   - **Product Functions**
     - Secure user registration and authentication
     - Role- and department-based access control
     - Real-time security alerts and AI-driven threat awareness
     - Staff scheduling and shift tracking
     - Compliance status monitoring
     - Internal communication and notifications
     - Report generation and export

   - **User Classes**
     - Healthcare workers (doctors, nurses, technicians, cleaners)
     - Administrators and IT staff
     - Compliance officers

4. **Business Rules**
   - Only registered users with verified credentials can access secure features.
   - User access permissions are based on assigned role and department.
   - System must support multi-factor authentication for added security.
   - Alerts and compliance updates must be logged and accessible.
   - Users can only view/edit data relevant to their role.

5. **Functional Requirements**

Category	Requirement
Registration and Authentication	• Users must provide full name, email, phone, password, role, and department during registration.

	• Email and phone must be validated and unique. • Login must support either email or phone with password.
Access Control	• System assigns permissions based on user role (e.g., doctor, nurse) and department. • Admin users have extended privileges for management and reporting.
Alerts and Notifications	• System must generate and display real-time alerts for security, compliance, and shift reminders. • AI component sends proactive tips and warnings based on threat analysis.
Scheduling and Shifts	• Staff must be able to view upcoming shifts. • Admin users can assign, edit, and view schedules.
Compliance Monitoring	• System must track training completion, policy acknowledgments, and legal compliance metrics. • Must alert users to pending compliance tasks.
Staff Directory	• Users can search, filter, and view profiles of registered staff by role or department.
Reports	• System must generate downloadable reports in PDF or CSV format. • Reports include user activity, alert trends, shift summaries, and compliance data.
Settings	• Users can update their profile details and reset passwords.

6. **Data Requirements**
   - Must store user data securely: name, role, department, contact info, login credentials.
   - All passwords must be hashed.
   - Audit trails and logs must be retained for accountability.
   - Must support secure backups and data recovery.

7. **External Requirements**
   - Must comply with POPIA and HIPAA standards.
   - Must support integration with hospital HR and scheduling systems via secure APIs.
   - Hosting must be on secure and compliant infrastructure.

8. **Non-Functional Requirements**

Aspect	Requirement
Security	End-to-end encryption, access logging, intrusion detection.
Performance	Average response time below 2 seconds.
Scalability	Must support thousands of concurrent users.
Reliability	99.9% system uptime.

Usability	Simple, intuitive interface for non-technical healthcare staff.
Compatibility	Accessible on all modern browsers and mobile devices.

9. Reporting Requirements

- Admins can generate reports for:
  - Login activities
  - Compliance status
  - Security alerts
  - Shift schedules
- Reports should be exportable in standard formats (PDF, CSV).

10. Supplemental Information

- **Technology Stack**:
  - To be updated

12. Conclusion

The **HSS (Healthcare Staff Secure)** system is a cybersecurity-focused solution tailored to the evolving needs of South African healthcare institutions. By using AI for behavioral authentication, enforcing robust access control, and aligning with POPIA, HSS ensures that sensitive healthcare data remains protected. This Software Requirements Specification aligns with SS25HACK expectations for innovation, local relevance, and real-world impact.