**Laboratory Resource Management System**

**Project Synopsis Report**

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**ABSTRACT**

Choosing the right career path has always been a challenging decision for students, especially with the increasing number of options available in today’s world. Many students face confusion regarding which subjects to choose, what skills to develop, and what career opportunities each path offers. Often, they lack structured information that connects academic choices with professional futures, leading to uncertainty, misinformed decisions, or loss of interest over time.

Our **Career Guidance Platform** is developed to solve this problem by providing a structured, student-friendly space where individuals can explore different career fields based on their interests and academic preferences. The platform offers detailed roadmaps for various professions, clearly outlining which subjects to focus on, what additional skills to build, and what academic journey to follow to achieve their desired career. It also provides introductory videos explaining the scope of each field, future trends, required qualifications, and essential soft and technical skills, making it easier for students to gain a complete picture before making critical decisions.

One of the unique features of the platform is that it doesn't just list careers; it connects students emotionally and practically with the fields they might love, helping them self-assess their interests and aspirations. By providing real-world insights, study progression paths, and skill-building tips, the platform acts like a mentor for students who are either starting out or feeling lost in their educational journey.

**Keywords:** Career Guidance, Student Career Planning, Roadmap to Career.

**Chapter 1**

**Introduction**

**In today’s fast-paced and ever-evolving world, students face a growing challenge when it comes to selecting the right career path. With an overwhelming number of choices and limited structured guidance, many students find themselves confused about which subjects to pursue, what skills are relevant for specific careers, and how to plan their academic journey effectively. This lack of clarity often results in uninformed decisions, lost time, and missed opportunities.**

**The traditional education system largely focuses on academic content but falls short in connecting it to real-world careers and future goals. As a result, students are often unaware of how their interests align with potential professions, or what steps are required to reach their dream careers. Many don’t even know where to begin.**

**To address this gap, we have developed a Career Guidance Platform – a student-centric solution designed to simplify and personalize the career planning process. This platform provides clear, step-by-step roadmaps for various career options, mapping out which subjects to focus on, what skills to develop, and what educational and professional milestones to aim for. It includes introductory videos, scope explanations, and industry insights that help students not only understand different fields but also discover where their true interests lie.**

**The platform is designed to be intuitive, interactive, and inclusive. Whether a student is completely undecided or already has a dream profession in mind, the platform serves as a digital mentor – guiding them from the basics to advanced career planning with clarity and confidence. It also encourages early awareness by introducing career options at the school level, helping students make informed choices before they step into higher education.**

**By merging technology with personalized guidance, this platform empowers students to take control of their future. It reduces confusion, removes guesswork, and builds a bridge between education and employment. The ultimate goal is to support students in discovering their passions, setting clear goals, and walking a well-defined path toward a fulfilling and successful career.**

**MOTIVATION**

In today’s dynamic world, students are presented with a wide range of career options—but very little guidance on how to navigate them. Many struggles with questions like “Which subjects should I choose?”, “What career suits me best?”, or “How do I reach my goals?” This confusion often leads to poor decision-making, loss of confidence, and wasted time pursuing paths that don’t align with their true interests.

What makes it worse is that most schools and systems don’t provide early, structured career awareness. Students typically make critical choices—like selecting streams or college courses—without fully understanding the long-term implications. Many are unaware of the career opportunities in emerging fields or the skill sets required to succeed in them.

This lack of clarity and direction sparked the idea for a Career Guidance Platform that puts the student first. Our motivation is to empower students with the knowledge, tools, and resources they need to make informed, confident decisions about their future. By offering personalized roadmaps, field insights, and skill-building suggestions, we aim to bridge the gap between education and employment.

We believe that early and informed guidance can be life-changing—and our mission is to make that accessible to every student, no matter where they start.

**PROBLEM STATEMENT**

In the modern educational landscape, students are often overwhelmed by the wide range of career options available to them. While the number of choices has increased, the support to help navigate these choices has not kept pace. Most students—especially those in school or early college years—lack access to structured, personalized career guidance. They are often unaware of how their academic interests, subject selections, and extracurricular strengths align with real-world career opportunities.

This lack of awareness leads to confusion, stress, and uncertainty when making crucial decisions such as choosing academic streams, college courses, or skill-development paths. Many students follow popular trends or parental expectations without a clear understanding of the fields they are entering, which can result in loss of motivation, career dissatisfaction, or the need to switch paths later in life.

Current systems for career advice are either outdated, too generic, or not student-friendly. Career counsellors are not always accessible, and online resources often present fragmented information that can be difficult to interpret without proper guidance. As a result, students are left with more questions than answers.

**OBJECTIVES**

The main objectives of our project are outlined below:

1. **Provide Career Awareness**

To educate students about a wide range of career options by explaining how specific subjects and skills connect to various fields.

1. **Offer Personalized Career Roadmaps**

To develop structured, step-by-step roadmaps that guide students from school-level choices to higher education and career goals.

1. **Simplify Decision-Making**

To reduce confusion by presenting easy-to-understand information about career scopes, required qualifications, and future trends.

1. **Support Interest Discovery**

To help students identify their interests and strengths through field-specific introductory videos, assessments, and insights.

1. **Bridge the Gap Between Education and Employment**

To align academic planning with industry needs by suggesting relevant skills, certifications, and learning paths for each career.

1. **Promote Early Guidance**

To provide early exposure to career planning so students can make informed choices before entering higher education.

**CHAPTER 3**

**Methodology**

1. **Requirement Analysis**

Conduct surveys, interviews, and feedback sessions with students, educators, and career counselors to understand the key challenges and expectations regarding career guidance.

1. **Career Path Research**

Collect and categorize information about major career fields, required academic backgrounds, essential skills, certifications, and industry trends.

1. **Content Creation**

Develop beginner-friendly roadmaps, field-wise introductory videos, and detailed descriptions to explain career scopes, skill requirements, and educational steps.

1. **Platform Development**

Design and build a user-friendly website using HTML, CSS, JavaScript (frontend), and a backend framework like Node.js or Django to handle user data, preferences, and content management.

1. **Personalization System**

Implement logic (possibly using questionnaires or preference filters) to guide students toward careers aligned with their interests and academic strengths.

1. **Testing & Feedback**

Conduct usability testing with real users—students and educators—to refine the platform based on feedback for better clarity, performance, and usefulness.

1. **Deployment & Maintenance**

Launch the platform and ensure ongoing updates to add new career paths, videos, and maintain compatibility with evolving industry demands.

**TOOLS AND PLATFORM USED**

The development of the **(Code Spark)** was carried out using a modern and efficient tech stack to ensure scalability, performance, and usability. Below is a breakdown of the tools, technologies, and platforms utilized throughout the project:

|  |  |  |
| --- | --- | --- |
| **Component** | **Technology Used** | **Key Features** |
| **Frontend** | Tailwind CSS | Lightweight, utility-first framework for fast UI development. |
| HTML | HTML is the standard markup language used to create and structure content on the web. |

**Chapter 5**

**RESULTS AND DISCUSSIONS**

**The development and deployment of the Career Guidance Platform successfully addressed the core problem of lack of clarity among students when choosing their career paths. After testing the platform with a group of school and college students, the feedback showed a noticeable improvement in their understanding of various career fields and the steps required to pursue them.**

**Many students reported that the structured roadmaps helped them connect their academic subjects to real-world careers, while the introductory videos made it easier to understand the scope and requirements of each field. The personalized guidance feature helped users explore careers aligned with their interests, reducing confusion and indecisiveness.**

**Teachers and career counsellors found the platform to be a valuable supplementary tool to support classroom discussions and career planning sessions. It not only saved time but also offered students a more engaging and independent way to explore their options.**

**The discussion reveals that with the right digital tools and interactive content, career guidance can become more accessible, relatable, and impactful. However, it also highlights the importance of continuously updating the platform with evolving industry trends and adding features like aptitude assessments and expert webinars to further enhance student experience.**

**Chapter 6**

**CONCLUSION**

Choosing the right career path is one of the most significant decisions in a student's life, yet many young individuals make these choices without proper awareness or direction. Our **Career Guidance Platform** was developed to address this gap by offering students a structured, interactive, and easily accessible way to explore various career opportunities based on their interests, academic subjects, and personal goals.

Through the development of this platform, we were able to provide clear and engaging roadmaps for different career paths, complete with introductory videos, required skills, and educational progression. By simplifying complex information and presenting it in a user-friendly format, the platform not only educates but also inspires students to think critically about their future.

The positive feedback from initial users demonstrated the effectiveness of combining technology with education to solve real-world problems. Students found the platform useful for making more confident decisions, while educators saw it as a valuable support tool for counseling.

In conclusion, this project highlights the importance of early, accessible, and personalized career guidance in shaping better futures. With further enhancements—such as skill assessments, expert sessions, and updated content—this platform can evolve into a vital resource for schools, parents, and students alike, empowering the next generation to take control of their career journey with clarity and confidence.