Software Requirements Specification (SRS) for Zoonigia Web Application

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1. Introduction

1.1 Purpose

Zoonigia is an EdTech platform focusing on providing students, particularly those in underrepresented regions, with immersive learning in niche scientific fields like space science, astrophysics, and quantum mechanics. By leveraging workshops, real-time research labs, and collaborations with institutions such as NASA, Zoonigia bridges the educational gap and equips students with hands-on experience in frontier sciences.

1.2 Goals and Objectives

The goal of the Zoonigia website is to act as the primary hub where students, schools, collaborators, and sponsors can register, enroll, and engage with Zoonigia's offerings. The platform must be user-friendly, visually engaging, and fully functional to support real-time research, course participation, and collaboration.

1.3 Target Audience

- **Students**: Learners with an interest in advanced scientific fields.

- **Educators and Institutions**: Schools seeking to integrate specialized science programs.

- **Collaborators, Sponsors, and Investors**: Entities that wish to support Zoonigia's mission through funding, partnerships, or collaborative projects.

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2. System Overview

Zoonigia's web platform will feature an interactive, multi-functional user interface, supporting user registration, event booking, lab enrollment, product purchases, and more. An administrative dashboard will provide full content management, tracking, and analytics capabilities.

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3. Functional Requirements

3.1 User Registration and Profile Management

Description: Users will be able to register as students, educators, institutions, or collaborators. Each user will have a personalized dashboard displaying relevant information.

- **User Roles**:

  - **Students**: Can access workshops, enroll in labs, book tours, and register for campaigns.

  - **Educators/Schools**: Can book/host workshops, enroll students in labs, book tours, and access collaborative tools.

  - **Collaborators and Sponsors**: Can access exclusive information on sponsorship and collaboration opportunities.

Features:

- User Profile creation, editing, and management.
- Personalized dashboards showing registrations, enrolled events, and active campaigns.

3.2 Workshop Management and Enrollment

Description: Allows students and institutions to register for various workshops hosted by Zoonigia.

- **Admin Features**:
    - Ability to create and manage workshops with titles, descriptions, dates, pricing, location, and capacity.
    - Ability to manage registrations and monitor attendance.

- **User Workflow**:
    - Users can browse workshops, filter by topic, date, or type (in-person or virtual), location, and register.
    - Payment gateway for registration fees.
    - Automated confirmation emails after registration.
    - Campuses (schools, institutions, universities) can book and host a workshop in their campus, options should include an open workshop, in which outdoor individuals can also take part, or a campus restricted workshop.

Technical Notes:

- Integration of a **secure payment gateway** for handling registration fees.

3.3 Real-Time Research Lab Enrollment (Coming Soon – Will launch in April 2025)

Description: Provides students and schools access to real-time research labs for hands-on experience in scientific research.

- **Lab Overview Page**: Details lab objectives, research focus, available spots, and session dates.
- **Enrollment**:
    - Students and schools can enroll for specific lab projects.
    - Real-time progress tracking for students' lab activities.
- **Lab Reports and Certifications**: Provides feedback, achievement badges, and certifications upon project completion.

LMS Integration:

- For managing course materials, lab assignments, and tracking progress.

3.4 Event and Tour Booking (Coming Soon, will make it active in April 2025)

Description: Allows users to book specialized educational tours, including observatory visits and science fairs.

- **Tour Details**: Lists available tours with dates, costs, and itinerary.

- **Group Booking**: Special booking options for schools and large groups, with potential discounts.

3.5 Course Registration and Management

Description: Provides a centralized view of all available courses related to the fields like Astronomy, Aerospace, Quantum Mechanics, Poetry, Literature, etc.

- **Course Overview**:

  o Course descriptions, learning outcomes, pricing, and pre-registration.

- **Enrollment**:

  o Users can register and pay for courses directly.

  o Integrated Learning Management System (LMS) for course content delivery, quizzes, and assignments.

3.6 Product and Resource Shop

Description: E-commerce section for purchasing educational kits, digital downloads, and merchandise.

- **Product Listings**: Include descriptions, images, pricing, and availability.

- **Checkout Process**: Secure, multi-step checkout supporting various payment methods (credit card, UPI, etc.).

3.7 Collaborator, Sponsor, and Investor Management

Description: Dedicated pages for potential collaborators, sponsors, and investors, detailing partnership opportunities and application forms.

- **Collaborator Page**: Details collaborative projects and benefits of partnering with Zoonigia.

- **Sponsor Page**: Lists sponsorship options, visibility benefits, and a downloadable prospectus.

- **Investor Page**: Provides a clear outline of investment opportunities and expected returns.

3.8 Campaign Registration

Description: Allows students and schools to register for specific campaigns, like NASA Citizen Science, providing real-world research opportunities.

- **Campaign Listings**: Details each campaign, registration deadlines, and eligibility.
- **Group Registrations for Schools**: Schools can register groups of students for campaigns.
- **Example of one such campaign**: Zoonigia Star Session, The Cosmic Voyage.
    - **Registration Closed**
    - **Show its progress**
    - **Started from November, and ends in March.**
    - **List the Selected Poets**

3.9 Blog and Achievers Page

Description: A dynamic blog for sharing scientific articles, event recaps, and success stories. The Achievers Page will highlight students' and collaborators' achievements.

- **Blog Features**:
    - Regularly updated posts from students, educators, and industry experts.
    - Comment and sharing options to foster community engagement.

3.10 Admin Dashboard

Description: A comprehensive dashboard for Zoonigia's administrators to manage users, content, workshops, payments, and analytics.

- **User Management**: View, edit, and manage user profiles and permissions.
- **Workshop and Event Management**: Create, modify, and delete events.
- **Content Management System (CMS)**: For updating blogs, events, and pages.
- **Analytics and Reporting**:
    - Track user engagement, registrations, sales, and platform growth.

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4. Technical Requirements

4.1 Database

A structured database (e.g., MySQL or PostgreSQL) for storing user information, registrations, transactions, and course data.

4.2 Backend Development

Developed using a scalable framework like Django or Node.js for API handling and data management.

4.3 Frontend Development

A responsive frontend built with ReactJS or VueJS for a seamless user experience across devices.

4.4 Security

- **SSL Encryption**: HTTPS protocol for secure data transmission.

- **User Authentication**: Role-based access control and two-factor authentication for sensitive roles.

- **Data Privacy Compliance**: Ensure GDPR compliance and regional privacy regulations.

4.5 Additional Features

- **SEO Optimization**: For higher visibility and organic traffic.

- **Google Analytics**: Integrated for tracking site performance and user behavior.

- **Interactive Elements**: Animations, hover effects, and intuitive design to enhance engagement.

This comprehensive SRS provides a detailed roadmap of Zoonigia's objectives, user flows, and technical requirements. Let me know if you need further refinement or additional details on specific functionalities!