

A Mini Project Synopsis on
Teachify: Learning Application for Kids
S.E. — Computer Science and Engineering-Data Science

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CERTIFICATE

This to certify that the Mini Project report on TEACHIFY: Learning application for Kid 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 Computer Science and Engineering(Data Science), during the academic year 2022-2023 in the satisfactory manner as per the curriculum laid down by University of Mumbai.

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References

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CHAPTER 1

Introduction

Teachify is a children's learning Web-based application that uses technology, such as Artificial Intelligence (AI), to provide an interactive and engaging learning experience for kids. The application is designed to help children learn various subjects, such as math, science, language, and basic manners, in a fun and interactive way.

One of the key features of Teachify is its AI bot, which can interact with children in a natural and conversational way. The bot can answer questions, provide feedback, and offer guidance, making the learning experience more personalized and engaging.

Another notable feature of Teachify is its talking dictionary, which provides definitions and examples of words and phrases in a clear and easy-to-understand way. This feature can be particularly helpful for children who are learning a new language or struggling with vocabulary.

Teachify also includes a range of videos, and other activities that are designed to help children learn and reinforce important concepts and skills. The application is user-friendly and intuitive, making it easy for children to navigate and explore on their own.

Overall, Teachify is a powerful and innovative tool for children's learning that uses cutting edge technology to create a fun and engaging educational experience. The application is designed to help children develop important cognitive, social, and emotional skills, and to prepare them for success in school and beyond in early ages.

1.1 Purpose: -

The purpose of a Teachify is to provide a safe, engaging, and interactive online environment for children to learn and develop various skills. Such a platform typically includes educational videos, and other activities that are specifically designed to help children learn important concepts and skills, such as reading, writing, math, science, and social studies.

The primary goal of a kid's learning platform is to make learning fun and enjoyable for children, so that they are motivated to learn and eager to explore new topics and ideas. By providing a range of interactive and engaging educational content, these platforms help children develop important cognitive, social, and emotional skills that will prepare them for success in school and in life. Overall, the purpose of a Teachify is to foster a love of learning and help children develop the skills they need to succeed both in and out of the classroom.

1.2 Objectives: -

- To make learning more interactive: one of the primary objectives of Teachify is to make learning more engaging and interactive for children. By using technology like AT and a talking dictionary, the app aims to provide an immersive learning experience that keeps children interested and motivated.
- To personalize the learning experience: Teachify also aims to personalize the learning experience for each child. The AI bot can interact with children in a natural and conversational way, providing customized feedback and guidance based on their individual needs and learning style.
- To improve children's cognitive skills: Another objective of Teachify is to improve children's cognitive skills, such as memory, attention, and problem-solving abilities. By using educational games, quizzes, and other activities, the app helps children develop these skills in a fun and engaging way.
- To enhance children's language skills: Teachify also aims to enhance children's language skills, whether they are learning a new language or improving their vocabulary in their native language. The talking dictionary feature provides clear and concise definitions and examples, helping children build their language skills.
- To prepare children for success in school and beyond: Ultimately, the objective of Teachify is to prepare children for success in school and beyond. By providing a fun and engaging learning experience that focuses on important academic skills as well as cognitive, social, and emotional development, the app aims to help children develop the skills they need to succeed in life.

1.3 Scope: -

Teachify has the potential to reach a global audience, making it possible for children all over the world to benefit from its innovative features and interactive learning experience. The app's AI bot and personalized feedback system allow for a tailored learning experience, catering to individual learning styles and abilities. This can make a significant impact on children's academic performance. Teachify's use of interactive games and activities makes learning more fun and engaging, motivating children to participate in their own education and develop a lifelong love of learning. With its talking dictionary feature, Teachify can make a significant impact on children's language learning abilities, helping them develop a strong vocabulary and understanding of language. Teachify can be a cost-effective alternative to traditional tutoring or educational services, making it accessible to a wider range of families and communities. Teachify uses advanced technology such as AT and a talking dictionary,

allowing children to access innovative features that can enhance their learning experience and give them a competitive edge in their academic pursuits

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 "Teachify" 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 behavior which in return makes them confident and someone trustworthy with good moral values.

CHAPTER 3

Proposed System

The proposed system for Teachify would provide a comprehensive and personalized learning experience for children. It would be designed to be engaging, user-friendly, and provide measurable progress tracking. The app's features would be customizable based on the user's needs and would be accessible to users of all ages and abilities.

3.1 Features and Functionality:

- **AI Bot:** Teachify's AI bot is designed to provide personalized learning experiences for students. The bot uses machine learning algorithms to analyze a student's performance, identify areas of weakness, and provide feedback and suggestions to help them improve. The bot can also adapt the learning experience to a student's preferred learning style and pace.
- **Talking Dictionary:** Teachify's talking dictionary provides audio pronunciations of words and definitions to help students improve their vocabulary and comprehension. The dictionary is designed to be interactive and engaging, with visual representations of new words and the ability to search for specific terms.
- **Interactive Lessons:** Teachify offers a range of interactive lessons and activities that cover a variety of subjects, including math, science, language arts, and social studies. The lessons are designed to be engaging and fun, with gamified elements that encourage students to participate and learn.
- **Accessibility:** Teachify is designed to be accessible to all students, with features like text to speech and speech-to-text that can help students with special needs participate in classroom activities. The app is also available in multiple languages, making it easier for students from diverse backgrounds to use.
- **Parent-Teacher Communication:** Teachify allows parents and teachers to communicate directly through the app. Teachers can send progress reports, alerts, and messages to parents, and parents can view their child's performance and communicate with teachers about their child's progress.

CHAPTER 4

Project Outcomes

- Education is one of the most important aspects of modern society, as it plays a crucial role in shaping the future of individuals and the world. The traditional methods of teaching have long been considered outdated and insufficient, as they fail to meet the needs of modern learners. However, with the advent of technology, there has been a paradigm shift in the way education is delivered. One such example of this shift is Teachify, an educational app that aims to help children improve their academic skills in a fun and interactive way.
- One of the main benefits of Teachify is its ability to provide educational content that aligns with national curriculums. This ensures that children receive a standardized education that meets the requirements set forth by educational authorities. Moreover, the app uses gamification techniques to make learning more engaging and fun. This approach has been proven to increase student motivation and retention, as it makes the learning process more enjoyable.
- In addition to this, Teachify can also help children become more comfortable with technology and develop important digital literacy skills. With technology playing an increasingly important role in our lives, being proficient in digital skills has become a crucial part of modern education. By using Teachify, children can become familiar with technology in a safe and controlled environment, and learn how to use it effectively.
- Another significant advantage of Teachify is its ability to provide personalized learning experiences that cater to the specific needs of each child. By analyzing the child's learning patterns and preferences, the app can tailor its content to meet their individual requirements. This ensures that every child receives an education that is suited to their unique learning style and pace.

CHAPTER 5

Software Requirements

Front End

- **Tkinter-** Tkinter is a standard Python library used for creating graphical user interfaces (GUIs) with a variety of widgets such as buttons, labels, textboxes, and more.
- **PyCharm-3.2-** PyCharm is a powerful Python integrated development environment (IDE) developed by JetBrains, providing a wide range of tools for code analysis, debugging, testing, and version control.
- **Python-3.7.4-** Python is a high-level, interpreted programming language known for its simple syntax, readability, and wide range of applications, from web development to data science and artificial intelligence.

Back End

- **MySQL- 5.7-** MySQL is an open-source relational database management system (RDBMS) that uses SQL (Structured Query Language) for managing and manipulating data in a relational database.

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 ‘Blue print’ 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 behavioral 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.

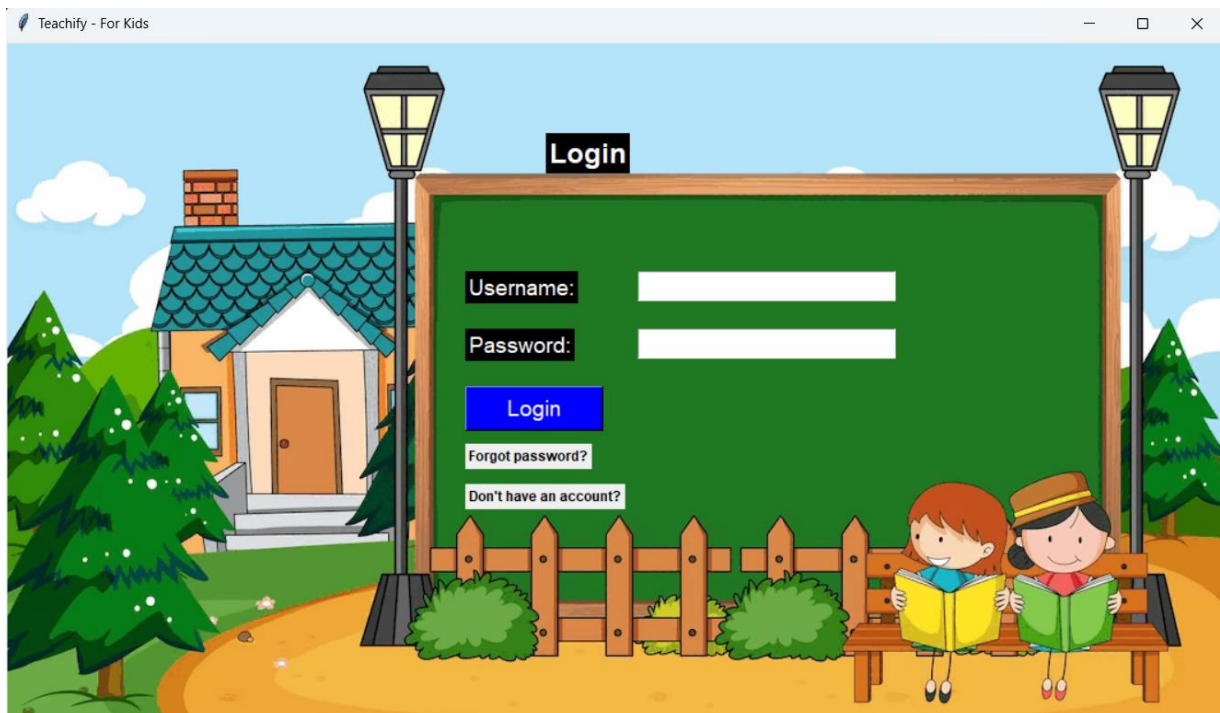


Fig 6.1

2) Age Category Page

This is a second page of the application. Here the user needs to select their age group in which they are. According to that their study modules will open.

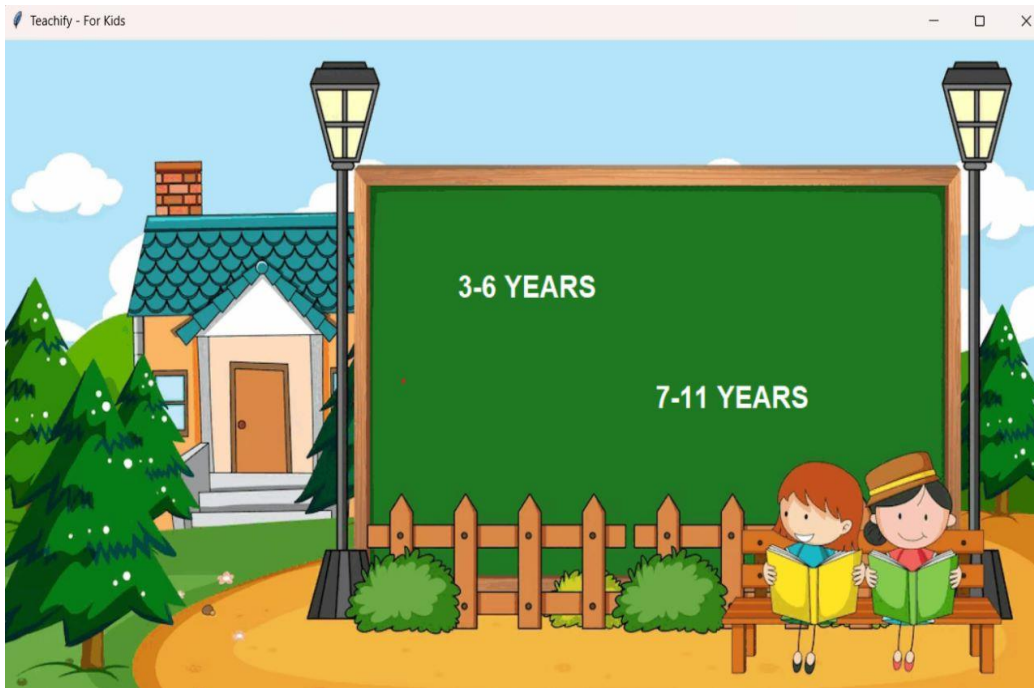


Fig 6.2

I.Contents of 3-6 YEARS

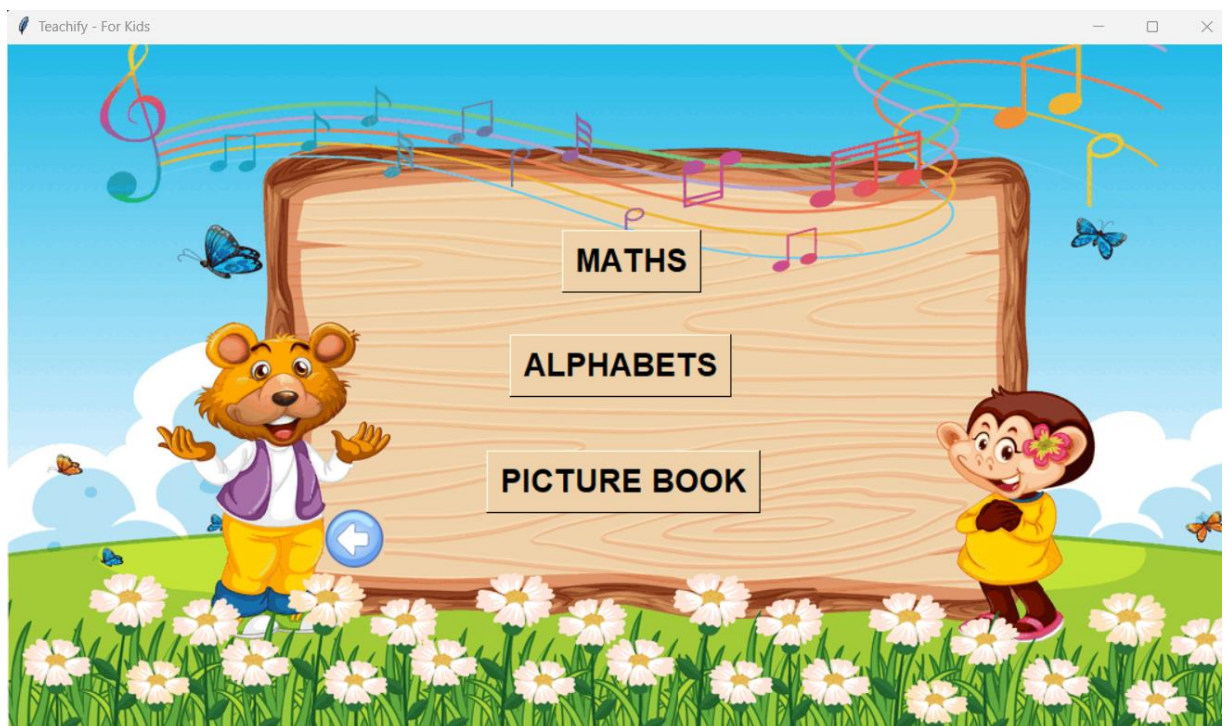


Fig 6.3

II. Contents of 7-11 YEARS

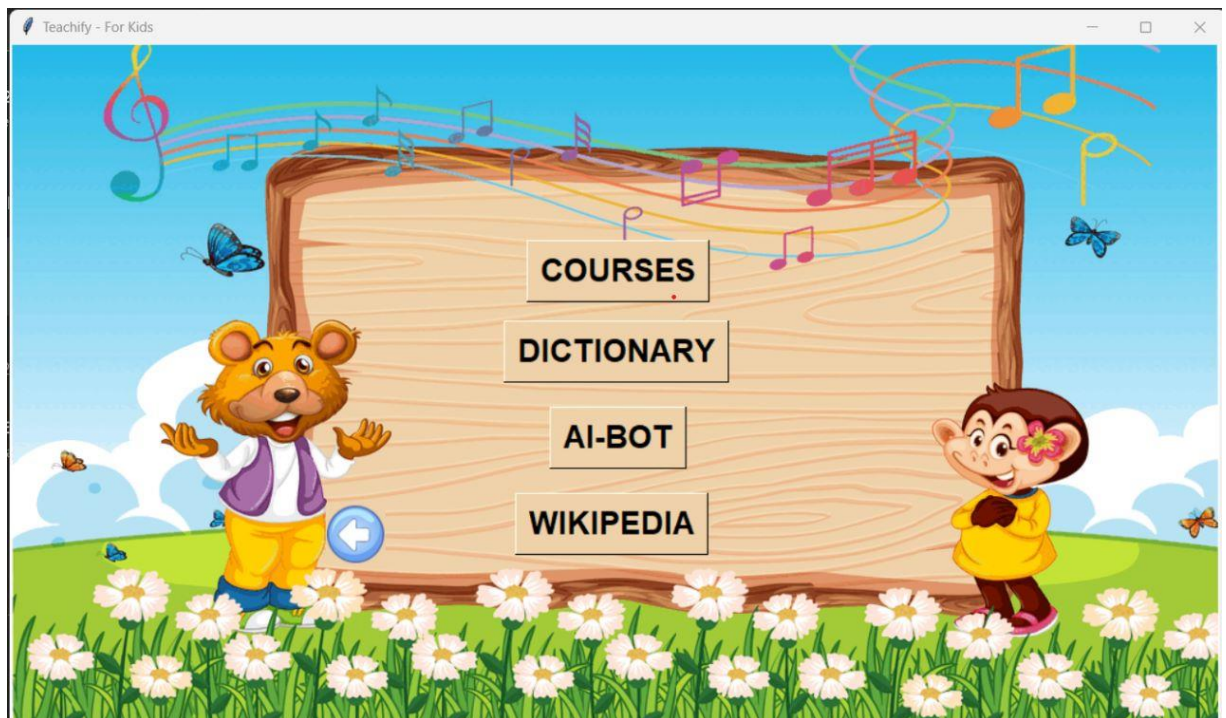


Fig 6.4

4) Wikipedia

With the help of inbuilt feature of Wikipedia children's can easily search meanings of each and every words which they found difficult to understand.

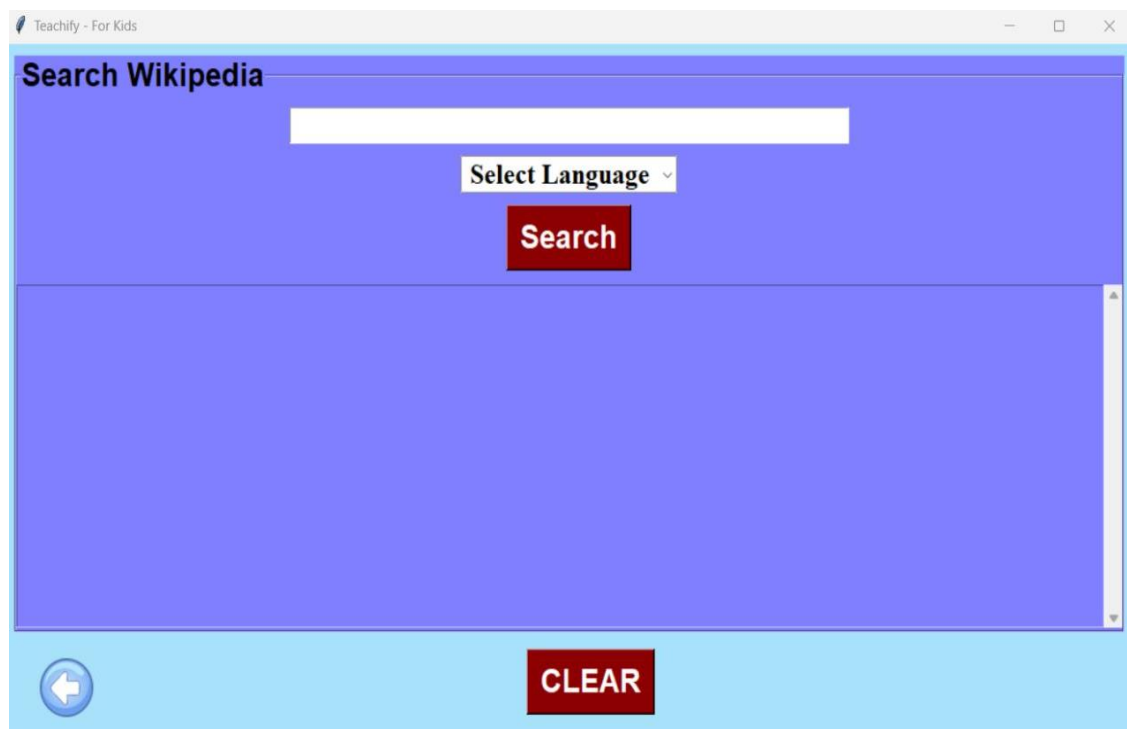


Fig 6.5

5) Dictionary

With the help of dictionary children can learn new words in different languages



Fig 6.6

6) AI-BOT

With the AI-BOT learning becomes more interesting and enhanced

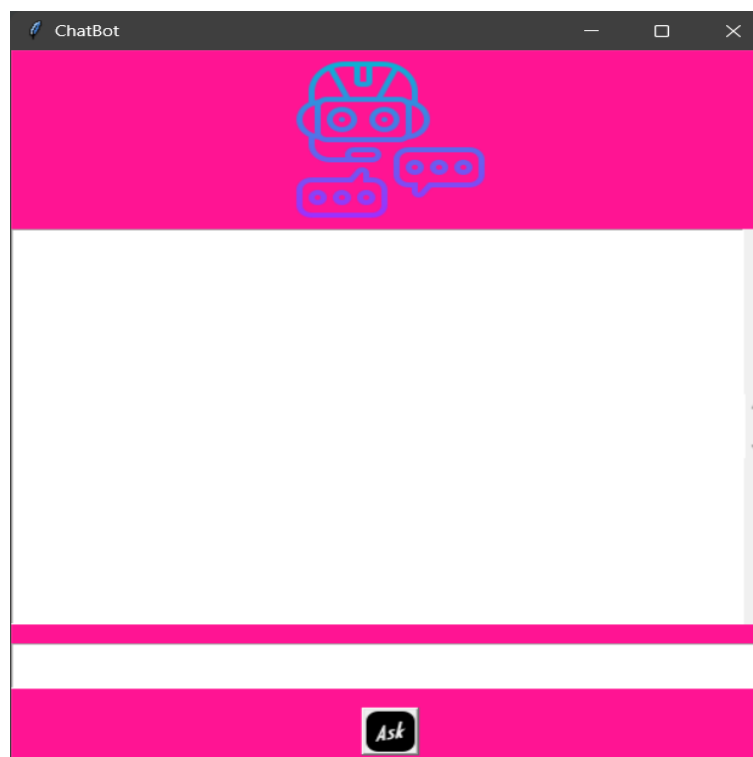


Fig 6.7

CHAPTER 7

Project Scheduling

Project scheduling is the process of planning and organizing the tasks and resources required to complete a project within a given timeframe. It involves identifying the project goals, breaking down the work into smaller tasks, determining the sequence and duration of each task, and allocating the necessary resources to complete the project. Project scheduling is a critical aspect of project management, as it ensures that the project is completed efficiently and effectively.

A Gantt chart is a popular tool used in project scheduling that visually displays the project schedule. It is a horizontal bar chart that shows the duration of each task and the dependencies between them. Gantt charts allow project managers to track the progress of the project, identify potential delays, and adjust the schedule as necessary. They are useful for communicating the project timeline to team members, stakeholders, and clients, and can help to ensure that everyone is working towards the same goals and deadlines.

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

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CHAPTER 8

Conclusion

In conclusion, Teachify can be a great tool to aid in the educational development of children. They offer a fun and interactive way for kids to learn important skills and knowledge, such as reading, writing, math, and more. With the advancement of technology, these apps have become increasingly popular and accessible, providing parents and educators with a variety of options to choose from.

1.Interactive Learning: Teachify offer a fun and interactive way for children to learn new skills and concepts. They use games, quizzes, and other interactive features to engage children and make learning more enjoyable.

2.Accessibility: With the increasing popularity of technology, kids learning apps are becoming more accessible than ever before. They can be downloaded onto smartphones, tablets, and computers, making them easy to access from anywhere.

3.Convenience: Teachify provide a convenient way for children to learn at their own pace, without the need for a physical classroom or teacher. This makes it easier for children to fit learning into their busy schedules.

4.Personalized Learning: Teachify offers personalized learning experiences that can be tailored to a child's individual needs and abilities. This helps to ensure that each child is learning at a pace that is comfortable for them

Reference Links

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- 5] <https://youtu.be/djDcVWbEYoE>
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