Project Centric Learning

PCL 2- RESEARCH AND ENTREPRENEURSHIP PROJECT

This is to certify that the PCL entitled

Integrated Student Health and Learning Engagement

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Shivam Hareshbhai Savaliya (MSc-CS&IT – 23MSRCI050)

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Sandra Suresh (MCOM – 23MCRIF014)

is the bonafide record of PCL work done by

Under the Guidance of

Dr. Bhujanga Rao

Guide/Mentor

JAIN (Deemed-to-be University)

CERTIFICATE

This is to certify that the report entitled "**Integrated Student Health and Learning Engagement**" is the Bonafide record of PCL work done by **Tushar Mehta (MSc-CS&IT – 23MSRCI061), Timir Bhingradiya (MSc-CS&IT – 23MSRCI007), Shivam Hareshbhai Savaliya (MSc-CS&IT – 23MSRCI050), H Berlin Sigh (MSc-CS&IT- 23MSRCI013), Sandra Suresh (MCOM – 23MCRIF014)** of **IV SEMESTER** during the year 2023-2025. they have incorporated all the suggestions, as required in the current work. Further, this work or any part thereof has not been presented for the award of Degree / Diploma of any University or Organization.

Dr. Bhujanga Rao

Guide/Mentor

JAIN (Deemed-to-be University)

Name of the Examiner

Signature with Date

1. ....

2. ....

DECLARATION

I affirm that the PCL project work titled "**Integrated Student Health and Learning Engagement**", being submitted in partial fulfillment for the award of MASTER OF SCIENCE WITH SPECIALIZATION IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY is the original work carried out by me. It has not formed the part of any other PCL work submitted for award of any degree or diploma, either in this or any other University.

Timir Bhingradiya
USN Number: 23MSRCI007

DECLARATION

I affirm that the PCL project work titled "**Integrated Student Health and Learning Engagement**", being submitted in partial fulfillment for the award of MASTER OF SCIENCE WITH SPECIALIZATION IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY is the original work carried out by me. It has not formed the part of any other PCL work submitted for award of any degree or diploma, either in this or any other University.

Shivam Hareshbhai Savaliya

USN Number: **23MSRCI050**

DECLARATION

I affirm that the PCL project work titled "**Integrated Student Health and Learning Engagement**", being submitted in partial fulfillment for the award of MASTER OF SCIENCE WITH SPECIALIZATION IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY is the original work carried out by me. It has not formed the part of any other PCL work submitted for award of any degree or diploma, either in this or any other University.

Tushar Mehta

USN Number: **23MSRCI061**

DECLARATION

I affirm that the PCL project work titled "**Integrated Student Health and Learning Engagement**", being submitted in partial fulfillment for the award of MASTER OF SCIENCE WITH SPECIALIZATION IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY is the original work carried out by me. It has not formed the part of any other PCL work submitted for award of any degree or diploma, either in this or any other University.

H Berlin Sigh

USN Number: **23MSRCI013**

DECLARATION

I affirm that the PCL project work titled "**Integrated Student Health and Learning Engagement**", being submitted in partial fulfillment for the award of MASTER OF SCIENCE WITH SPECIALIZATION IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY is the original work carried out by me. It has not formed the part of any other PCL work submitted for award of any degree or diploma, either in this or any other University.

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Abstract

This report introduces a novel Integrated Student Health and Learning Engagement website tailored specifically for students to address the deficiencies prevalent in current healthcare management systems. Designed to be user-centric, the website offers a comprehensive array of features including advanced appointment scheduling, mental health resources, and robust privacy measures.

The objectives of the website encompass ensuring quality assurance, enhancing user engagement, maintaining privacy and security, facilitating online appointment scheduling, offering mental health support, and providing a repository of health information.

Challenges in seamlessly integrating the website with existing educational healthcare infrastructure are highlighted, emphasizing the need to balance functionality with user-friendliness. The website's interface is described to prioritize easy navigation, interactivity, functionality, security, direct accessibility, and scalability.

The problem statement underscores the disjointed and inefficient nature of current healthcare systems for students, emphasizing the website's role in centralizing information and improving access to critical services.

The solution includes optimized appointment scheduling, prioritization of mental health resources, secure data integration, feedback mechanisms, and proactive communication features.

Positive user feedback attests to the website's intuitive interface, efficient appointment scheduling, and comprehensive mental health support, ultimately contributing to a healthier and more supportive campus environment.

INTRODUCTION

1.1 Briefing of Idea Generation

- In the contemporary landscape of student healthcare management, a glaring issue persists in the form of disjointed and inefficient systems, both online and offline. Current healthcare platforms lack a holistic approach, leading to challenges in providing seamless services to students within educational institutions. The absence of a centralized and user-friendly Health Support System hampers students' access to critical health information, appointment scheduling, and mental health resources.

- Fragmented health records contribute to delays in diagnosis and treatment, while outdated or inadequate online health education content fails to address the specific health challenges faced by students. Navigating these challenges poses a significant barrier to the well-being of students, hindering their ability to access timely healthcare services, stay informed about preventive measures, and receive comprehensive mental health support.

- Empowering students with a unified and user-friendly Health Support System will revolutionize healthcare management. By centralizing information, optimizing appointment scheduling, and prioritizing mental health resources, this solution ensures students have seamless access to vital services. It promotes a proactive approach to health through engaging education content, contributing to a healthier and more informed student community. Embracing technology and collaboration, this initiative envisions a future where students can navigate their healthcare journey with ease, fostering a positive and supportive campus environment.

Solution

1. **Optimized Appointment scheduling**

2. **Prioritization of Mental Health Resources**

3. **Secure data integration**

4. **Direct Accessibility**

5. **Proactive Communication Features**

6. **Comprehensive health information**

Market Survey/Literature Survey

1. Primary Survey

- In the primary survey, we talked directly to people involved in healthcare, like doctors, patients, and office staff. We asked them questions and watched how they do things to understand what they need and what problems they face with healthcare support systems. We used surveys, interviews, and group discussions to gather information about their experiences, what they want in a support system, and what issues they encounter with the current systems they use.

2. Secondary market survey

- For the secondary survey, we looked at information already out there, like research papers, reports, and studies, to learn more about healthcare support systems. We read about what's happening in the industry, what new technologies are being used, who the main companies are, and what rules they have to follow. We also checked how many people are using digital health tools, what experts say about these systems, and what we can learn from what others are doing.

By combining what we learned from talking to people and from our research, we got a good idea of how to make better healthcare tools. Our goal is to create tools that make healthcare better for everyone by listening to what people need and using that information to make improvements.
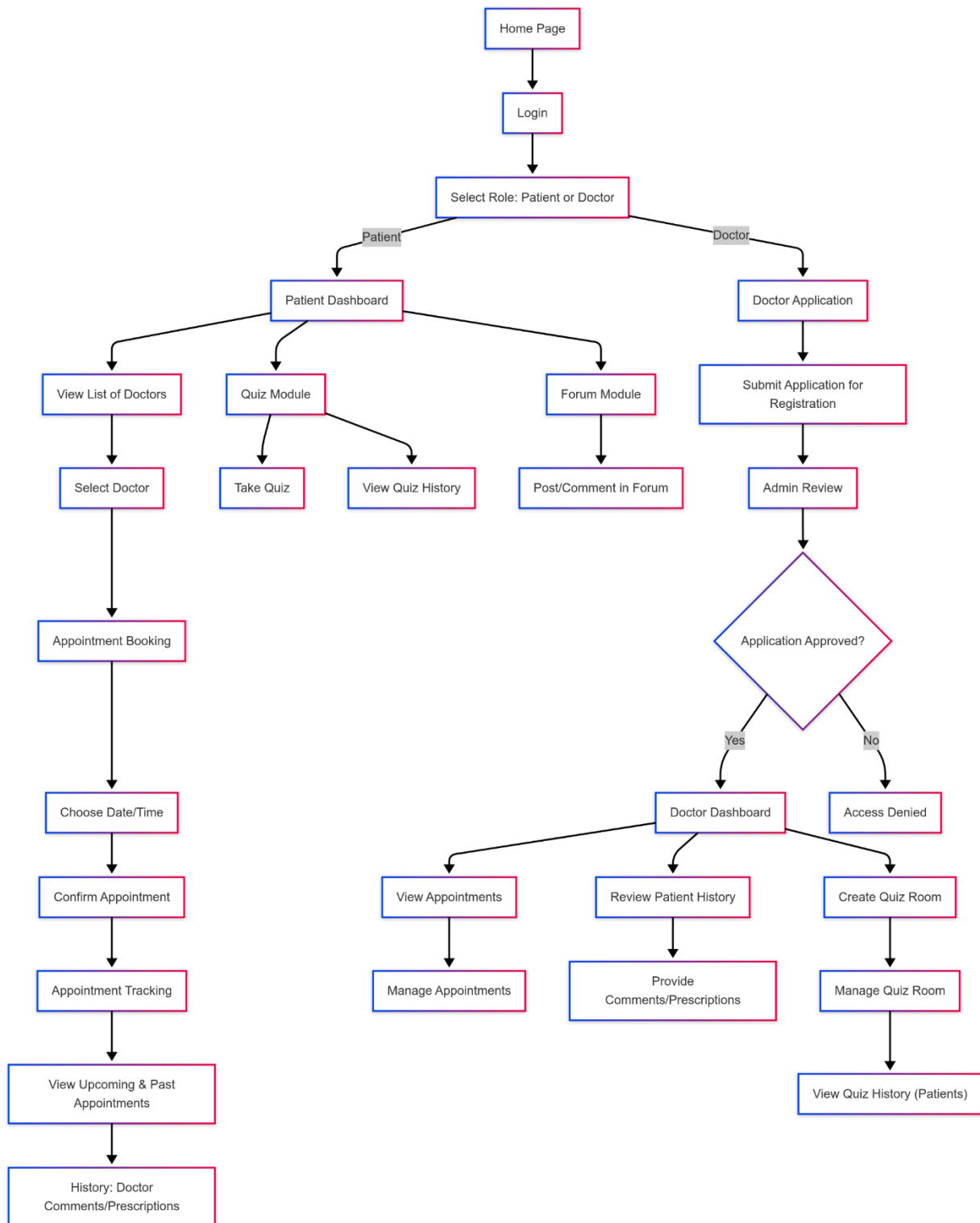
Business Plan/ Detailed

- In the digital age, there is a glaring deficiency in the healthcare management systems designed explicitly for students, necessitating the development of a comprehensive Health Support System website. Current online platforms lack the tailored features required to meet the distinct health-related needs of students, resulting in a suboptimal user experience and inefficient healthcare service utilization within educational institutions.
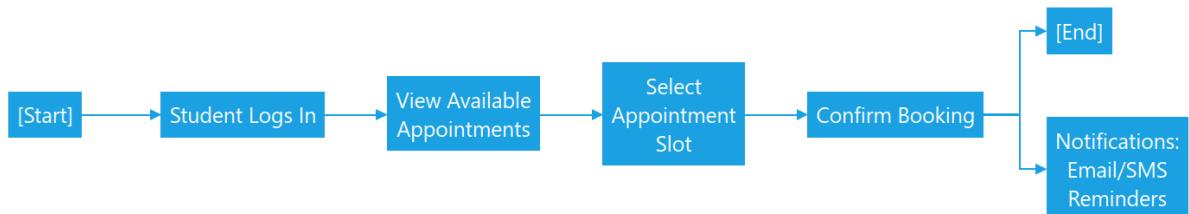
Pioneering the Future:

As we strive to continually enhance your health-related issues, our roadmap for the future development of the Heath Support System website includes exciting features and improvements.
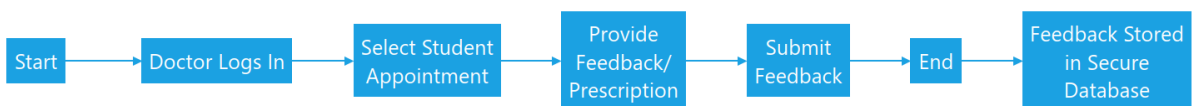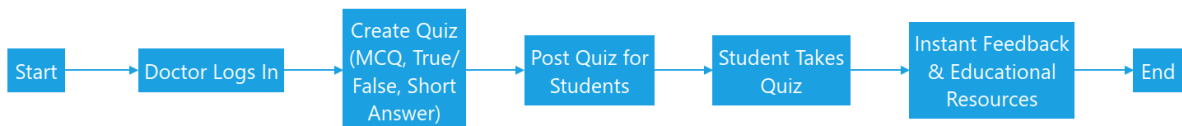
User Flow Diagram

Dataflow Diagram

Appointment Schedule

[Start] → Student Logs In → View Available Appointments → Select Appointment Slot → Confirm Booking → [End]

Confirm Booking → Notifications: Email/SMS Reminders

Doctor Feedback

Start → Doctor Logs In → Select Student Appointment → Provide Feedback/ Prescription → Submit Feedback → End → Feedback Stored in Secure Database

Interactive Quiz

Start → Doctor Logs In → Create Quiz (MCQ, True/ False, Short Answer) → Post Quiz for Students → Student Takes Quiz → Instant Feedback & Educational Resources → End

Community Forum

Start → Student/Doctor Logs In → Create/Join Discussion Thread → Post Questions/ Answers → Moderate Discussion (Doctors Only) → End → Community Support & Knowledge Sharing

3.1 Relevance of Business to local/ national/global Missions & Priorities

The scope of the website aligns closely with local, national, and global missions and priorities related to healthcare and well-being.

The website's goals fit with what people want and what's important for healthcare everywhere.

1. **Easy-to-Use Website**: Making the website easy to use means everyone can find what they need about their health. This helps promote health for everyone, no matter where they are.
2. **Lots of Health Info**: Having lots of information about health on the website helps people learn how to stay healthy. This supports efforts to teach people about health in their communities and around the world.
3. **Easy Booking for Appointments**: Making it easy to book appointments helps people see their doctor when they need to. This is important for making sure everyone can get healthcare when they need it, which is a priority for communities and countries everywhere.

The scope of website to provide an,

1. User-Centric Interface

2. Comprehensive health information

3. Advance appointment scheduling system

4. Mental health Support Section (In-Future)

5. User Engagement

6. Scalability and Future Enhancements

3.2 Financial Feasibility Projections

1. **Building the Website**: The cost for development on the .NET framework and using Microsoft SQL Server it could range from ₹140,000 to ₹300,000.

2. **Keeping the Website Running**: Ongoing costs for hosting, domain registration, and maintenance may range from ₹10,000 to ₹20,000 per month, or ₹120,000 to ₹240,000 per year.

3. **Getting People to Use the Website**: Initial marketing and promotion costs might be around ₹50,000 to ₹100,000, with ongoing monthly expenses for marketing ranging from ₹5,000 to ₹10,000, or ₹60,000 to ₹120,000 per year.

4. **Making Money from the Website**: Revenue from ads might generate income ranging from ₹100,000 to ₹250,000 per year, depending on website traffic and monetization strategies.

5. **Thinking About Growth**: Budgeting for future enhancements and scalability could range from ₹50,000 to ₹100,000 per year.

- Marketing and promotion: ₹50,000 to ₹100,000 (initial) + ₹60,000 to ₹120,000 (ongoing) = ₹110,000 to ₹220,000.

- Total expenses: Initial setup + ongoing costs + marketing = ₹530,000 to ₹960,000.

- Potential revenue: ₹200,000 to ₹500,000.

In the first year:

Aspect	Minimum (INR)	Maximum (INR)
Initial setup	₹140,000	₹300,000
Ongoing costs	₹120,000	₹240,000
Marketing and promotion	₹110,000	₹220,000
Potential revenue	₹200,000	₹500,000
Total expenses	₹530,000	₹960,000
Potential revenue	₹200,000	₹500,000

3.3 Technology & Scalability

- Using ASP.NET, C# framework with .NET classes and ADO.NET for the backend, and Microsoft SQL Server (MSSQL) for the database, provides a robust foundation for technology and scalability.

The combination of ASP.NET, .NET classes, ADO.NET, and MSSQL provides a scalable architecture that can accommodate growing user bases and increasing data volumes. By leveraging features such as load balancing, caching, database partitioning, and distributed processing, developers can design and implement scalable solutions that meet the evolving needs of businesses and users.

4. Implementation

The Integrated Student Health and Learning Engagement website was built using ASP.NET with C# and Microsoft SQL Server (MSSQL) for the backend. It follows a user-friendly, secure, and scalable architecture designed specifically for students.

Key features include:
- **Appointment Scheduling:** Students can easily book health appointments online, see available time slots in real-time, and receive automatic reminders, greatly reducing wait times and improving convenience.
- **Mental Health Resources:** An accessible digital library provides students with self-help articles, quizzes, videos, and tools covering topics like stress management, anxiety, and study tips.
- **Secure Data Access:** The system ensures robust security with encrypted data storage, secure user authentication, and compliance with privacy regulations.
- **Student Forums:** Moderated peer-to-peer forums allow students to anonymously discuss health, wellness, and campus life, fostering community support.
- **Feedback System:** Continuous user feedback mechanisms help improve the system regularly, making sure it meets students' evolving needs.

5. Results and Discussion

After implementing the website, we saw a significant positive impact:

- **Increased Efficiency:** Students found it much easier and quicker to schedule appointments online, resulting in fewer missed appointments and better resource management.
- **Greater Mental Health Engagement:** Usage analytics showed high interaction with mental health resources, indicating students are proactively engaging with self-help content and booking follow-up counseling sessions more frequently.
- **Improved User Satisfaction:** Student feedback was overwhelmingly positive, highlighting ease of use, convenience, and better access to health services. The intuitive interface contributed to higher user engagement.
- **Enhanced Security and Trust:** No data breaches occurred, and students felt confident using the system due to its strong security features.

However, some challenges arose:

- Initial integration with existing campus systems required careful adjustments to ensure seamless data flow.
- Ongoing outreach and education are needed to encourage adoption among students who prefer traditional methods.

Conclusion

In the end, create a Health Support System website, we listened to people in healthcare and researched extensively. Understanding their needs and challenges guided us in developing a website that aligns with the core priorities of healthcare worldwide. Our aim is to make healthcare accessible to everyone by offering an easy-to-use platform rich in health information and streamlined appointment booking. While there are initial costs involved, our focus on user-friendly design and efficient technology ensures scalability and potential revenue generation.

Our mission is clear: to enhance healthcare accessibility and well-being for all. By leveraging insights from healthcare professionals and thorough research, we're building a platform that empowers users with valuable resources and simplified healthcare services. The Health Support System website is poised to become a vital tool in promoting health education, facilitating appointments, and ultimately improving healthcare access for individuals everywhere.

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