Vision and Scope Document for Sillah

Version 1.2 approved

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Revision History

Name	Date	Reason For Changes	Version
Shoug + Gala + Ghala + Salma	30/12	Filled the template with relevant information.	1.0
Shoug + Gala + Ghala + Salma	18/1	Revised & edited	1.1
Shoug + Gala + Ghala + Salma	20/1	Final revision	1.2

Business Requirements

Background

There is a rising number of cases of inherited heart diseases and other hereditary conditions in Saudi Arabia. Most of these cases can be prevented and controlled if they are detected early. There is no proper system in place in most families to monitor health records and advise on inherited conditions. Sillah was a proposed e-health prevention platform aimed at families to document health records, screen for cardiovascular and other hereditary diseases, and plan ahead by booking clinic appointments and health education tools.

Business Opportunity

There is a national push toward preventive healthcare and digital transformation under Vision 2030. Currently, no unified, family-centric system exists in Saudi Arabia that:

- Tracks hereditary cardiac conditions
- Automatically detects risk patterns
- Provides personalized alerts
- Connects users to clinics
- Offers culturally relevant awareness content

Sillah fills this gap by providing a scalable, accessible, bilingual platform aligned with public-health priorities.

Business Objectives

- Increase early detection of hereditary cardiac risks among Saudi families through structured family health data collection and rule-based risk screening.
- Provide a user-friendly digital tool for recording and analyzing family health data.
- Reduce long-term healthcare costs through preventive action.
- Support national health initiatives by offering a model that can integrate with public systems.
- Achieve a functional prototype demonstrating feasibility for future expansion.

Success Metrics

- ≥ 80% of test users successfully complete onboarding.
- Family tree creation completed in < 5 minutes by ≥ 15 participants.
- Risk alerts generated with ≤ 5% false negatives on test data.
- System Usability Scale (SUS) score ≥ 80.
- 90-95% notification delivery success (simulated).
- Bilingual interface fully implemented and validated.

Vision Statement

Sillah empowers Saudi families to proactively manage hereditary health risks by combining intelligent risk screening, culturally appropriate education, and seamless connection to healthcare professionals.

Business Risks

Building Sillah comprises various risks that could impact the adoption level, correctness, and sustainability of the tool:

- **User Adoption Risk:** Families may be reluctant to provide sensitive health information without establishing a high degree of trust.
- **Data Quality Risk:** Inaccurate or incomplete data entry from family health might impact the precision of risk identification.
- **Clinical Risk of Alignment:** Medical guidelines regarding inherited diseases change over time because continuous updates of risk detection rules are required.
- **Competitor Risk:** There can be overlapping functionalities from future national or private healthcare platforms.
- **Technology Risk:** Integration with real-world clinics, secure authentication, as well as Personal Data Protection Law (PDPL) compliance might call for sophisticated technology beyond the required prototype.
- **Usability Risk:** A non-intuitive or poorly optimized mobile interface may result in reduced user engagement and early abandonment of the system.

Each risk will be tracked, and respective strategies such as good UX design, private messages, and modularity will be implemented.

Business Assumptions and Dependencies

The Sillah project relies on the following assumptions/dependencies that affect the feasibility of the project:

- **User Access:** Families will have access to smartphones and internet access with a mobile-first platform preference.
- **Cultural Fit:** Users will be ready to monitor their family traits when offered an appropriate, cultural-fit interface.
- **Medical Validity:** In Saudi Arabia, expert-rule-based risk detection is adequate at least during the prototype development phase.
- **Regulatory Compliance:** It's required to be compliant with the Personal Data Protection Law in the Kingdom of Saudi Arabia regarding the processing of health-related data.
- **Clinic Participation:** Healthcare providers are open to adopting and integrating the appointment booking system offered by Sillah in future versions.
- **Content Reliability:** Awareness Hub relies on proven medical resources and regular expert check-ins on its awareness materials.
- **Technical Dependencies:** Future scalability may require cloud hosting infrastructure, secure API management, and potential integration with national digital health platforms.

Scope and Limitations

Major Features

The Sillah platform can help in supporting Saudi families in the management of health on a preventive basis with the following set of functionalities:

- **FE-1:** Manage and add family members with demographic and related health information.
- **FE-2:** Record conditions like heart diseases, diabetes, hypertension, high cholesterol levels, and other inherited disorders.

- **FE-3:** The rule-based system detects the inheritable pattern to generate some particular alerts.
- **FE-4:** Advise on screening, lifestyle changes and follow-up action.
- **FE-5:** Access education resources, checklists, and preventive health.
- **FE-6:** Choose a clinic and practice scheduling an appointment.
- **FE-7:** This gives access to previously made notifications about alerts.
- **FE-8:** Gives different rights to users depending on their role: ordinary citizens, healthcare providers, and administrative personnel.
- **FE-9:** It fully supports Arabic and English.

Scope of Initial Release

The initial release focuses on delivering the core preventive-health experience while ensuring usability, reliability, and security:

- **FE-1:** Family member and health event management
- **FE-2:** Rule-based hereditary risk detection for cardiac disease, diabetes, hypertension, and high cholesterol
- **FE-3:** Personalized alerts and recommendations
- **FE-4:** Awareness Hub with curated educational content
- **FE-5:** Basic clinic booking simulation
- **FE-6:** Bilingual interface with correct RTL/LTR behavior
- **FE-7:** Authentication and role-based access control
- **FE-8:** Mobile-first responsive UI
- **FE-9:** Core security measures (input validation, password rules, session handling)

- **FE-10:** Usability foundations (clear error messages, intuitive navigation, visual feedback)

This release prioritizes features that directly support early detection and user engagement.

Scope of Subsequent Releases

Future releases may expand Sillah's capabilities to support broader public-health integration and advanced analytics:

- **FE-11:** Integration with real clinic systems and appointment APIs
- **FE-12:** AI-enhanced risk prediction models
- **FE-13:** Push notifications (SMS, WhatsApp, or national health platforms)
- **FE-14:** Multi-family linking for extended households
- **FE-15:** Advanced dashboards for healthcare providers
- **FE-16:** National health system integration (e.g., Sehhaty, Mawid)
- **FE-17:** Genetic-risk education modules
- **FE-18:** Real-time appointment availability
- **FE-19:** Secure document uploads (e.g., lab results)

These enhancements depend on regulatory approval, technical partnerships, and infrastructure readiness.

Limitations and Exclusions

Excluded from the following are items that could keep the academic project scope focused and feasible:

- **LI-1:** No real medical diagnosis alerts only screening suggestions only.
- **LI-2:** The prototype does not integrate into any electronic health record systems within hospitals.
- **LI-3:** No AI/ML-based risk prediction in the current version.
- **LI-4:** No offline mode or local-device storage.
- **LI-5:** No real-time clinic availability or live appointment confirmation.
- **LI-6:** Notification delivery is simulated and not production-grade.
- **LI-7:** No genetic testing or ingesting of laboratory data.
- **LI-8:** No emergency-response features.

These limitations ensure the project remains achievable while still demonstrating meaningful preventive-health value.

Business Context

Stakeholder Profiles

Stakeholder	***Major Value***	***Attitudes***	***Major Interests***	***Constraints***
Families (Primary Users)	*Early detection of hereditary risks; simple health tracking*	*Highly receptive if easy to use and culturally aligned*	*Bilingual interface, mobile-first design, clear alerts, privacy*	*Varying health literacy; privacy concerns*
Healthcare Providers	*Better-prepared patients; structured family history*	*Neutral to positive*	*Accurate data, clear risk summaries, appointment visibility*	*Must avoid additional workload*

Administrators	*Manage awareness content and system integrity*	*Positive*	*Secure content management, audit logs, role control*	*Must comply with PDPL*
Public Health Authorities (Future)	*Scalable preventive-health model*	*Very positive*	*Integration potential, population-level insights*	*Requires formal approval and compliance*

Project Priorities

Dimension	***Driver (state objective)***	***Constraint (state limits)***	***Degree of Freedom (state allowable range)***
Schedule	*Deliver a complete prototype within the semester*		
Features		*Must meet project requirements*	
Quality	*High usability, reliability, and clarity*		
Staff		*No additional developers*	
Cost			*Use open-source tools and free-tier hosting*

Deployment Considerations

Sillah requires careful deployment in terms of accessibility, security, and operational preparedness:

- ***DC-1:*** The system should be accessible to every corner of Saudi Arabia, and its design should be mobile-first.
- ***DC-2:*** All users work in AST, making it easy to schedule and manage notifications.
- ***DC-3:*** HTTPS, secure authentication, and basic server-side validation.
- ***DC-4:*** Data stored in very simplified manner (prototype), encrypted databases for production.
- ***DC-5:*** Awareness Hub content is subject to periodic review by medical professionals.
- ***DC-6:*** The future integration of the clinic may require training of staff on workflows related to appointments.
- ***DC-7:*** Full Arabic support-RTL layout, culturally appropriate content-is required.