A Mini project Synopsis on

LevelUp: Smart Study using A.I

T.E.- Computer Science and Engineering (Data Science)

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CERTIFICATE

This to clarify that the Mini Project Report on **LevelUp: Smart Study using A.I** has been submitted by **Devansh Kopra(21107013), Ayush Mistry(21107029), Sahil Mujumdar (21107050) and Mayank Kumar(21107016)** who are a Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in **CSE(DATA SCIENCE)**, during the academic year **2023-2024** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

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Guide

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1.

2.

Place: A.P. Shah Institute of Technology, Thane

Date:

TABLE OF CONTENTS

References

Acknowledgement

<u>ACKNOWLEDGEMENT</u>

CHAPTER 1

Introduction

In an ever-evolving world where knowledge is the key to success, LevelUP emerges as a beacon of educational advancement. With a mission to empower learners of all ages and backgrounds, LevelUP is more than just an E-learning platform; it is a transformative journey. Our platform is designed to break down the barriers to education, providing an accessible and immersive learning experience for individuals seeking to expand their horizons.

LevelUP brings together the latest in technology and pedagogy, creating an environment where learners can thrive. Our extensive library of courses, diverse instructors, and interactive resources cater to a broad spectrum of subjects and interests. Whether you are a student looking to enhance your academic prowess, a professional aiming to upskill, or an enthusiast eager to explore new passions, LevelUP has something for everyone.

Our commitment to quality, accessibility, and innovation sets us apart. We believe in levelling the playing field, ensuring that education is not bound by geographical constraints or financial limitations. With LevelUP, learners can set their own pace, access content from anywhere in the world, and engage with a supportive community of fellow learners and instructors.

As we embark on this educational journey together, LevelUP invites you to rise above the ordinary, embrace lifelong learning, and unlock your full potential. Join us in redefining education for the digital age, and let us LevelUP together.

1.1 Purpose:

The purpose of LevelUP is to empower individuals with the knowledge and skills they need to excel in today's dynamic and rapidly changing world. Our platform is driven by a profound belief in the transformative power of education. We aim to break down barriers to learning, making high-quality education accessible to all, regardless of their background or circumstances.

At LevelUP, we recognize that learning is a lifelong journey. Our purpose is to provide a versatile and engaging learning environment where individuals can continually acquire new knowledge, develop practical skills, and explore their passions. Whether it's academic subjects, professional development, or personal enrichment, our platform offers a wealth of opportunities for growth.

We strive to foster a sense of community and collaboration among learners, instructors, and experts, creating a vibrant ecosystem of knowledge exchange. Through this collaborative approach, LevelUP seeks to facilitate not just individual advancement, but also the sharing of knowledge and expertise for the betterment of society as a whole.

In essence, the purpose of LevelUP is to enable individuals to level up their lives, careers, and personal fulfilment through accessible, innovative, and comprehensive E-learning experiences. We believe that by empowering people with the tools they need to succeed, we contribute to a brighter and more promising future for all.

1.2 Objective:

LevelUP is driven by a set of clear and ambitious objectives aimed at delivering a superior E-learning experience and fostering educational excellence:

1. Accessible Education: Our primary objective is to make quality education accessible to learners.

2. Innovative Learning Methods: LevelUP is committed to implementing innovative and effective E-learning methods and technologies to enhance the learning experience and engagement of our users.

3. Community Engagement: We seek to build a strong and supportive learning community where learners can interact with instructors, experts, and fellow students, fostering collaboration and knowledge sharing.

4. Continuous Improvement: Our objective is to continually enhance the platform's offerings, user experience, and content quality based on feedback and emerging educational trends.

5. Global Reach: LevelUP aspires to reach to maximum student possible and provide quality learning experience.

6. Empowerment: Our ultimate objective is to empower learners to achieve their personal and professional goals, equipping them with the skills, knowledge, and confidence needed to excel in their chosen paths.

7. Social Impact: LevelUP is committed to making a positive social impact by contributing to the education and skill development of underserved communities and individuals.

1.3 Scope:

The scope of LevelUP extends far beyond traditional boundaries, aiming to revolutionize the way people access and engage with education. At its core, LevelUP is a

platform that embraces the concept of lifelong learning. It accommodates a wide range of subjects, skills, and interests, making it accessible to learners of all backgrounds and ages.

One of the key facets of LevelUP scope is its commitment to inclusivity. By providing affordable and accessible education, we aim to bridge the educational divide that often hinders individuals from pursuing their goals. Our platform is not limited by geography or socioeconomic status; anyone with an internet connection can embark on a learning journey with LevelUP.

Furthermore, LevelUP offers a diverse array of courses, from academic subjects to professional skills and personal development. Learners can choose their areas of interest and expertise, empowering them to acquire knowledge that is both relevant and fulfilling. The platform also supports various learning formats, including video lectures, quizzes, assignments, and interactive discussions, catering to different learning styles.

As we continue to expand our offerings and partnerships, LevelUP scope reaches across borders, connecting learners with renowned instructors and experts from around the world. Our commitment to innovation ensures that we remain at the forefront of E-learning technology, providing an ever-evolving and dynamic educational experience.

In summary, the scope of LevelUP is vast and all-encompassing, designed to democratize education, foster personal growth, and empower individuals to thrive in the digital age. With LevelUP, the possibilities for learning are boundless, and the pursuit of knowledge knows no limits.

CHAPTER 2
Problem Definition

In the wake of the global pandemic, the education sector has seen a massive expansion. With technology on its side, the entire education system is finding new ways of doing things. It's not that technology has not been used in education before, but the use of education application has been limited. In this new era, where the children are smart and tech savvy. The children have reached to a certain level of comfort with the technology. The industry should take advantage of this scenario.

In addition to entertainment, the technology should be used to start educating the young generation about various things including basic life improving habits as well as to make them independent of their parents to learn new things. Although technology being a boon for this generation can also become a bane if not used or utilized properly. It changes the way of life of a young one.

Thus, the need for not only great knowledge and high IQ but also the need to make a child live an ethical life which becomes our responsibility. So, the aim of LevelUP is to become a platform which not only enhances the academic but enhances the way the child perceives the life. It teaches very young minds how to be at their best behaviour which in return makes them confident and someone trustworthy with good moral values.

CHAPTER 3

Proposed System

The proposed system, LevelUP, aims to revolutionize online learning by offering a comprehensive and user-centric E-learning platform. LevelUP will provide a dynamic and interactive virtual environment where learners can access a wide range of courses, engage with high-quality educational content, and collaborate with peers and instructors. The platform will leverage cutting-edge technology, including AI-driven recommendation systems, to personalize the learning journey for each user, tailoring content and assessments to their individual needs and progress. Additionally, LevelUP will prioritize accessibility, ensuring that learners from diverse backgrounds and abilities can participate fully. With a user-friendly interface and a wealth of multimedia resources, LevelUP seeks to foster an engaging and effective learning experience, empowering individuals to level up their skills and knowledge conveniently and confidently.

Advantages:

1. Accessibility: LevelUP breaks down geographical barriers, enabling learners from around the world to access high-quality educational content anytime, anywhere. This accessibility promotes inclusivity and allows individuals to learn at their own pace.

2. Scalability: LevelUP can scale rapidly to accommodate a growing user base without the constraints of physical infrastructure. This scalability makes it an ideal solution for both individual learners and institutions seeking to expand their online education offerings.

3. Variety of Content: The platform offers a wide array of courses and learning materials, ranging from text-based resources to video lectures and interactive quizzes. This diversity of content caters to different learning styles and preferences.

4. Continuous Improvement: Data analytics and user feedback mechanisms enable LevelUP to continuously improve its content and features. This iterative approach ensures that the platform remains relevant and effective over time.

5. 24/7 Availability: Learners can access LevelUP resources and courses at any time, making it suitable for individuals with busy schedules or those juggling work and education.

6. Up-to-Date Content: The platform can quickly update content to reflect current industry trends and advancements, ensuring that learners receive the most relevant and up-to-date information.

3.1 Features and Functionalities

1. User Registration and Profiles:

   -Users can create personalized profiles with their information and educational background.

   - Registration process for students, instructors, and administrators.

2. Course Catalog:

   - A comprehensive catalog of courses spanning various subjects and skill levels.

   - Search and filter options to find specific courses.

   - Course previews and descriptions.

3. Course Enrollment:

   - Easy enrollment in courses of interest.

   - Tracking of enrolled courses and progress.

4. Content Delivery:

   - Multimedia content delivery, including video lectures, e-books, quizzes, and assignments.

   - Real-time or on-demand access to learning materials.

5. Feedback and Ratings:

   - Rating and review system for courses and instructors.

   - Feedback mechanisms to improve course content and delivery.

6. Admin Dashboard:

   - Administrative tools for managing courses, instructors, and users.

   - Content management and analytics.

CHAPTER 4

Project Outcomes

The LevelUP E-learning platform is expected to yield a multitude of outcomes that contribute significantly to the realm of online education. As a result of this project, learners and educational institutions will experience a transformation in their approach to teaching and learning. Firstly, LevelUP will make education more accessible than ever, overcoming geographical and time constraints. Learners will have the freedom to choose from a vast catalog of courses, ranging from academic subjects to vocational skills, at their own convenience. This newfound accessibility promotes inclusivity, enabling individuals from diverse backgrounds and abilities to engage in lifelong learning.

The core outcome of LevelUP lies in its ability to provide personalized learning experiences through AI-driven algorithms. Learners will receive tailored content, assessments, and feedback, enhancing their understanding and retention of knowledge. The platform's user-friendly interface, extensive multimedia resources, and gamification elements will promote active participation, motivation, and deeper engagement in the learning process. Instructors, on the other hand, will benefit from tools to monitor and assess student progress, making the teaching and mentoring experience more effective.

The introduction of live virtual classrooms and discussion forums will foster a sense of community among learners, encouraging peer collaboration and knowledge sharing. The platform will be designed to offer certification and credentials that are widely recognized, thereby improving learners' career prospects and personal development. Additionally, the platform's continuous improvement cycle, driven by data analytics and user feedback, will ensure the content remains relevant and up-to-date.

LevelUP will be a cost-effective alternative to traditional education, as it reduces the need for physical infrastructure and printed materials. This cost-efficiency will expand access to quality education for learners across the globe. Moreover, the project outcomes will be characterized by robust data security measures, ensuring the safety and privacy of user information.

In the grand scheme of things, the LevelUP E-learning platform's project outcomes will go beyond just an online learning platform; it will be a catalyst for lifelong learning and skills development, catering to the needs of a diverse global audience. It will bridge the gap

between individuals seeking knowledge and the educators and institutions eager to deliver it, thereby enriching lives, careers, and the educational landscape.

CHAPTER 5
Software Requirements

Software Requirement Specification (SRS) Format as name suggests, is complete specification and description of requirements of software that needs to be fulfilled for successful development of software system. These requirements can be functional as well as non-functional depending upon type of requirement. This is description of features and functionalities of the target system. Requirements convey the expectations of users from the software product. It is the responsibility of system analyst to document the requirements in technical language so that they can be comprehended and useful by the software development team.

The Software and Technology stacked used in development of LevelUp analysis are:

- Visual Studio 1.83
- PHP 8.2.12

CHAPTER 6

Project Design

Design is the first step in the development phase for any engineering product (or) system. It may be defined as "the process of applying various techniques and principles for the purpose of defining a device, a process, or a system insufficient detail to permit its physical realization." Software design is an iterative process through which requirements are translated into a 'Blueprint' for constructing the software.

The design is represented at a high level of abstraction, a level that can be directly translated to specific data, functional and behavioural requirements. The interface design describes how the software communicates within itself, to systems that interoperate with it, and with humans who use it. An interface implies a flow of information (e.g., data and /pr control). Therefore, the data and control flow diagrams provide the information required for interface design.
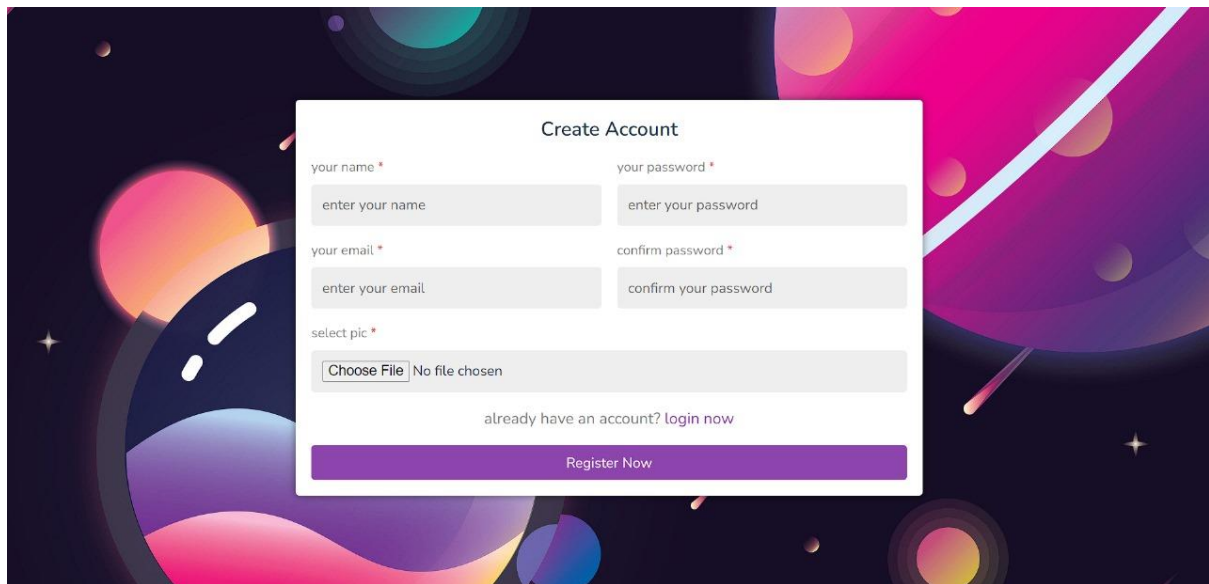
1. Login Page:

This is the very first page of the application. Here the user needs to enter his/her username and password to sign up in the application. If he/she is new, then they need to first register and the log up. The system also gives option to reset the credentials.
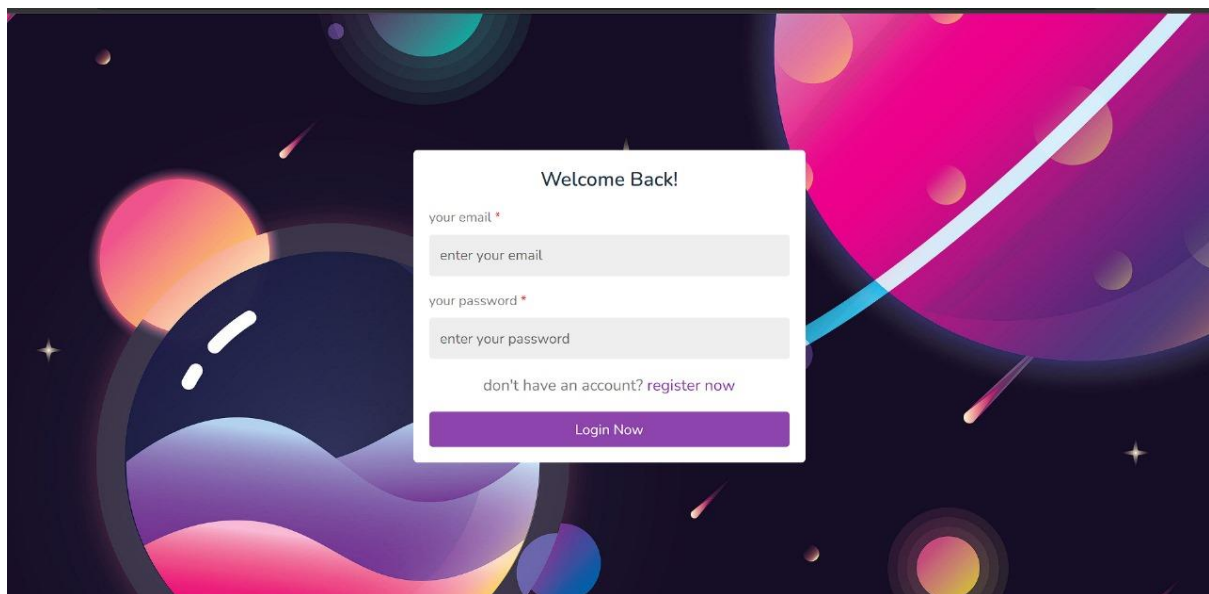
Fig. 6.1

2. Registration Page

If the user is a new user, he/she needs to first create an account by entering the personal details such as name, email, password, contact no etc. and then login.
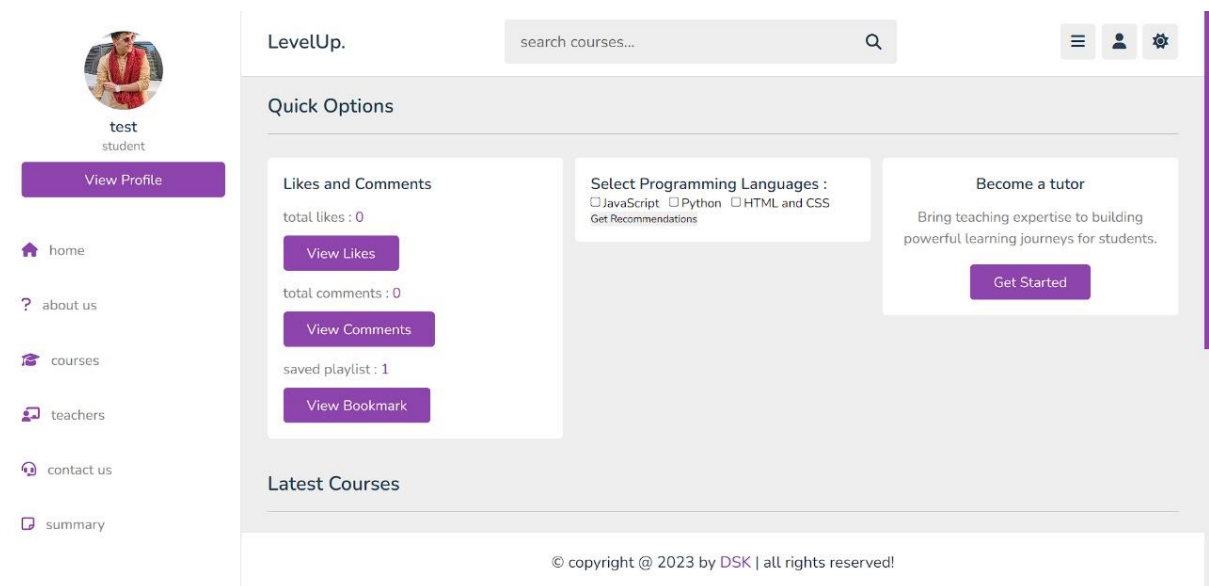
Fig.6.2

3. Dashboard

This is the main dashboard of the project. Here the user will be able to find the main Track of his/her progress, Liked and bookmarked Content.

Fig.6.3

11

CHAPTER 7

Project Scheduling

In project management, a schedule is a listing of a project's milestones, activities, and deliverables. Usually, dependencies and resources are defined for each task, then start and finish dates are estimated from the resource allocation, budget, task duration, and scheduled events. A schedule is commonly used in the project planning and project portfolio management parts of project management. The development and maintenance of the project schedule is the responsibility of a full-time scheduler or team of schedulers, depending on the size and the scope of the project. The project schedule is a calendar that links the tasks to be done with the resources that will do them. It is the core of the project plan used to show the organization how the work will be done, commit people to the project, determine resource needs, and used as a kind of checklist to make sure that every task necessary is performed.

A Gantt chart is a type of bar chart that illustrates a project schedule. Modern Gantt charts also show the dependency relationships between activities and the current schedule status. This chart lists the tasks to be performed on the vertical axis, and time intervals on the horizontal axis. The width of the horizontal bars in the graph shows the duration of each activity. Gantt charts illustrate the start and finish dates of the terminal elements and summary elements of a project. Terminal elements and summary elements constitute the work breakdown structure of the project. Modern Gantt charts also show the dependency (i.e., precedence network) relationships between activities. Gantt charts can be used to show current schedule status using percent-complete shadings.
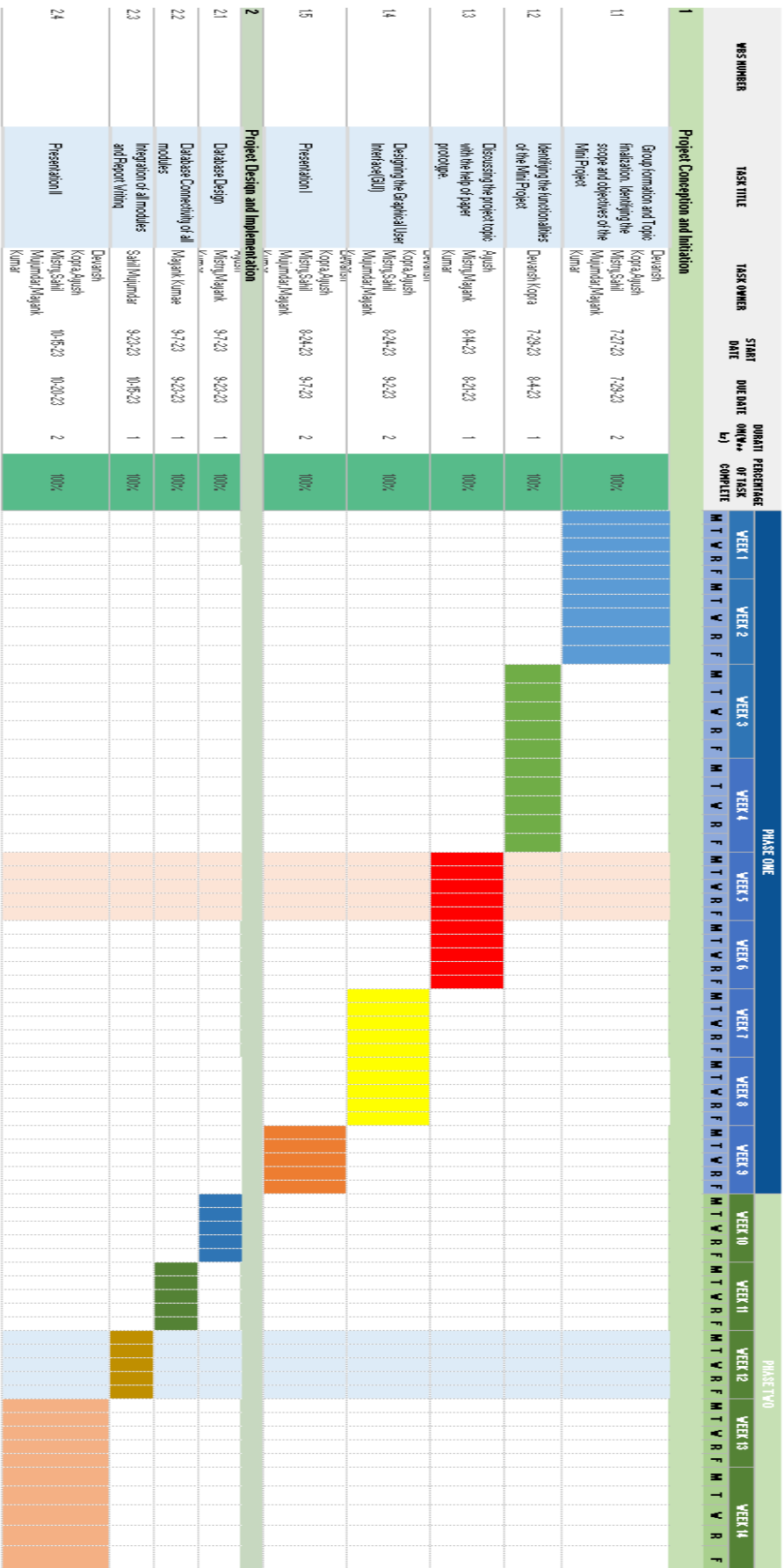
GANTT CHART TEMPLATE

Smartsheet Tip → A Gantt chart's visual timeline allows you to see details about each task as well as project dependencies.

PROJECT TITLE: LevelUp: Smart learning using AI

PROJECT GUIDE: PROF. POONAM PANGARKAR

INSTITUTE & DEPAR: AP SHAH INSTITUTE OF TECHNOLOGY(CSE-Data Science)

DATE: 10/24/23

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION (WEEK)	PERCENTAGE OF TASK COMPLETE
1	**Project Conception and Initiation**					
1.1	Group formation and Topic finalization. Identifying the scope and objectives of the Mini-Project	Devansh Kopra-Ayush Mistry-Sahil Mujumdar-Mayank Kumar	7-27-23	7-28-23	2	100%
1.2	Identifying the functionalities of the Mini-Project	Devansh Kopra	7-29-23	8-4-23	1	100%
1.3	Discussing the project topic with the help of paper prototype.	Ayush Mistry-Mayank Kumar	8-14-23	8-24-23	1	100%
1.4	Designing the Graphical User Interface(GUI)	Kopra-Ayush Mistry-Sahil Mujumdar-Mayank Kumar	8-24-23	9-2-23	2	100%
1.5	Presentation I	Kopra-Ayush Mistry-Sahil Mujumdar-Mayank Kumar	8-24-23	9-7-23	2	100%
2	**Project Design and Implementation**					
2.1	Database Design	Mistry-Mayank Kumar	9-7-23	9-29-23	1	100%
2.2	Database Connectivity of all modules	Mayank Kumar	9-7-23	9-29-23	1	100%
2.3	Integration of all modules and Report Writing	Sahil Mujumdar	9-29-23	10-15-23	1	100%
2.4	Presentation II	Devansh Kopra-Ayush Mistry-Sahil Mujumdar-Mayank Kumar	10-15-23	10-20-23	2	100%

PHASE ONE: WEEK 1, WEEK 2, WEEK 3, WEEK 4, WEEK 5, WEEK 6, WEEK 7, WEEK 8, WEEK 9

PHASE TWO: WEEK 10, WEEK 11, WEEK 12, WEEK 13, WEEK 14 (M T W R F)

Fig7.1

13

CHAPTER 8

Conclusion

LevelUp, an E-learning platform tailored for young children, provides a personalized learning experience that caters to each user. Through a simple login or registration process, users gain access to their individual accounts, complete with a user-friendly dashboard with user friendly Front End. With User friendly Front End small children can access web application without parents supervision. This dashboard empowers users to effortlessly track the courses they're engaging with and facilitates feedback mechanisms through comments, likes, dislikes, and the option to bookmark videos for later viewing. LevelUp thoughtfully includes day and night mode options to ensure a comfortable viewing experience. With a diverse array of courses spanning various subjects, LevelUp offers something for every learner. Additionally, its intelligent recommendation system suggests similar courses, further enhancing the learning journey.

In a world where personalized education is increasingly essential, LevelUp emerges as a user-centric E-learning platform, transforming the way young children access and engage with educational content. With its intuitive features and engaging course offerings, LevelUp sets out to make learning a dynamic and tailored experience for every child.

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[1] W3Schools. (HTML) https://www.w3schools.com/html/ W3Schools is a popular online learning platform that provides tutorials and documentation on web development technologies. This specific link is the HTML section of their website, which covers the fundamentals of HTML, the standard markup language for creating web pages.

[2] W3Schools. (CSS) https://www.w3schools.com/css/ Another section of W3Schools, this link provides resources for Cascading Style Sheets (CSS), which is used to control the design and layout of web pages. It includes tutorials and references for CSS properties and techniques.

[3] W3Schools. (JavaScript) https://www.w3schools.com/js/ W3Schools' JavaScript section offers comprehensive resources on JavaScript, a widely used scripting language for web development. It covers JavaScript basics, advanced concepts, and practical examples.

[4] PHP. https://www.php.net/ PHP is a server-side scripting language commonly used for web development. The official PHP website provides extensive documentation, including a manual, functions reference, and community resources for PHP developers.

[5] Coursera. https://www.coursera.org/ Coursera is an online learning platform that offers a wide range of courses, including many related to computer science, programming, and web development. It provides access to courses from top universities and institutions.

[6] edX. https://www.edx.org/ Similar to Coursera, edX is an online learning platform that offers a variety of courses and programs. It features courses from universities and organizations worldwide, covering a broad spectrum of topics, including web development.

[7] Udemy. https://www.udemy.com/ Udemy is a popular online marketplace for educational courses. It hosts a vast array of courses on web development, programming, and various other subjects, often created by industry experts and instructors.

[8] Skillshare. https://www.skillshare.com/en/ Skillshare is an online platform that focuses on creative and practical skills. It offers a library of video-based courses and tutorials, including web development and design-related content.

[9] Khan Academy. https://www.khanacademy.org/ Khan Academy is an educational platform that provides free video lessons and exercises in a wide range of subjects. While it's known for math and science, it also offers computer programming and web development courses.

[10] Codecademy. https://www.codecademy.com/ Codecademy is an interactive learning platform that specializes in coding and programming courses. It provides hands-on coding exercises and projects for various programming languages, including web technologies.

[11] Free Code Camp. https://www.freecodecamp.org/ Free Code Camp is a nonprofit organization that offers free coding challenges and web development projects. It's a community-driven platform that helps learners build real-world coding skills.

[12] The Odin Project. https://www.theodinproject.com/ The Odin Project is a free, open-source curriculum for learning web development. It offers a comprehensive pathway for self-learners and covers HTML, CSS, JavaScript, and more.

[13] edWeb. https://edweb.net/ edWeb is a professional learning network for educators and teachers. It provides a space for educators to collaborate and access webinars, discussions, and resources related to education technology and teaching.

[14] Mozilla Developer Network (MDN). https://developer.mozilla.org/en-US/docs/Web/ MDN is a resource by Mozilla that offers extensive documentation and guides for web developers. It covers web technologies like HTML, CSS, JavaScript, and more, and is known for its accuracy and completeness.

[15] W3Schools. https://www.w3schools.com/ W3Schools is a widely used online resource for web development tutorials and references. In addition to HTML and CSS, it also provides information on various other web technologies and programming languages.

[16] GeeksforGeeks. https://www.geeksforgeeks.org/ GeeksforGeeks is a popular website that offers tutorials and articles on computer science and programming topics. It's a valuable resource for developers, including web developers, looking for in-depth explanations and coding examples.