# Abstract

In this app, we target those students, professionals, and teachers that want to learn something new by watching videos or internet-unavailable students they can save videos so they learn some skills by watching videos. In the early launch, we target only two skills and only save the video in the cache our app is dynamic so we add skills periodically and add a download function in the next release.

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# Introduction

In this tutoring app I am going to help students to learn emerging technologies in an efficient and easy way. For students that do not know what to study or have trouble searching the study materials, this app is best for them. In this app, we ask students what they want to study or we tell them they have to study this on the basis of some question answers and then provide the best material from all over the world to them. In the first launch, we may only target one or two courses only, and then in the next launch, we target different courses that help the student to make their future better.

# Road Map

Phase 1: MVP Release

* Develop and test basic app functionality, including playing videos from YouTube and downloading video links from Firebase
* Implement course selection feature
* Design and implement basic user interface
* Conduct initial user testing and feedback gathering

Phase 2: Content Expansion

* Create additional video content for courses
* Allow teachers to submit their own video content for review and inclusion in the app through email not directly in the app.
* Enhance course selection functionality to allow users to automatically choose a course by giving answers to some question

Phase 3: Platform Enhancements

* Add the ability to save the video in cache memory in case of internet fluctuation
* Improve video recommendation engine to suggest new content based on user history and preferences
* Implement analytics to track usage and identify areas for improvement

Phase 4: Mobile App Release

* Develop and release mobile versions of the app for iOS and Android
* Optimize user interface for mobile devices
* Integrate with mobile-specific features

Phase 5: Community Building

* Develop social features to allow users to connect with each other and share content
* Implement a ratings and review system for app

The specifics of the roadmap will depend on the priorities and resources of the development team and company. It's important to continually assess and adjust the roadmap based on feedback and changing market conditions.

# Agile Method

1. Planning:

* Create a product backlog with all the features required for the app

1. As a user, I want to be able to view a list of all available courses, so that I can easily find the course I want to take.
2. As a user, I want to be able to select a course and view a list of all videos associated with that course, so that I can watch them in order.
3. As an administrator, I want to be able to add new courses to the app, so that users can have access to new content.
4. As an administrator, I want to be able to remove courses that are no longer relevant, so that users don't waste time looking for outdated content.
5. As a developer, Implement the feature to save the video in the cache so that when the internet fluctuates video does not stop.
6. As a developer, I want to implement a system for tracking user interactions, so that we can analyze how users are engaging with the app and make improvements accordingly.
7. As a developer, I want to optimize the app's performance to ensure that videos load quickly and without interruptions.

* Break down the features into smaller user stories
* Prioritize the user stories in the backlog

1. Sprint 1:

* Conduct a sprint planning meeting and select the 1st user stories to be worked on in this sprint
* Develop a simple user interface to display the list of available courses
* Implement the feature to choose course or chosen automatically by the app by giving answers to some questions
* Implement the feature to retrieve the list of courses from Firebase
* Implement the feature to play videos from YouTube

1. Sprint 2:

* Conduct a sprint planning meeting and select the 2nd user stories to be worked on in this sprint
* Develop a user interface to allow users to choose a course
* Implement the feature to retrieve the list of videos for a selected course from Firebase
* Implement the feature to play selected videos from YouTube

1. Sprint 3:

* Conduct a sprint planning meeting and select the 3rd user stories to be worked on in this sprint
* Implement the feature to save the video in the cache so that when the internet fluctuates video does not stop.
* Implement the feature to stop, rewind, play, fast forward and change speed of the video.
* Add testing to all implemented features

1. Release:

* Release the app to the app store
* Continue to gather feedback and make improvements for future updates

***Personas***

1. A student is a busy graduate student pursuing master's degree in computer science and doing a part-time job and wants to supplement studies with online courses in free time and looking for a simple and convenient tutoring app that can help her learn new skills quickly and easily.

Goals:

* Find and access quality courses on the app
* Easily navigate the app and search for courses
* Save courses for later viewing
* Feel confident that the app is secure and reliable

Challenges:

* Limited time due to her busy schedule
* Limited budget for paid courses
* Slow internet connection at times
* Concerned about the security of her personal information

1. A software engineer working for a tech company. He wants to improve his skills and learn new technologies that can help him in his career growth. He likes to learn through online courses and video tutorials in his free time.

Goals:

* wants to find a simple and easy-to-use app that can provide him with a wide range of video tutorials on different topics related to software engineering.

Challenges:

* has a busy schedule with work and other commitments, so he needs an app that can provide him with a flexible learning experience. He also wants to make sure that the app is secure and that his personal data is protected.

1. Some one who is a High school teacher and has a Bachelor's degree in Education and 10 years of teaching experience

Goals:

* To easily find and share educational videos with his students.
* To have a tool that can help him easily organize course materials.

Challenges:

* Finding quality educational videos that align with his curriculum.
* Keeping track of which videos he has shared with his students.

# Scenarios

1. Students have a few minutes between classes and want to use that time to study. He opens the tutoring app on his phone and browses the available courses. He selects a course on calculus and begins watching a video lecture. The video is stored locally on her phone, so He can continue watching even when he loses the Wi-Fi connection. After the lecture, he takes a quick quiz to test her understanding of the material.
2. downloads the tutoring app from the app store. He opens the app and is presented with a list of different courses to choose from. He selects a course on "Introduction to Machine Learning." The app presents him with a list of videos related to the course, along with a brief description of each video. He selects a video on "Linear Regression" and starts watching it. He can pause, rewind or fast-forward the video as per his convenience. After watching the video, he can mark it as completed and move on to the next one in the course. He can also browse through other courses and select the ones he is interested in. Alex feels secure using the app
3. a high school teacher who is looking for a tool to help him better manage his course materials. He decides to try out a simple tutoring app that he has heard about. He opens the app and is taken to the app's homepage, where he sees a list of courses that he can choose from.

He selects the course that he is teaching, and is taken to a screen that displays all of the videos that have been uploaded or shared for that course. He selects "Photosynthesis" and is presented with a list of results.

He finds a video that looks promising and clicks on it. The video starts playing within the app, and he can easily pause, rewind, or fast forward as needed. He decides to share this video with his students, so he copies the app link and sends it to the students.

Students can download the app and play that video. He feels satisfied that he was able to easily find and share high-quality educational videos with his students.

# Key Features of our application

1. Course Catalog: A searchable and filterable course catalog that allows users to browse and choose courses based on their interests or needs.
2. Video Player: A high-quality video player that can stream videos from YouTube or play downloaded videos from Firebase.
3. Download functionality: Users should be able to watch the videos when the internet fluctuates video must be saved in cache memory.
4. Course Recommendations: Personalized course recommendations based on the user's interests, past viewing history, and completed courses can be done by giving answers to some questions.
5. Notifications: Optional push notifications to remind users about new course content or upcoming deadlines.
6. Share: Users can share the app with other students so that they can also take advantage of our app.

# User stories

1. Student
   * As a busy college student, I want to be able to watch educational videos on my phone so that I can study on the go.
   * As a Student, I want to be able to go on a specific course topic within the app, so that I can easily watch the videos that I need for my studies.
   * As a Student, I want to be able to choose a personalized course or if I do not know what course I have to study app will help me to find that course that I can watch at my convenience so that I can stay organized and on track with my learning goals.
2. Software engineer
   * As a software engineer, I want to find an app that can provide him with a wide range of video tutorials on different topics related to software engineering so that he can improve his skills and stay up-to-date with the latest technologies.
   * As a software engineer, I want to integrate a feature that allows users to choose courses by keyword so that users can easily find relevant content.
   * As a software engineer, I want to improve the performance of the app by implementing caching for frequently accessed video links, so that users can experience faster load times.
3. Teachers

* As a teacher, I want to be able to add new videos to YouTube so the developer adds them to the app for my students.
* As a teacher, I want to be able to share the app with students so that they download the app and watch the videos of the course.
* As a teacher, I want to be able to add a short description or summary for each course or video link so that my students can get an overview of the content before watching the video.