

# EDUX

For effective student learning.

Murat Çağrı Kara  
Bilginer Oral  
Efe Kaan Fidancı  
Cahit Ediz Civan  
Görkem Kadir Solun

Presenters

20.12.2024

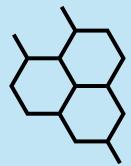
# OUTLINE

1. Introduction
2. Current Status
3. Progress of Tasks
4. Project Plan
5. Contributions
6. Demo
7. Business Model
8. Conclusion
9. Q&A



# INTRODUCTION

- Global education market is valued at **USD 5.4 trillion** in 2023.
- Expected to reach **USD 9.8 trillion** by 2030.



# INTRODUCTION

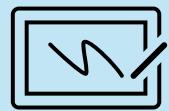
A different perspective:  
**revolutionizing** education.

- Khan Academy, Udemy,  
Coursera... and many others.
  - Worse in content quality
  - Higher in price



# INTRODUCTION

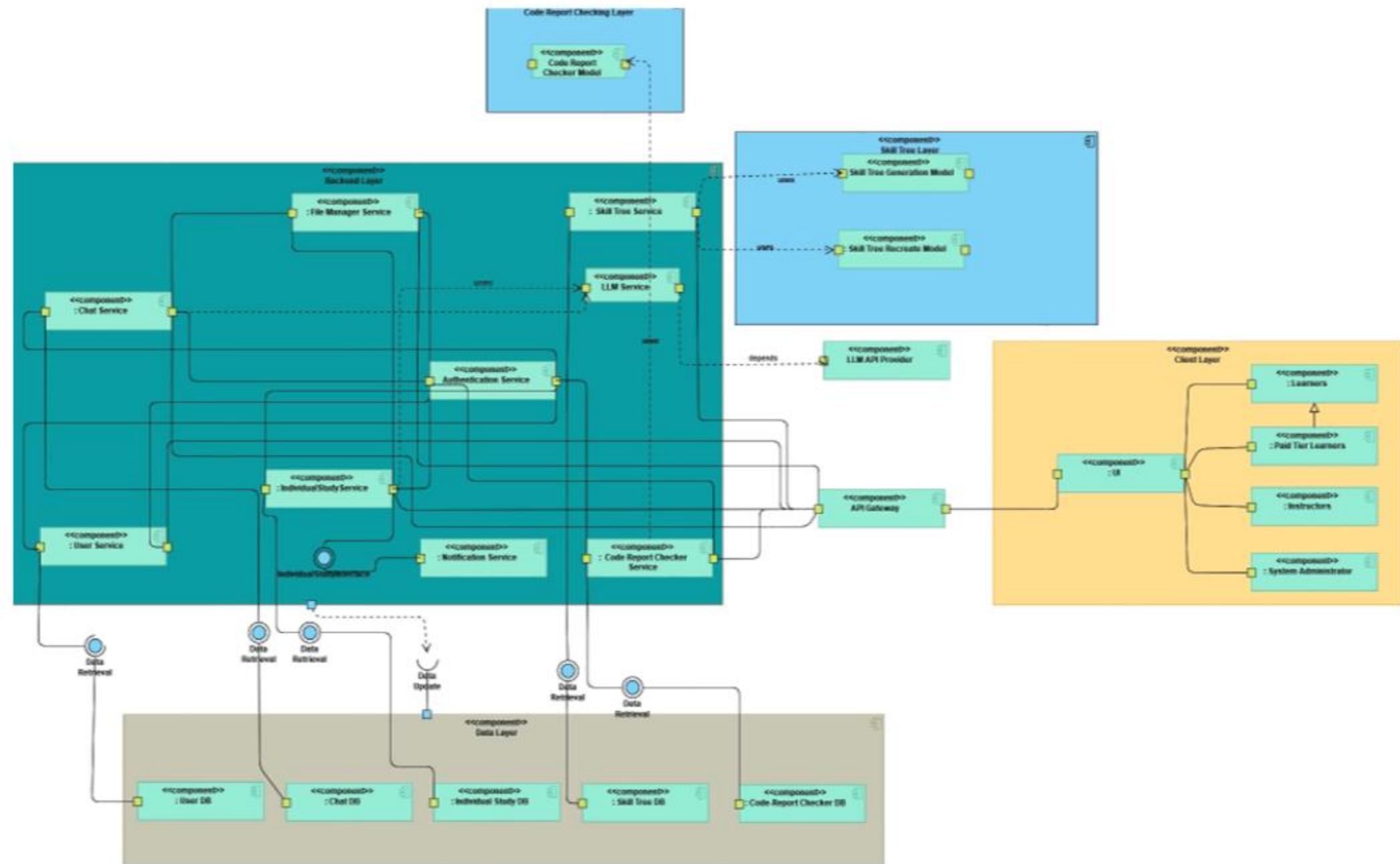
- Democratizing education
- Making education accessible to everyone



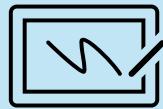
# CURRENT STATUS



# SYSTEM ARCHITECTURE

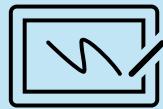


# COURSE



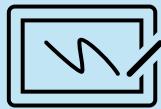
The screenshot shows the edux.ai platform interface. At the top, there is a navigation bar with the logo, 'About', 'Services', a search bar, and a light/dark mode switch. Below the navigation, there's a 'Skill Tree' section with a description: 'Conquer each skill, reveal new branches and quizzes.' To the right, there's a 'Create Individual Study' modal window. This window has fields for 'Name' (with a placeholder 'I'), 'Code', and 'Description'. Below these are two upload sections: one for PDF or DOCX files and another for JPG, JPEG, or PNG files. A 'Create' button is at the bottom right of the modal. In the background, there are other course cards visible, such as 'Card 4' and 'Signals'.

# COURSE



The screenshot shows the edux.ai platform's course editor. At the top, there's a navigation bar with the logo, 'About', 'Services', a search bar, and some settings icons. A modal window titled 'Edit Individual Study' is open in the center. It contains fields for 'Name' (filled with 'Programming Languages: Pearl, Python, Go'), 'Code' (filled with 'CS315'), and 'Description' (containing the text 'Very large description very large description'). Below these fields are two dashed boxes for file uploads: one for PDF or DOCX files and another for JPG, JPEG, or PNG files. A 'Save' button is at the bottom right of the modal. In the background, there are several cards: 'Skill Tree' (with a small icon), 'Big Card' (with content and a footer), and 'Card 4'. To the right, there are sections for 'Languages...' (with a 'Signals' card showing a circuit diagram) and 'View Course'.

# COURSE



edux/ai About Services Search in edux... ☰ ☺ ☀ ☐

**Flashcards**  
Practice with digital flashcards.

[Flashcards](#)

**Quizzes**  
Take interactive quizzes.

[Quizzes](#)

**Go to Signals Instructor**  
Ask Signals Instructor through chatbot.

[Go to Signals Instructor](#)

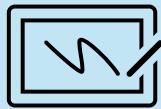
**Weekly study plan**  
Plan your study sessions for the week.

[Weekly study plan](#)

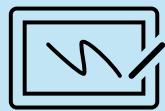
**Upload/Update Syllabus**  
Upload or update the course syllabus.

[Upload/Update Syllabus](#)

# COURSE



The screenshot shows a dark-themed user interface for managing courses. At the top, there's a navigation bar with the logo 'edux/ai', 'About', 'Services', a search bar, and some icons. Below the navigation, there are four cards: 'Skill Tree' (with a gear icon), 'Card 2' (with a circular icon), 'Card 3' (with a circular icon), and 'Card 4' (with a circular icon). On the left side, there's a large card labeled 'Big Card' with the sub-label 'This is the big card on the left.' It contains the text 'Content for the big card.' and 'Footer for the big card.'. A modal window titled 'Confirm Deleting Study' is open in the center. It asks 'Are you sure you want to delete course Operating Systems? This action cannot be undone.' with 'Cancel' and 'Continue' buttons. In the bottom right corner of the main area, there's a card for 'Operating Systems' with the sub-label 'This course is the hardest course.', a 'View Course' button, and two small icons. A lightning bolt icon is also visible at the bottom left of the main area.



# SKILL TREE

The screenshot shows a web interface for 'edux.ai'. At the top left is the logo 'edux.ai'. To its right are navigation links 'About' and 'Services'. On the far right is a search bar with placeholder text 'Search in edux...', a magnifying glass icon, and a refresh/clear icon. Below the header are two rounded rectangular cards. The first card, titled 'Basic Education Path', contains the subtitle 'Very good Skill Tree' and two small icons. The second card, titled 'Second Skill Tree', contains the subtitle 'Second good Skill Tree' and two small icons. A small circular icon with a lightning bolt symbol is located at the bottom left of the page.

**Basic Education Path**  
Very good Skill Tree

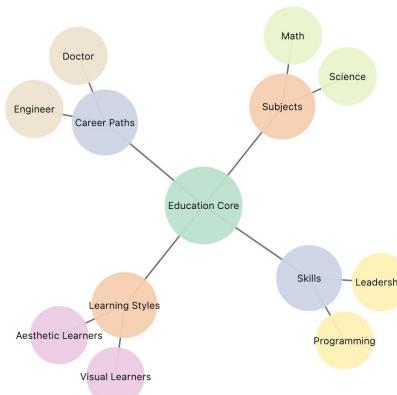
**Second Skill Tree**  
Second good Skill Tree



# SKILL TREE

/ edux/ai About Services

Search in edux...  ✕ K ☀ ↗



# QUIZ FEATURE

Operating Systems

Unit 1

Create Quiz

Unit 1

2. Security and Protection:

**User Accounts:** The OS manages user accounts, providing different levels of access to resources. It helps protect the system from unauthorized access.

**File Permissions:** The OS controls which users and programs can access specific files, preventing unauthorized modifications or deletions.

**Protection from Malicious Software:** The OS implements security mechanisms to defend against viruses, malware, and other threats.

3. Abstraction and Interface:

**Hiding Complexity:** The OS presents a simplified interface to the user and applications, hiding the complex details of the underlying hardware. This makes it much easier for users to use computers.

**Standardization:** The OS provides a consistent interface for applications to interact with the hardware, regardless of the specific hardware configuration. This allows applications to run on different computers without needing to be rewritten.

In a Nutshell:

The OS is the foundation for a computer's functionality. It manages hardware resources, ensures the smooth operation of applications, protects the system from threats, and provides a user-friendly interface. Without an OS, computers would be incredibly difficult to use and would be much less secure.

Let me know if you'd like to explore any of these aspects further, or if you have other questions about the role of the OS. I'm happy to help!

Chat with your instructor

# QUIZ FEATURE

The screenshots show the LearnSmart platform interface, specifically the 'Operating Systems' course section.

**Screenshot 1:** A modal window titled 'Quiz' displays 'Question 1 of 4'. The question asks: 'Question: Which of the following is NOT a core function of an operating system (OS)?' The options are: A. Managing user accounts and access permissions, B. Controlling the execution of user programs, C. Creating and running applications for users (highlighted in green), D. Managing hardware resources like memory and CPU, and E. Providing a user-friendly interface to interact with the system. A 'Next Question' button is at the bottom.

**Screenshot 2:** The same quiz modal is shown, but option B ('Controlling the execution of user programs') is now highlighted in red, indicating it is the correct answer. The other options are greyed out.

**Screenshot 3:** The main course page shows the quiz has been saved successfully. A message at the top right says 'Quiz saved successfully as "2024-09-16 21.12.38"'.

# FLASHCARD FEATURE



Unit 1

Operating Systems

Today

Unit 1

Rename

Create Quiz

Create Flashcards

Delete

for applications to use them.

**2. Security and Protection:**

**User Accounts:** The OS manages user accounts, providing different levels of access to resources. It helps protect the system from unauthorized access.

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Chat with your instructor

## Question



Key Roles of an OS



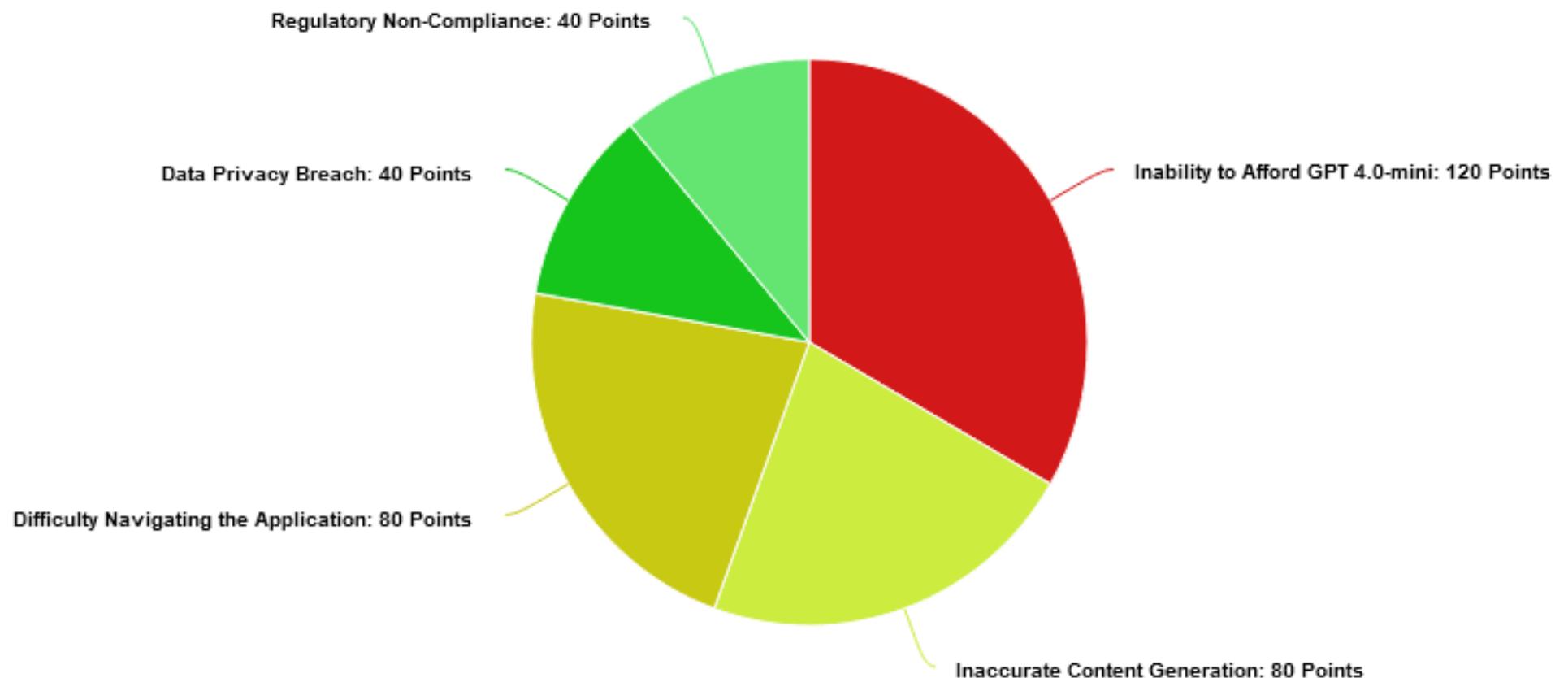
## Answer

The OS has several key roles in a computer system. It manages resources like memory, CPU, files, and devices. It provides a secure environment by managing user accounts and file permissions. It also abstracts the complexity of the hardware, making it easier for users and applications to interact with the system.



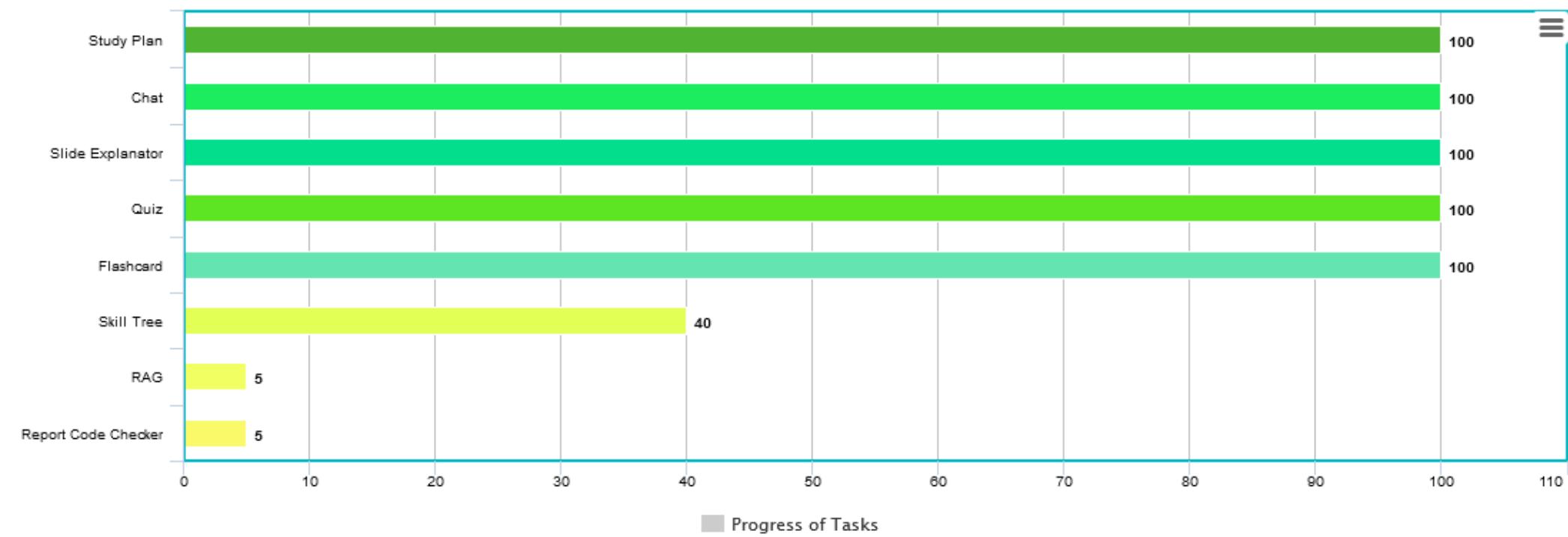


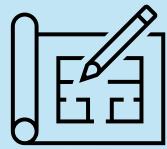
# PROGRESS OF TASKS



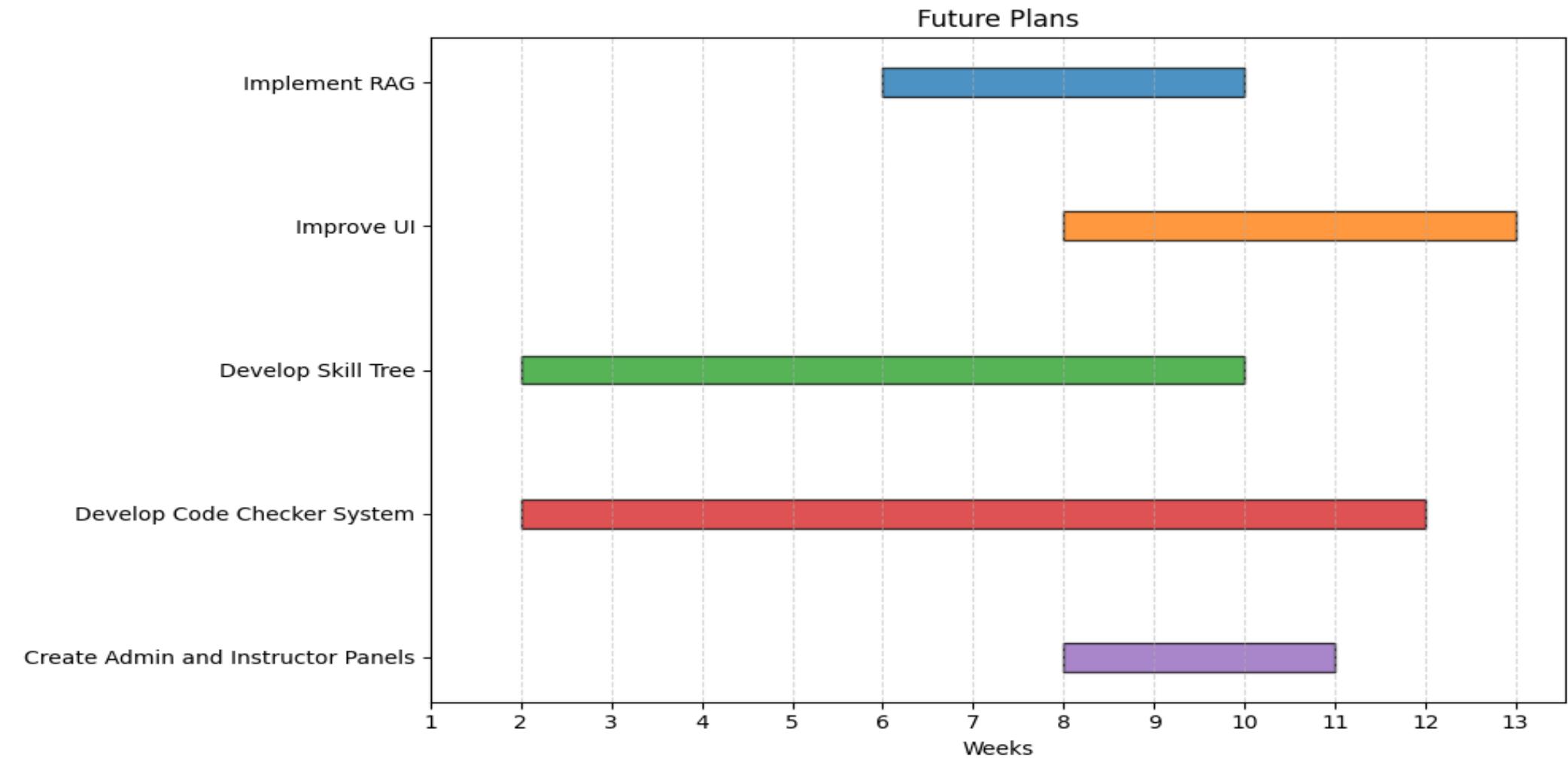


# PROGRESS OF TASKS





# PROJECT PLAN





# CONTRIBUTIONS OF EACH MEMBER





# DEMO OF EDUX



## Sign up an account

 murat.cagri2@gmail.com

 murat.cagri

 .....

 .....

Sign up

By clicking continue, you agree to our  
[Terms of Service](#) and [Privacy Policy](#).



## Sign in an account

 murat.cagri2@gmail.com

 .....

Sign in

OR CONTINUE WITH

 Google

By clicking continue, you agree to our  
[Terms of Service](#) and [Privacy Policy](#).

### Choose Your Role

**User**

Unlock your potential, one click at a time.

**Instructor**

Inspire, guide, and benefit from edux.

**Submit**

## Skill Tree

Conquer each skill, reveal new branches and quizzes.



## Card 2

Content for card 2.



## Card 3

Content for card 3.



## Card 4

Content for card 4.



## Big Card

This is the big card on the left.

Content for the big card.

Footer for the big card

## Your Studies



## Skill Tree

Conquer each skill, reveal new branches and quizzes.



## Card 1

Content for card 1.

## Big Card

This is the big card on the left.

Content for the big card.

Footer for the big card

### Create Individual Study

✖

#### Name

Operating Systems

#### Code

CS342

#### Description



syllabus.pdf



os.jpg

Create

### Skill Tree

Conquer each skill, reveal new branches and quizzes.



### Card 2

Content for card 2.

### Card 3

Content for card 3.

### Card 4

Content for card 4.

### Big Card

This is the big card on the left.

Content for the big card.

Footer for the big card

### Your Studies



**Operating Systems**

[View Course](#)  

**Success**  
Course successfully created

[Dismiss](#)



## Skill Tree

Conquer each skill, reveal new branches and quizzes.



## Card 3

Content for card 3.

## Big Card

This is the big card on the left.

Content for the big card.

Footer for the big card

### Edit Individual Study



#### Name

#### Code

#### Description

This course is the hardest course



syllabus.pdf



icon.png

Save



**Skill Tree**

Conquer each skill, reveal new branches and quizzes.

**Card 2**

Content for card 2.

**Card 3**

Content for card 3.

**Card 4**

Content for card 4.

**Big Card**

This is the big card on the left.

Content for the big card.

Footer for the big card

**Your Studies****Operating Systems**

This course is the hardest course

[View Course](#)



**Flashcards**

Practice with digital flashcards.

[Flashcards](#)**Quizzes**

Take interactive quizzes.

[Quizzes](#)**Go to Operating Systems Instructor**

Ask Operating Systems Instructor through chatbot.

[Go to Operating Systems Instructor](#)[Weekly study plan](#)**Upload/Update Syllabus**

Upload or update the course syllabus.

[Upload/Update Syllabus](#)

Create Chat

Operating Systems

## Welcome to Presentation Chat

Select a chat from the sidebar or create a new one to get started.

## Create a New Chat

X

Enter a name for your new chat and click create when ready.

Unit 1

### Upload slides (optional)

Slides-Introduction-1.pdf



Drag and drop a file or click to browse

PDF or PPTX

Create Chat

Cancel

## Welcome to Presentation Chat

Select a chat from the sidebar or create a new one to get started.

Create Chat



Slides-Introduction-1.pdf ▾

Operating Systems



Unit 1

...

## Slide 1

Bilkent University  
Department of Computer Engineering  
CS342 Operating Systems

# Introduction - 1

Last Update: Jan 30, 204

← Previous

Next →

## Unit 1

Create Quiz

Create Flashcards

This slide is the title slide for an introductory lecture (Introduction - 1) in the course CS342 Operating Systems at Bilkent University's Department of Computer Engineering. The last update date is given as January 30th, 204. The slide itself contains no further content beyond this introductory information. It serves as a header for the course and the lecture.

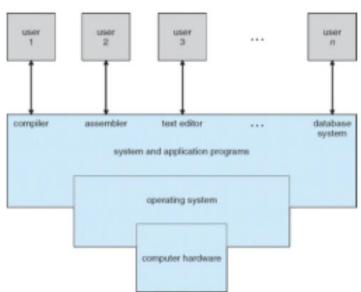
Type your message...



## Slide 3

What operating systems do

### Basic components of a computer system: place of OS



- A computer system can be divided into four components
  - **Hardware** – provides basic computing and storage resources
    - CPU, memory, I/O devices
  - **Operating system**
    - **Controls and coordinates use of hardware among various applications and users**
  - **Application programs** – solve the problems of the users: use system resources
    - Word processors, compilers, web browsers, database systems, video games.
  - **Users**
    - People, machines, other computers

3

[← Previous](#)
[Next →](#)

## Unit 1

[Create Quiz](#)
[Create Flashcards](#)

Can you explain what the purpose of operating system is

The purpose of an operating system (OS) is to manage and control the computer's hardware and software resources. It acts as an intermediary between the hardware and the applications, making it possible for users to interact with the computer and its programs effectively.

More specifically, the OS performs these key functions as described in the provided slide:

- **Resource Management:** The OS controls how the CPU, memory, and I/O devices are allocated and used by different applications and users. This ensures that resources are shared efficiently and that no single application monopolizes them, leading to crashes or performance issues.
- **Coordination:** It coordinates the use of hardware among various applications and users. This means that different programs can run concurrently without interfering with one another. The OS handles scheduling and prioritization to ensure smooth operation.

# Quiz

Question 1 of 4

Question: Which of the following is NOT a core function of an operating system (OS)?

A. Managing user accounts and access permissions

B. Controlling the execution of user programs

C. Creating and running applications for users

D. Managing hardware resources like memory and CPU

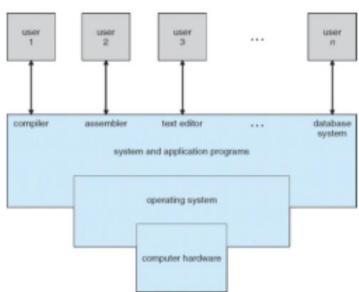
E. Providing a user-friendly interface to interact with the system

[Next Question](#)

## Slide 3

What operating systems do

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3

[← Previous](#)
[Next →](#)

## Unit 1

[Create Quiz](#)
[Create Flashcards](#)

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Type your message...

## Question

---



Key Roles of an OS



## Answer

---

The OS has several key roles in a computer system. It manages resources like memory, CPU, files, and devices. It provides a secure environment by managing user accounts and file permissions. It also abstracts the complexity of the hardware, making it easier for users and applications to interact with the system.



## Week-by-Week Study Plan

### Week 1:

**Topic:** Introduction, Overview

**Activities:** Read Chapter 1 of Operating System Concepts, Begin familiarizing yourself with course materials and expectations.

### Week 2:

**Topic:** Processes

**Activities:** Read relevant sections of Operating System Concepts, focusing on processes. Begin working on any assigned preparatory work for the first quiz.

### Week 3:

**Topic:** Interprocess Communication (IPC), Sockets

**Activities:** Read relevant sections of Operating System Concepts, focusing on IPC and sockets. Continue working on any assigned preparatory work for the first quiz.

### Week 4:

**Flashcards**

Practice with digital flashcards.

**Flashcards****Quizzes**

Take interactive quizzes.

**Upload/Update Syllabus**

Click to upload or drag and drop

PDF or DOCX

You can upload your course syllabus to get a personalized weekly study plan.

**Cancel****Upload****Upload/Update Syllabus**

Upload or update the course syllabus.

**Upload/Update Syllabus****Go to Operating Systems Instructor**

Ask Operating Systems Instructor through

**Weekly study plan**

Plan your study sessions for the week.

**Weekly study plan**

## Basic Education Path

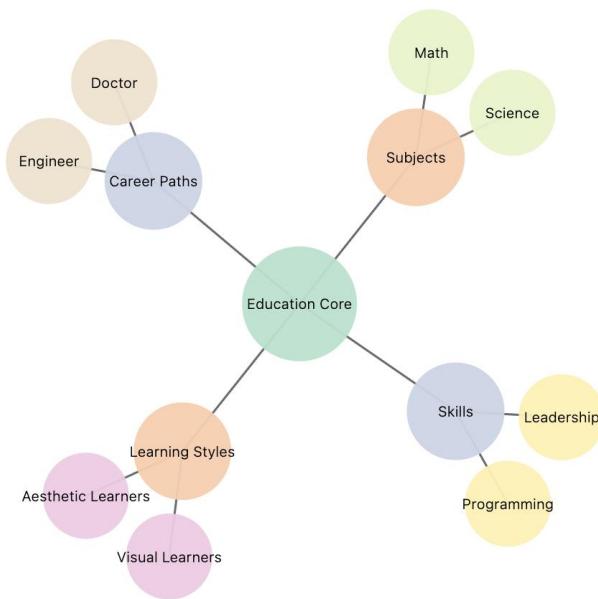
Very good Skill Tree



## Second Skill Tree

Second good Skill Tree





edux.ai About Services Search in edux

Skill Tree

Conquer each skill, reveal new branches and quizzes.

Card 2

Content for card 2.

Card 3

Content for card 3.

Card 4

Content for card 4.

Big Card

This is the big card on the left.

Content for the big card.

Footer for the big card.

Confirm Deleting Study

Are you sure you want to delete course Operating Systems? This action cannot be undone.

Cancel Continue

Operating Systems

This course is the hardest course

View Course

4

edux/ai

## users

enter a name



**murat**





edux/ai



**murat**

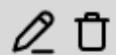
**ban user**



edux/ai

## Current Classes

CS491



CS421



Assign Project



Current Class

CS491



## Assign Project

**Name****Description****Select Class**

CS491

CS421

**Create****Assign Project**



edux/ai

## Project 1



murat

**view score**



Project 1



murat

## Murat's Score



murat

**Consistency Rate : 96.6**

**File Inconsistency**

**Complete Check**



# **USER AND CUSTOMER SURVEY RESULT**

# **SURVEY RESULTS ON USER FEATURE PREFERENCES BY RATING**

Different Features	Average of different features out of 5
Quiz	4.42
Interface	4.42
Slide chat	4.19
Regular chat	4.07
Flashcard	4.07
Study Plan	3.57

## Liked Features(47)

Extraction of Information from Documents

4.3%

Personalization & Customizable Courses

8.5%

Interface & Usability

8.5%

Study Plan & Syllabus

8.5%

Summary & Chat

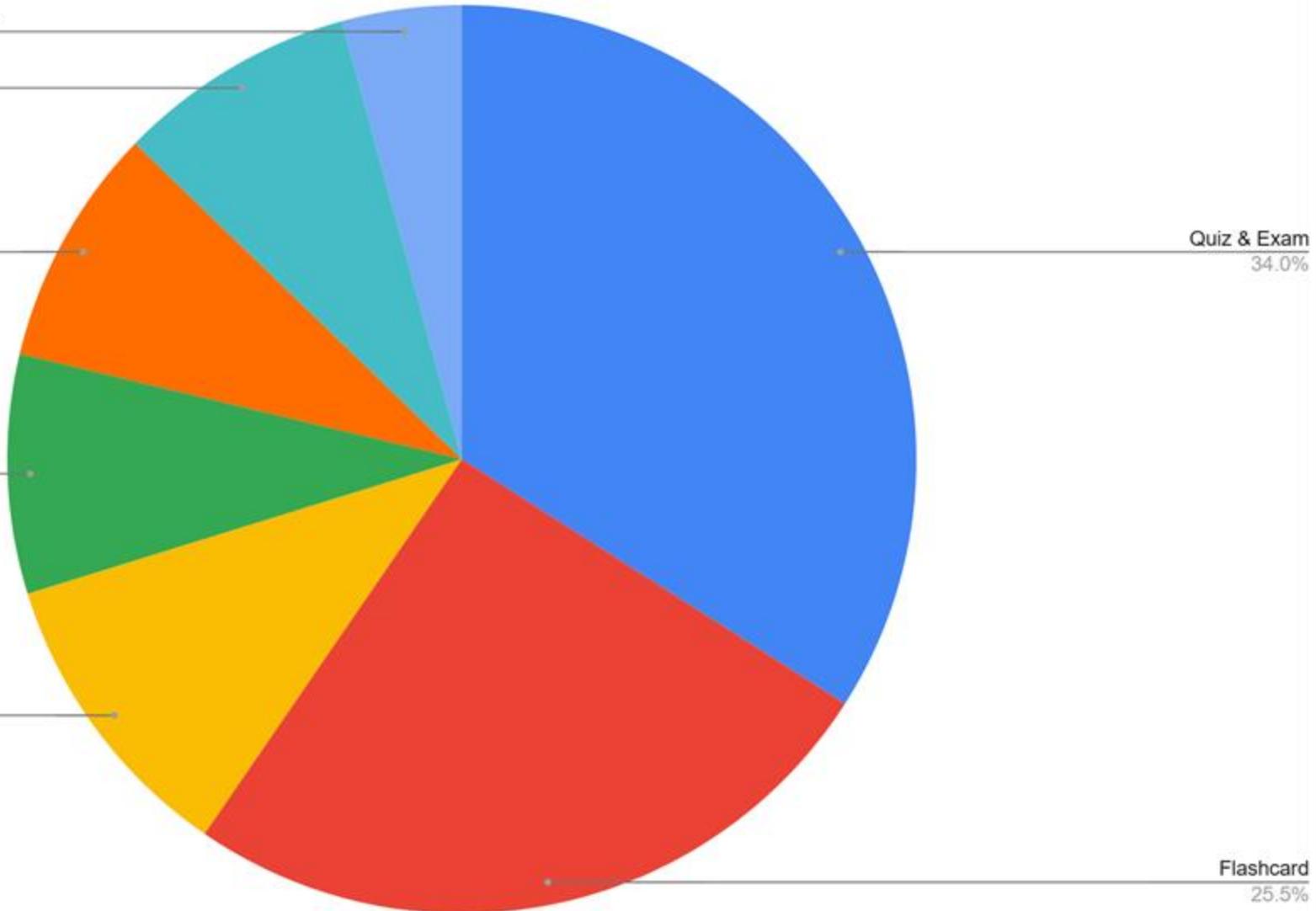
10.6%

Quiz & Exam

34.0%

Flashcard

25.5%





# **AREAS OF IMPROVEMENT**

- 1. Content upload and analysis**
- 2. Study plan adaptability**
- 3. Complex subject support**



# FEATURE REQUESTS

1. Improved diagram and visual analysis tools
2. Gamification elements like progress tracking and achievements
3. Enhanced collaborative features, such as forums and shared repositories

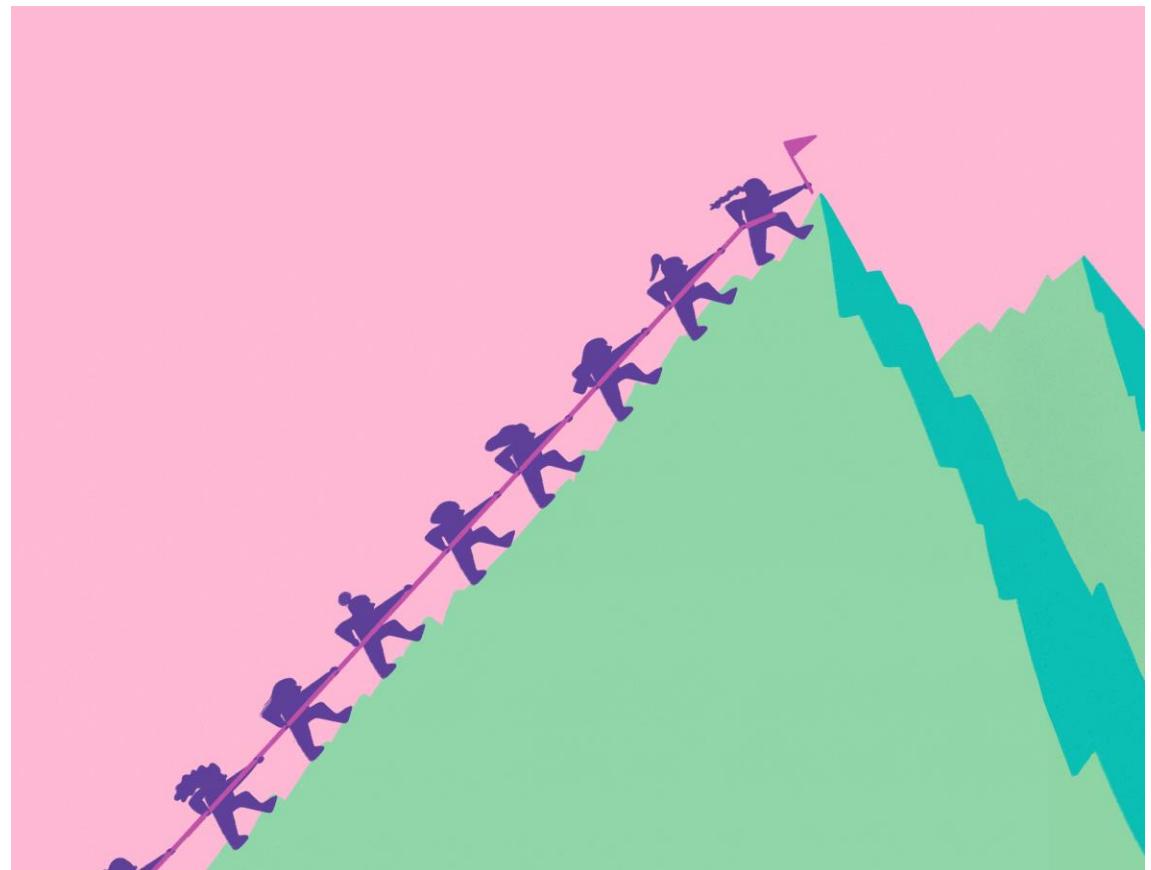


# FRAMEWORKS, 3RD PARTY API AND SERVICES

1. React, shadcnui
2. FastAPI, gRPC, SQL
3. Amazon S3
4. ChatGPT, Gemini



# TEAM SPIRIT AND SENSE OF DISCIPLINE

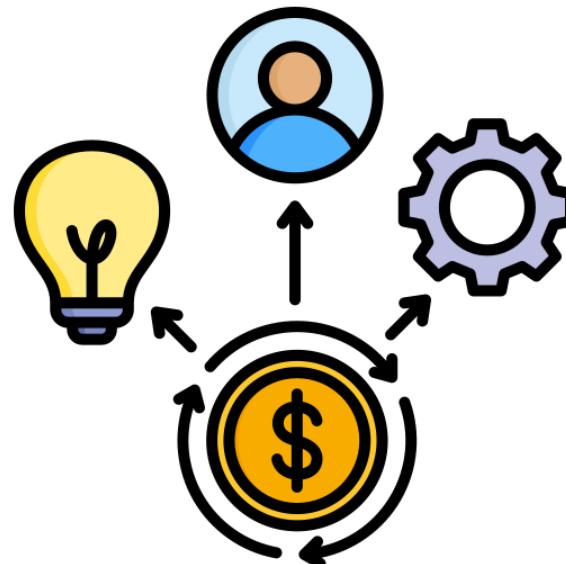




# BUSINESS MODEL

Our web application is designed to enhance academic collaboration by offering a centralized platform for ai-generated learning tools.

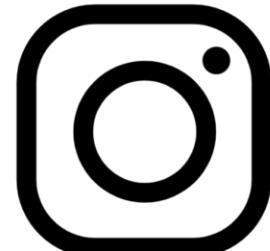
With a tiered subscription model as our primary revenue stream, we aim to expand to mobile platforms once a specific user threshold is reached.





# BUSINESS MODEL

- Revenue Model:
  - Primary revenue source: Paying users
  - Subscription-based model with tiered plans
  - Each tier offers access to additional features
- Platform Availability:
  - Initial launch: Web application
  - Mobile app development contingent on reaching a certain user threshold
- Target Audience:
  - University students
- Identify Key Marketing Channels:
  - Social media campaigns on platforms popular among students (e.g., Instagram, TikTok)





# Q&A

If you have any questions we would be glad  
to answer them!