PathSeeker Developer Guide

The PathSeeker application is designed to help students, graduates, and professionals find a career path that aligns with their skills and interests.

#### **Key Features and How to Use Them**

* **Tailored Career Options:** The app provides career recommendations based on the user's profile and assessment results.
* **Interest-Based Quizzes:** Users can take quizzes to receive personalized recommendations.
* **Multimedia and Resources:** The application offers learning materials and downloadable resources.
* **Sitemap:** The application should include a sitemap on the home page to help users understand the flow of the application.
* **User Authentication:** Users need to sign in to access the tools. The system will then guide them through assessments and collect information to provide recommendations.
* **User Profile:** The system will collect user data like academic information, career preferences, and assessment results to build a user profile.
* **Job Search Assistance:** The app can provide job listings, personalized job recommendations, and resources for interview preparation.

### **Examples of Good Content**

Good content for a career guidance app should be designed to help users navigate their professional journey with clarity and confidence.

#### **Interactive Content**

* **Personality and Interest Assessments:** Quizzes and assessments like the MBTI (Myers-Briggs Type Indicator) can help users discover their abilities, interests, and values.
* **Interactive Video Lessons:** These can provide educational content across a wide range of subjects.
* **Real-time Feedback and Performance Analytics:** This helps users track their progress and identify areas for skill development.

#### **Informational Content**

* **Career Profiles:** Detailed information about different career paths, including job prospects and average salaries.
* **Industry Insights:** Information about specific industries, including the skills and knowledge needed.
* **Resource Library:** A collection of educational materials like courses and tutorials to help users enhance their skills.

#### **Supportive Content**

* **Mentorship Connections:** Facilitating connections between users and industry professionals for guidance and networking.
* **Resume Assistance:** Providing tools or guidelines to help users create a strong resume.
* **Career Planning Tools:** Features that help users set and track their career goals.

### **Interface Requirements**

The application requires specific hardware and software to operate.

* **Hardware:** A computer with an Intel Core i5/i7 processor or higher, 8 GB RAM or higher, a color SVGA monitor, 500 GB of hard disk space, a mouse, and a keyboard.
* **Software:** The application can be developed using various technologies for the frontend, backend, and database.
  + **Frontend:** HTML5, CSS3, Bootstrap, ReactJS/AngularJS/Angular/TypeScript, JavaScript, jQuery, and XML.
  + **Backend:** Java SDK with Apache NetBeans or Eclipse, C# with ASP.NET MVC, PHP with Laravel Framework, Python with Flask or Django, or a MongoDB/Express.js/React/Node.js stack.
  + **Database:** MySQL or SQL Server.

### **Project Deliverables**

The project deliverables include a complete project report with the following components:

* Problem definition.
* Design specifications and diagrams (flowcharts, data flow diagrams, etc.).
* Database design.
* Test data used in the project.
* Project installation instructions.
* User credentials for all user types.
* A zip file containing a ReadMe.doc file and SQL or schema files.
* A mandatory video (.mp4 file) demonstrating the working of the web application.
* A sitemap on the home page.

### **Functional Requirements**

The PathSeeker web application is a complete, role-based career exploration platform with dynamic frontend features and a robust backend.

**Core Features:**

* **User Authentication and Management:** Implement role-based registration and login for students, graduates, and professionals. This includes secure session management, a "Forgot/Reset Password" feature with email verification, and a user profile with editable fields. The application should also allow users to upload their resumes.
* **Personalized Dashboard:** Display a personalized greeting, recent activity, quiz results, and bookmarked items. The dashboard should recommend careers and content based on user interaction history.
* **Career Bank:** This feature fetches job roles from a backend database and includes multi-level filtering (domain, skill match, salary, job demand) and a smart search with autocomplete and spell-check.
* **Multimedia Center:** The application should stream embedded videos, audio podcasts, and animated explainers with playback controls, transcript toggles, and related content suggestions.
* **Resource Library:** This section should provide downloadable PDFs, checklists, and infographics, with an auto-preview feature.

### **Non-Functional Requirements**

The application must meet several non-functional requirements.

* **Compatibility:** The application must be compatible with major web browsers and responsive across various devices.
* **Performance:** The application should have minimal load time and smooth page transitions. The architecture must be scalable to handle increasing user traffic and data.
* **Security:** The application must implement adequate security measures, such as requiring authentication for certain features.
* **Accessibility:** The application should have clear and legible fonts, user-interface elements, and navigation.