

PROJECT REPORT
FOR
STUDENT-ASSISTANT: ENHANCING STUDENT LIFE
WITH EFFORTLESS ORGANIZATION

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1. ABSTRACT

The Student-Assistant App is an all-in-one solution designed to help students manage their academic and financial responsibilities efficiently. The app features a simple To-Do list for task management, an AI-powered note-taking system that can summarise text, convert voice to text, and summarise it, as well as image-to-text conversion and summarization. Additionally, the app includes a Personal Finance Management module with tools for budgeting, expense tracking, income management, and multi-currency support. The goal of this project is to simplify student life by integrating both academic and financial management into a single platform, enhancing productivity and reducing stress.

2. INTRODUCTION

Students often struggle to keep up with their coursework, assignments, and personal finances. Most apps focus on either productivity or money management, leaving them to handle multiple tools. Student-Assistant solves this by combining a To-Do list, AI-powered Note Taker, and Personal Finance Management system into one easy-to-use app.

3. OBJECTIVE

The primary objectives of the Student-Assistant App are to:

- Provide students with an easy-to-use platform for managing their tasks, notes, and finances.
- Integrate AI technology to automate summarizing and note-taking processes.
- Assist students in maintaining a balanced budget and tracking their income and expenses.
- Enhance student productivity and reduce the complexity of academic and financial tasks.
- Offer a simple, integrated solution for both academic and personal financial management.

4. MOTIVATION

Managing academics and finances can be tough for students, especially with the challenges of modern education and personal budgeting. Although there are separate apps for note-taking and financial management, they often don't offer the convenience of an all-in-one solution. The Student Assistant App fills this gap by combining task management, note-taking, and finance management in one tool. We propose a complete solution, which is to make our daily lives easier by focusing on students demands.

Here, AI note-taking is a special feature that is directly contributed in academic life to organize study materials. Using AI for automation and smart data processing, the app creates an easy-to-use platform designed specifically for students.

5. MAIN FEATURES

5.1 TO DO List

A task management tool that enables students to:

- **Create, edit, and delete tasks:** Easily add new tasks, make changes to them, or remove them once they're done.
- **Set due dates and prioritize tasks:** Students can pick when tasks are due and highlight the most important ones, helping them focus on what needs to be done first.
- **Receive reminders:** The app sends helpful reminders so students never miss a deadline.
- **Organize tasks by categories:** Students can group their tasks into different categories like academic work, personal tasks, or financial responsibilities, making it easy to keep everything in order.

5.2 AI Note Taker

This feature offers some AI capabilities for:

- **Text Summarization:** Simplify text-based notes by generating concise summaries.
- **Voice-to-Text Summarization:** Convert lectures and voice message into text and automatically summarize the key points.
- **Image-to-Text Summarization:** Extract text from images (e.g., photos of hand-written notes or slides) and summarize them.

5.3 Personal Finance Management

A set of finance management tools created specifically for students, including:

- **Budgeting Tools:** Create and monitor budgets based on income and expenses.
- **Expense Tracking:** Track spending in various categories (e.g., food, rent, transportation) and generate spending reports.
- **Income Management:** Record and analyze income from different sources (e.g., part-time jobs, tuition, scholarships).
- **Savings Goals:** Set savings targets and monitor progress.
- **Bill Payment Reminders:** Receive notifications for upcoming bills and deadlines.
- **Spending Analysis:** Visualize spending patterns through graphs and charts
- **Financial Reports:** Generate detailed financial summaries with key insights.
- **Multi-currency Support:** Manage financial data in different currencies for international students.

6. Visual Aspect

This section provides the visual guideline for the **Student-Assistant App**. Each subsection demonstrates step by step by screenshots of the app.

6.1 Home Page

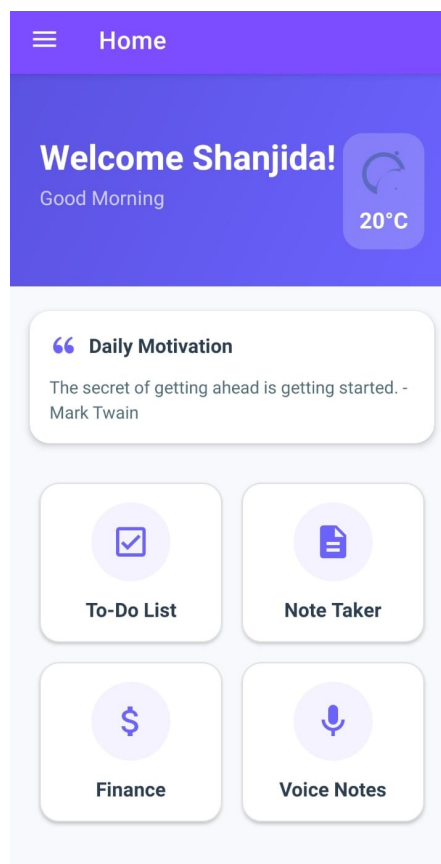


Figure 6.1: The home screen provides the list of features available to the user.

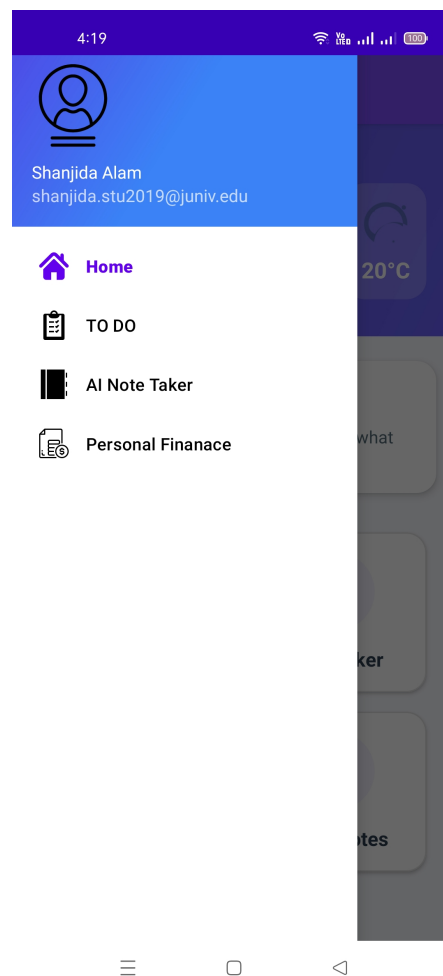


Figure 6.2: Side nave bar and user profile icon

6.2 To Do List

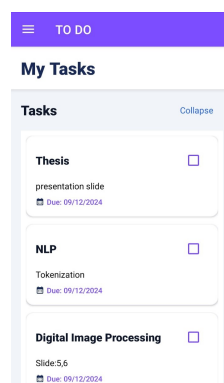


Figure 6.3: Tasks list that are created by the user

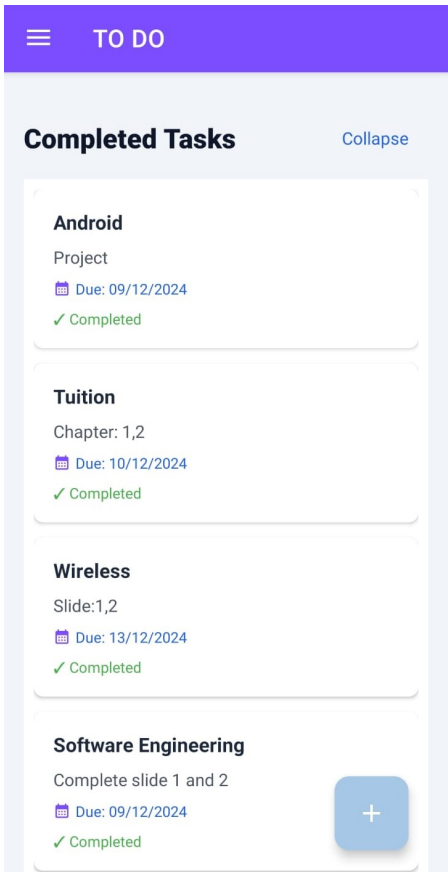


Figure 6.4: Completed tasks list that are done by the user

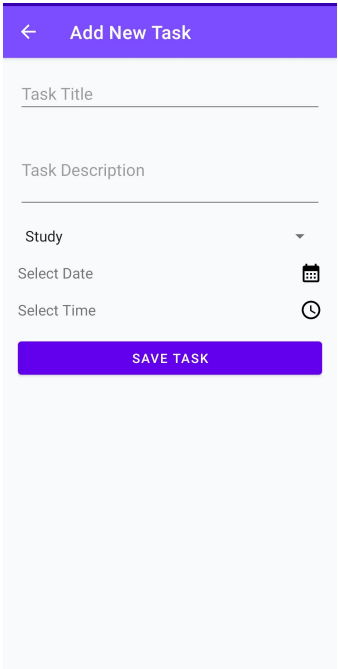


Figure 6.5: Add task interface for creating the new task with date and time

6.3 Personal Finance Management

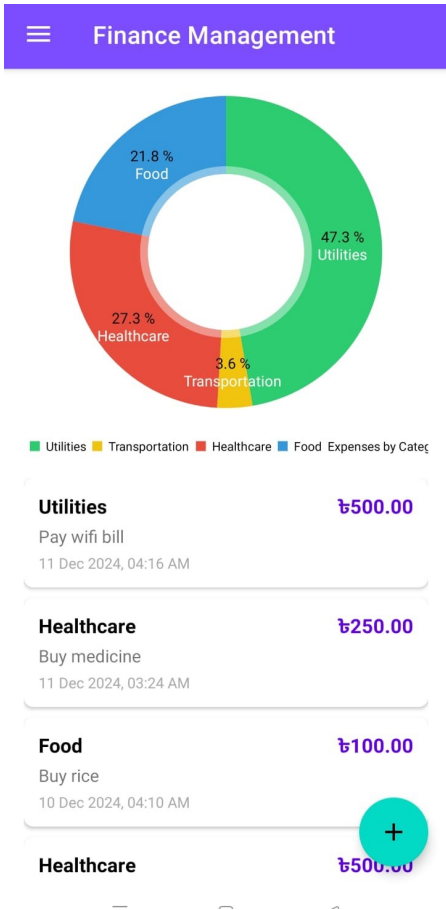


Figure 6.6: Personal finance management interface that shows the pie chart to track the expenses of the user

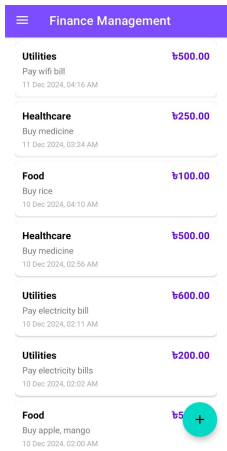


Figure 6.7: The personal finance management interface shows the list of expenses of the user

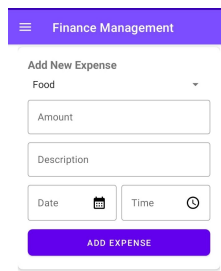


Figure 6.8: Add new expenses interface to add the new expense list of the user

7. USE CASES

- **Use Case 1:** A student has recorded a lecture and needs to review it quickly. The app converts the voice recording into text and provides a summarized version for quick revision.
- **Use Case 2:** A student is trying to manage their monthly finances. They use the app to track expenses, set a budget for the month, and receive reminders for paying tuition and rent.
- **Use Case 3:** During a study session, a student takes a picture of a whiteboard full of notes. The app converts the image to text and provides a concise summary, making the material easier to review later.

8. CODING DESIGN

In this section, we will try to follow the basic conventions of coding, like:

- OOP
- SOLID Principle

- Database
- Singleton design pattern
- Multithread

9. WORKFLOW DIAGRAM

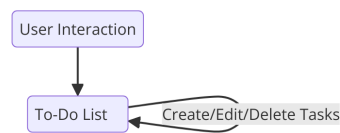


Figure 9.1: User Interaction with TO DO List

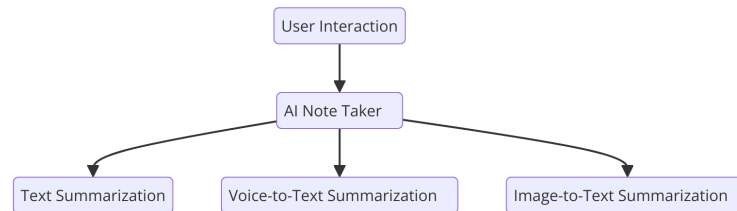


Figure 9.2: User Interaction with AI Note Taker

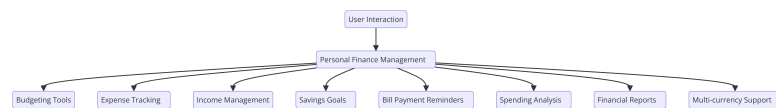


Figure 9.3: User Interaction with Personal Finance Management

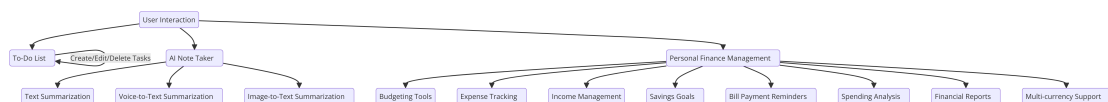


Figure 9.4: Workflow diagram of the Student-Assistant

10. FUTURE WORK

This is a scalable project, so the future development plans include:

- **Integration with University Systems:** Synchronisation with Learning Management Systems for automatic assignment, class notice, and exam tracking, and integration with Google Calendar to keep tasks and deadlines organised.
- **Collaborative Features:** Enable group collaboration for shared notes and tasks, useful for project work.
- **Conference Room:** Create a conference room like Google Meet to reduce the complexity of using multiple apps.

11. CONCLUSION

The Student-Assistant App helps students manage their academic tasks and personal finances with an easy-to-use, AI-powered platform. It includes features like text, voice, and image summarization, plus financial management tools, making it a complete solution for student needs. As AI and student support services grow, the app can become an even more powerful tool to make student life easier and more productive.

Project Link: <https://github.com/shanjida-alam/Student-Assistant-App>

<https://github.com/ShabrinaShahana/StudentAssistant>