Overview

platform (Ayn) will operate in the **education domain**, here are the **best and most relevant global quality standards** for schools, universities, academies, training centers, and e-learning platforms.

The education market in Egypt is huge:

- 25M+ students

- 50,000+ schools

- 3,000+ training centers

- 100+ universities

- Strong push for accreditation

- Heavy demand for ISO 21001 compliance

- Zero modern digital tools for managing documentation

ISO Standards for Education

These ISO frameworks are the international benchmarks for quality in education:

ISO 21001 — Educational Organizations Management System (EOMS)

The #1 standard for educational institutions.
Very important for:

- *Schools*

- *Universities*

- *Training centers*

- *E-learning platforms*

- *Academies*

- *Institutes*

- *Certification providers*

This standard ensures:

- *Quality of learning*

- *Student satisfaction*

- *Curriculum development*

- *Data management*

- *Learning outcomes measurement*

- *Continuous improvement*

ISO 9001 — Quality Management System (QMS)

Used widely by private schools and universities in Egypt.

Covers:

- Document control

- Teacher/trainer performance

- Assessment processes

- Feedback cycles

ISO 29993 — Learning Services Outside Formal Education

Perfect for:

- Online courses

- Bootcamps

- Coaching programs

- Private training centers

Ensures:

- Quality of educational services

- Professional delivery

- Clear learning outcomes

How Ayn (with Horus Engine) Fits the Education Sector

platform can become a full digital quality system for:

- Schools

- Universities

- Training academies

- LMS platforms

- EdTech companies

It will help them:

- Upload documents (curriculums, assessments, attendance, reports)

- Validate data and reports

- Ensure compliance with ISO 21001 & ISO 29993

- Generate automated quality reports

- Track student outcomes

- Monitor KPIs

- Maintain documentation for accreditation

Frontend Tasks

1. Authentication & Onboarding

This is the first thing users see

Tasks:

- Login page (Email + Password)

- Register page (Institution signup)

- Forgot/Reset password flow

- Tenant-aware login (institution.horus.com or code-based login)

- Basic access control (hide pages if no permission)

Why it's important:
No login → No SaaS.
This must be done before any feature.

2. Main Dashboard (Role-Based)

Create a clean dashboard for:

- Institution Admins

- Auditors

- Instructors

- Students (optional later)

Tasks:

- Sidebar + Topbar layout

- Dashboard widgets:

  - Compliance Percentage

  - Tasks Assigned

  - Upcoming Audits

  - Evidence Status

- Fetch dashboard data from backend

Why it's important:
This defines the user experience and navigation system for the entire SaaS.

3. Standards & Assessment UI (Core Feature #1)

This is the heart of the system.

Tasks:

- Page to list Quality Standards (ISO 21001, ISO 9001…)

- Criteria pages

- Forms to answer questions (input, dropdown, text…)

- Scoring display (bars or progress)

- Submit assessment button

Why it's important:
This is the main reason educational institutions will use your platform.

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4. Evidence Upload & Viewer (Core Feature #2)

Institutions must upload files as evidence.

Tasks:

- Upload modal with drag & drop

- Progress bar

- File type validation

- Evidence list table

- File preview components:

    o PDF Viewer

    o Image Viewer

    o DOCX basic preview (optional MVP)

Why it's important:
Evidence is required for ISO compliance — this is a must for an MVP.

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5. Workflow Pages (Draft → Submitted → Review → Approved)

ISO assessment needs a full workflow.

Tasks:

- Status timeline component

- Workflow actions:

    o Save Draft

    o Submit

    o Request Change

    o Approve / Reject

- Reviewer comments UI

Why it's important:
Accreditation depends on clear workflow steps.

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6. Institution Management UI

This includes:

- Institution profile page

- Branches

- Programs

- Users inside institution

Tasks:

- Create/Edit institution forms

- Table views for branches/programs

- Add user to institution modal

Why it's important:
Every tenant needs to manage their organization's structure.

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7. Admin Panel (Horus Global Admin)

This is control room.

Tasks:

- Manage all institutions

- Manage subscriptions

- Manage ISO standards

- Manage roles & permissions

- System logs UI

Why it's important:
Without an admin panel, your SaaS cannot operate.

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8. Reports & Analytics (Charts + Tables)

Use:

- Chart.js or Recharts

- Simple tables with filters

Tasks:

- Compliance charts (line, bar, donut)

- Audit results

- Evidence counts

- Export buttons (PDF, Excel)

Why it's important:
Every education stakeholder depends on analytics to improve quality.

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9. Notifications System

Tasks:

- Notification dropdown

- Read/unread states

- Notification center page

- Real-time updates (via WebSocket later)

Why it's important:
Users need to know when assessments are reviewed, rejected, missing evidence, etc.

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10. Localization (English + Arabic)

Tasks:

- RTL support (Arabic)

- Language switcher

- Save user language preference

Why it's important:
Since it's for Egypt & Middle East → Arabic support is mandatory.

Backend Tasks

1. Basic Authentication

- Register

- Login

- Logout

- JWT Access Token only (no refresh token now)

- **Simple roles:**

- o admin
- o teacher
- o auditor

No advanced RBAC. No complexity.

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2. Institution Module —

- Create Institution
- Edit Institution
- Add users to institution
- Fetch institution profile

No advanced multi-tenancy — just institution_id on every user.

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3. Standards API

Instead of a full ISO rules engine:

- List Standards
- List Criteria under each Standard
- Add/Edit criteria
- Link standards to institutions

No scoring automation yet — keep it basic.

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4. Assessment System — MVP Version

Forget full workflow complexity.

You only need:

- Create assessment
- Save answers (draft)
- Submit assessment
- Reviewer adds a comment
- Assessment has only 3 states:
  - o draft
  - o submitted
  - o reviewed

No workflow engine, no state machine.

5. Evidence Upload

- Upload file
- Delete file
- Attach file to a criterion

No versioning. No metadata extraction.

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6. Basic Dashboard Metrics

Just return simple numbers:

- Completed criteria count
- Evidence count
- Assessment progress percentage
- Number of assessments

No advanced analytics or BI tools yet.

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7. Notifications

- Save notifications in DB
- Fetch notifications list

No WebSockets, no real-time system.

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8. Payments — Postpone for Now

For MVP:

- **Admin sets institutions as active/inactive manually**
- **No Paymob, no Fawry yet**

Payment integration can come later after launch.

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9. Admin Panel API —

- Manage institutions
- Manage users

- Manage standards

Only the basic CRUD.

Summary — MVP Frontend Structure

✔ **Login**
✔ **Dashboard**
✔ **Standards**
✔ **Criteria**
✔ **Assessments**
✔ **Evidence**
✔ **Notifications**
✔ **Users**
✔ **Institutions**
✔ **Admin logs**
✔ **Profile**

Summary —Backend Required

1. **Simple Auth**

2. **Institutions**

3. **Standards**

4. **Assessments**

5. **Evidence upload**

6. **Dashboard basic metrics**

7. **Basic notifications**

8. **Skip payments for MVP**

9. **Simple admin APIs**

Tech Stack

1. Frontend

Main Framework

- **React.js → Best for dashboards, scalable, easy to hire for in Egypt.**

- **Next.js (optional) → If you want SEO + faster pages.**

UI Libraries

- **Tailwind CSS → Fast, simple UI building.**

- **Material UI or Ant Design → Great for dashboards.**

State Management

- **Redux Toolkit → Super simple & clean.**

- **or Zustand → Lightweight and easier.**

Charts / Visuals

- **Recharts**
- **Chart.js**

Form Handling

- **React Hook Form → Very easy for the team.**

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2. Backend

Main Backend Framework

- **Python + FastAPI**
    - **Extremely fast**
    - **Very clean and simple**
    - **Perfect for APIs & SAAS platforms**

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3. Database Layer

Primary Database

- **PostgreSQL → Best choice for SAAS, stable, free, strong relations.**

ORM

- **If Node.js → Prisma**
- **If FastAPI → SQLAlchemys**

4. DevOps & Hosting

Hosting

- **DigitalOcean (best balance)**
- **Render**

CI/CD

- **GitHub Actions → Simple and free.**

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5. Core Features Tools

Authentication

- **Auth0**
- **or Supabase Auth**
- **or build simple JWT auth**

Email / Notifications

- **SendGrid or Mailgun**

- **Firebase Cloud Messaging (if mobile app later)**

File Storage

- **AWS S3**

- **or Supabase Storage**

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6. Quality Standards Tools (ISO for Education Domain)

These help benchmark processes:

Standards to Follow

- **ISO 21001 → Educational Organizations Management System**

- **ISO 9001 → Quality Management**

- **ISO 27001 → Information Security (for student data)**

Tools to Document / Manage Quality

- **Notion / Confluence → Write standards and procedures**

- **Loom → Record development workflows**

- **Checkly / Postman → API monitoring**

- **SonarCloud → Code quality**

- **Sentry → Error tracking**