**Project Report on AcharyaX – your companion to score better!!**

**Description - AcharyaX** is an innovative AI-powered study companion designed to simplify the learning process for students. The app allows users to upload their PDF notes and engage with the content by asking questions. Leveraging advanced AI models, AcharyaX provides accurate answers and insights based on the uploaded material, making study sessions more efficient and interactive. Additionally, the app features tools for generating tailored learning paths, flashcards, flowcharts, and diagrams to enhance understanding and retention of complex topics. With AcharyaX, students can transform their study habits and achieve better academic outcomes effortlessly.

**Student Information**

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* **Course:** Bachelor of Engineering in Computer Science and Engineering
* **Semester:** 7th Semester
* **Institution:** The Oxford College of Engineering

**Project Overview**

AcharyaX is an AI-powered study companion designed to enhance students' learning experiences. It allows users to upload PDF notes, ask questions based on the content, and receive answers through an AI model. The project focuses on simplifying study processes and improving knowledge retention.

**Features**

1. **PDF Upload:** Users can upload their PDF notes.
2. **Question Answering:** Utilizes an AI model to answer questions based on the uploaded PDF.
3. **Learning Paths:** Provides tailored learning paths for specific topics.
4. **Flashcard Generation:** Allows users to create flashcards for quick revisions.
5. **Flowcharts and Diagrams:** Offers tools for generating visual aids for complex topics.

**Technology Stack**

* **Frontend:** HTML, CSS, Bootstrap
* **Backend:** Django (Python)
* **AI Integration:** Hugging Face Transformers for question-answering
* **PDF Processing:** PyMuPDF for text extraction from PDF files
* **Deployment:** AWS Party Rock

**Implementation**

**Directory Structure**

AcharyaX/

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├── AcharyaX/

│ ├── \_\_init\_\_.py

│ ├── settings.py

│ ├── urls.py

│ └── wsgi.py

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├── core/

│ ├── \_\_init\_\_.py

│ ├── admin.py

│ ├── apps.py

│ ├── migrations/

│ ├── models.py

│ ├── tests.py

│ ├── views.py

│ ├── learning\_paths.json

│ └── templates/

│ └── core/

│ ├── base.html

│ └── home.html

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├── db.sqlite3

└── manage.py

**Current Status**

AcharyaX is currently in the Minimum Viable Product (MVP) stage. The application has been developed to function with basic features, serving as a prototype to demonstrate its potential.

**Future Developments**

Further development is required to enhance user experience and feature set, including:

* Improved AI algorithms for better question-answering accuracy.
* Enhanced user interface for better accessibility and design.
* Additional features such as user profiles, progress tracking, and more interactive learning tools.

**Conclusion**

AcharyaX aims to revolutionize the way students interact with their study materials, leveraging AI to make learning more effective and engaging. The project serves as a stepping stone towards creating a comprehensive educational tool that can adapt to individual learning styles and needs.