SOFTWARE ENGINEERING I

Spring 2024

-Assignment #1-

Team 5:
Andrew McNeill
Krishna Sruthi Velaga
Akash Reddy Karri
Ahmed Hamza
Tobechukwu Ejike

March 04th, 2024

TABLE OF CONTENTS

SECTION 1
PROJECT INFORMATION

Name of the project: Budget Buddy

Semester: Spring 2024

Group Number: 5

Team members:

1. Andrew McNeill
2. Krishna Sruthi Velaga
3. Akash Reddy Karri
4. Ahmed Hamza
5. Tobechukwu Ejike

Date of Submission: March 4th, 2024

SECTION 2

BRIEF RESUMES

Andrew A. McNeill

Bowie, Maryland
mcneillandrew088@gmail.com
https://www.andrewsfirstsite.com/
https://www.linkedin.com/in/hireandrewamcneill/

EDUCATION

Towson University Towson, Maryland
Current Education: Master of Science, Computer Science | December 2025
Degree: Bachelor of Science, Information Technology | December 2022

SKILLS

Web Technologies: HTML, CSS, WordPress, JavaScript, React, Angular
Programming Languages: C++, Java, Python
Data Technologies: SQL, R
Project Management Technologies: Jira Software, ServiceNow, Office 365 Admin

PROJECTS

https://www.andrewsfirstsite.com/
https://lznupes.com/
https://thebizespot.com/

- Developed over 50 pages by writing lines of code using HTML, CSS, JavaScript, and frameworks of React and Angular.
- Utilized raw debugging tools such as Firebug and Chrome Inspector to eliminate flaws and glitches prior to publishing.
- Designed and developed web applications using React and Angular to increase target audience engagement by 9%.
- Took concepts and produced design mockups and prototypes to strengthen designs, enhance user experiences and improve site interactions.
- Spoke with customers directly to define standards for websites and provide wireframes to start the design process.

JOB EXPERIENCE

Information Technology Specialist Washington D.C, United States
Freedmen's Medicine November 2022 – Present

- Provide technical support for computer systems, hardware, and software delivery, configuration, setup, maintenance, and troubleshooting by phone, email, in-person, or remote access.
- Created domain emails for with the help of office 365's global administrative assistance.
- Troubleshoot and resolve Tier I and II incidents to include: system inquiries, requests, incidents, software installation, printer support, hardware support.
- Maintain the chronic care IQ healthcare database to store patient documents, make medical notes, and keep up to date medical records.

Computer Support Assistant Baltimore, Maryland
Johns Hopkins University June 2022 – February 2023

- Maintained the Johns Hopkins University's WordPress and HTML online interfaces, including interface backups, plugin updates, and user access.
- Utilized Microsoft Forms software to develop various forms required for the Johns Hopkins Technology Innovation Center, enabling effective departmental communication.
- Provided Tier 1 IT support via Jira Software to non-technical internal users through desk side support services.
- Explained technical information in clear terms to non-technical individuals to promote better understanding.

Information Technology Support Student Towson, Maryland

Towson University February 2022 – November 2023

- Accessed documentation on the university's SharePoint site to identify and troubleshoot technological problems.
- Maintained and repaired university community center desks hardware and building identification cards.
- Installed, relocated, and replaced computers support IT and marketing coordinator with housing database software Mercury.
- Assisted the university in identifying issues and explained solutions to restore service and functionality.

Information and Computational Sciences Information Desk Assistant Towson, Maryland

Towson University January 2022 – August 2022

- Provide accurate information and answer questions by telephone and visitors at the Information Desk.
- Interact with event staff, housekeeping, and maintenance daily regarding in regard to questions concerning information and computational science and building issues as needed.
- Delivered top-notch administrative support to office staff, promoting excellence in office operations.
- Worked closely with management to provide effective assistance for specific aspects of business operations.

Krishna Sruthi Velaga

Towson, MD 21286 • kvelaga1@students.towson.edu • (667)308-1671 • http://www.linkedin.com/in/ksruthivel/

EDUCATION

Master of Science, Computer Science May 2025
Towson University, Towson, MD
3.89 GPA
Relevant Coursework: Advanced Data Structures and Algorithms, Data Mining(in progress), Neural Networks and Deep Learning(in progress)

Bachelor of Technology, Computer Science June 2023
Vasireddy Venkatadri Institute of Technology(VVIT), Guntur, Andhra Pradesh, India
3.63 GPA
Relevant Coursework: Operating Systems, Probability and Statistics, Full Stack Development.

TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, ReactJS, HTML5/CSS3
Frameworks: Django, Flask, NumPy
Software: Canva, Figma, Excel
Operating Systems: Linux, Microsoft Windows

CERTIFICATIONS

Linux Tools for Developers, Coursera Jan,2021
HTML5 and CSS3, edX Jul,2020
Python3 Programming Specialization, Coursera Apr,2020

PROJECTS

Inventory for Local Restaurant Aug,2023-Dec,2023
- Developed a desktop application to efficiently manage restaurant operations and employee data
- Implemented secure admin and employee modules with authentication features.
- Built using Java Swing and hosted database on Triton using SQL with team of five

Malicious URL Detection using Machine Learning Dec,2022-Apr,2023
- Developed a chrome extension to alert the users when accessing a malicious website
- Incorporated content features alongside lexical and host features to improve the accuracy of the model
- Built the application using Python and its libraries such as beautifulsoup4, googlesearch-python, scikit-learn
- Collaborated with team of four people for ICRASTEM hosted by VVIT

Blood Bank Management System Jan,2021-Jul, 2021
- Improved how the Blood Bank keeps track of blood bags and manages information
- Designed different modules for patients, donors, and administrator to oversee stock blood
- Built a web app using Python3, HTML5, and CSS3 with Django for efficient use
- Showcased work at a project expo, presenting the project and its features with team of four

RELATED EXPERIENCE

Lab Administrator, Department of Computer and Information Science, Towson, MD Aug,2023-Present
- Assist students with computer software or hardware issues, offering guidance and responding to their questions
- Provide troubleshooting for faculty in labs and classrooms, ensuring optimal functionality of technology
- Collaborate with others to resolve technology issues/errors

LEADERSHIP & ACTIVITIES

Vice Chairperson, Association for Computing Machinery Student Chapter, VVIT Feb,2021-Mar,2022
- Collaborated with other chapter officers and members to plan and coordinate events such as workshops, seminars
- Maintained effective communication channels using various platforms
- Assisted in recruitment and onboarding of new members

Member, International Students Association, Towson University Aug,2023-Present
Member, Data Analytics and Visualization Club, Towson University Nov,2023-Present

Akash Reddy Karri
(443)652-2903|karriakash8931@gmail.com
www.linkedin.com/in/akash-karri-4a2677293

EDUCATION

Towson University | Master of Computer Science | Towson, MD |GPA:*3.7/4.0* ***May, 2025***

- **Relevant Coursework:** Advanced Data Structures, Database Management Systems , Computer Networks

Jawaharlal Nehru Technological University | Bachelor of Technology in Computer Science & Engineering | Hyderabad, India| ***July. 2022***

- **Relevant Coursework:** Data Structures, Web Technology, Operating Systems,Software Engineering

SKILLS

Coding Languages: C,C++,SQL, Python,Java
Databases: SQL Server, SQLite, MongoDB
Technologies: HTML,CSS
Computer: Microsoft Office Suite (Excel, Powerpoint,Word), macOS, Linux
Languages: English, Hindi, Telugu

CERTIFICATIONS

- Certified in Coding, Data Analysis, Development, Cyber Security, and Forensic Technology by Deloitte.
- Completed Python Essentials 1 and 2 courses through Cisco Networking Academy in collaboration with OpenEDG Python Institute.
- Certified in C&DS and Python Programming by ISO.
- Certified in Android Botix workshop by Robokart.com.
- Acquired knowledge in AWS S3 and introduction to cloud computing through SkillUp by Simplilearn courses.

PROJECT

Railway Tweet Analysis Based on Machine Learning

- Led a project to analyze increasing crime rates using Python (Pandas and Numpy), focusing on crime classification based on location, affiliated gangs, and occurrence timing to enhance future crime prediction capabilities.
- Utilized machine learning and artificial intelligence for crime pattern analysis, scraping data from public datasets, and developed predictive models to determine the likelihood of crimes based on various factors.
- Innovated in AI/ML application for crime detection through audio/visual monitoring, influencing policymaker perspectives on technology's role in crime prevention and contributing to the improvement of crime prediction tools.
- Achieved significant insights into crime classification and prediction, documented results using various classifiers, and identified opportunities for future advancements in AI-driven crime prevention technology.

Recommender System with Artificial Intelligence for Fitness Assistance

- Developed an AI-enhanced recommender system (RS) for a fitness assistance system, focusing on providing personalized workout suggestions to both beginners and existing users by learning, analyzing, and predicting user preferences.
- Employed Artificial Neural Networks and Logistic Regression to accurately predict suitable workouts for beginners, enhancing the system's adaptability to individual user needs.
- Advanced the RS using various machine learning algorithms, including a reinforcement learning agent with Soar architecture, to classify user activities and offer tailored workout recommendations in line with their fitness goals.
- Demonstrated the effectiveness of the RS through comprehensive testing, validating its ability to deliver precise and customized fitness advice, thereby significantly improving user experience in workout planning.

Shop for Home

- Developed and managed an e-commerce platform offering 24/7 shopping convenience and secure transactions
- Implemented multiple payment options and streamlined order fulfillment processes
- Enhanced user experience with easy product browsing and stock level notifications for sellers
- Ensured timely and safe delivery of products, resulting in high customer satisfaction rates

WORKSHOPS ATTENDED

ANDROID BOTIX WORKSHOP **Feb2022**

- The workshop is about automates User Interface testing with botium.
- Tests on real devices and emulators
- Simplifies complex workflow testing

ACTIVITIES

TU Software Engineering Club | Towson, MD **Aug2023 – Dec2023**

Ahmed Hamza

(347) 259 5380| amurdamzer@gmail.com | Maryland, USA

I am self-motivated and self-directed, always willing to take on challenges and learn new things.

EDUCATION

MSc. Computer Science August 2023 - Present
Towson University Maryland-USA
CGPA: 3.67/4.0

- Relevant Coursework: Advanced Data Structures and Algorithm Analysis, Software Engineering, Database Management Systems, Computer Organization & Assembly Language.

BSc. Statistics (Actuarial Science) August 2015 - June 2019
Kwame Nkrumah University of Science and Technology (KNUST) Kumasi-Ghana
CGPA: 3.54/4.0 GRE: 303/340 Duolingo: 130/160

- Relevant Coursework: Calculus I, II & III, Probability & Statistics, Linear Algebra, Regression Analysis, Time Series Analysis and Forecasting, Financial Mathematics.
- Graduating Thesis: Using Regression Analysis to Determine the Impact Time Management Factors Have on Students' Academic Performance on KNUST Campus.

WORK EXPERIENCE | VOLUNTEERING & LEADERSHIP

Research Assistant (Voluntary) August 2023 – Present
Towson University Maryland-USA

- Reading papers and summarizing them to my supervisor (Professor Wasilla Lalouani)

Teaching and Research Assistant (Full Time) August 2019 – July 2022
Kwame Nkrumah University of Science and Technology Kumasi-Ghana

- Tutored MATLAB, R, Python, and SPSS.
- Tutored, prepared examination questions, and graded assignments and quizzes in Probability & Statistics I & II, Linear Algebra, Calculus, and Regression Analysis.
- Assisted and guided undergraduate students in analyzing data for their projects.

Data Analyst Intern June 2016 - August 2016
Al-Ihsan Ventures Kumasi-Ghana

- Strategized ways to handle data collection activities in accordance with established sales protocols.
- Cleaned, analyzed, and interpreted the data collected which helped in decision making.
- Optimized pricing and increased average daily sales by approximately 35%.

SKILLS

Technical skills:

- Programming Languages: Python, Java, C++, Javascript
- Frameworks: Django, React, Bootstrap, Tailwind.
- Databases: MySQL, MongoDB, PostgreSQL.

Strengths:

- Strong Communication and Interpersonal Skills; Problem-Solving Skills; Critical and Analytical Thinking; Organizational Skills and Ability; Persistence and Maturity; Good team player.

TOBECHUKWU EJIKE

LAUREL, MARYLAND 20708
+12405448466
tobeejike22@gmail.com

EDUCATION AND TRAINING

BACHELOR OF SCIENCE: ELECTRICAL ENGINEERING 12/2020
Morgan State University, Baltimore, MD

MASTER OF SCIENCE: COMPUTER SCIENCE Current
Towson University, Baltimore, MD

EXPERIENCE

NNPC
ABUJA, FCT

Data Analyst 02/2021 to 05/2023

- Conduct data analysis to identify trends, insights, and opportunities for improvement.
- Develop data models to support business decisions.
- Collaborate with cross-functional teams to deliver data-driven solutions.
- Maintained a library of model documents, templates, or other reusable knowledge assets.

NNPC
ABUJA, FCT

Junior Data Analyst Intern 05/2019 to 07/2020

- Assisted in the development of data models for business analysis
- Performed data cleaning and data validation tasks
- Stayed up to date on information technology trends by attending training and conferences.
- Developed and maintained documentation of data processes and procedures

SKILLS

- Proficient in data analysis tools and programming languages such as [Python/SQL]
- Strong knowledge of statistical analysis techniques and methodologies
- Experience with data visualization tools such as Tableau or Power BI
- Familiarity with database management and querying languages (e.g., SQL)
- Excellent problem-solving and critical-thinking skills
- Strong attention to detail and ability to work with large datasets
- Effective communication and presentation skills
- Troubleshooting skills and Technical Documentation

PROJECT

Credit card fraud detection using PyCaret (Auto ML) 01/2022 to 05/2022

- Implemented a credit card fraud detection system using PyCaret, an automated machine learning library, in Python.
- Utilized PyCaret's AutoML capabilities to compare and evaluate multiple machine learning algorithms, such as Logistic Regression, Random Forest, and Gradient Boosting, for fraud detection.
- Performed model training, evaluation, and hyperparameter tuning to optimize the chosen algorithm's performance.
- Conducted cross-validation to assess the model's robustness and generalize its performance on unseen data.
- Created a confusion matrix and generated a classification report to analyze the model's effectiveness in identifying fraudulent transactions.

SECTION 3

PROJECT SCHEDULE (A1)

Assignee Name/ Email (@students.towson.edu)	Task	Duration (Hours)	Dependency	Due Date	Evaluation
Andrew McNeill / amcnei8	Choose a project topic Add brief resume Write Teamwork Basics section Draw context model for system requirements Make final changes	2hrs 0.5hrs 2hrs 1hr 1hr	Initial Meeting Draft Outline Draft Outline Draft Outline Final Edit	02/25 03/01 03/01 03/02 03/02 03/03	100%
Krishna Sruthi Velaga/ kvelaga1	Choose a project topic Add brief resume Edit Github repository Draft the report Make final changes	2hrs 0.5hrs 0.5hrs 5 hrs 1hr	Initial Meeting Draft Outline Github Draft Outline Final Edit	02/25 03/01 03/04 03/04 03/03	100%
Akash Reddy Karri/ akarri2	Choose a project topic Add brief resume Create Github repository and Kanban Board	2hrs 0.5hr 1.5hr 1hr	Initial Meeting Draft Outline Created Github Final edit	02/25 03/01 02/29 03/03	100%

SECTION 4

TEAMWORK BASICS SUMMARY

Ground Rules

Ground rules help with clearly defining the project's goals and how each member intends to contribute to achieving them helps to guarantee that everyone is on the same page. The following are examples of ground rules: work, meeting, consideration, facilitation, and communication norms.

1. **Work Norms**

One of the work norms is for a team to ask one another questions about how the work is being completed in relation to a deadline. As an example How will the job be assigned? Who will establish the due dates? What occurs when someone breaks a commitment—for instance, by missing a deadline—and what then happens? How is the work going to be assessed? By asking these questions, you can make sure that a plan can be developed to successfully complete the assigned tasks.

2. **Facilitator Norms**

A group member is designated as the primary point of contact by the facilitator norms. Will you utilize a facilitator? is one of the questions posed by the facilitator norms. How will the person in charge be selected? Are you going to switch up the role? The reason a facilitator works so well is that they enable someone to maintain some semblance of organization while working on the assignment. In order to maintain everyone's support and alignment throughout the process of A1's creation, Andrew would facilitate meetings.

3. **Communication Norms**

Among the most significant norms is undoubtedly the norm of communication. When should communication occur and via what channel (e.g., do some people prefer email communication while others would rather converse on the phone) are some questions concerning this norm. We were fortunate enough to be able to operate just as well remotely as we would have in person because group 5 was able to meet virtually thanks to technology.

4. **Meeting Norms**

The project group will schedule meetings and decide on the best time each week. This is part of the meeting norms. Concerning adhering to norms, some questions are which people are available when? Does meeting coordination need to fall under the purview of one person?

What time of day do individuals like to have meetings? Which location works well for meetings? If someone arrives at a meeting late, what happens? In order to effectively coordinate the project group's meeting schedule, it is imperative that the group understands each member's preferences and schedule.

5. **Consideration Norms**

Consideration norms are a crucial standard that enable group members to establish boundaries in order to maintain a certain level of mutual respect. Concerns regarding this standard include Is food permitted at meetings? smoke? What occurs when one person dominates the conversation? If someone is uncomfortable with what is happening on the team, how can norms be changed?

One personality in a group may display difficult conduct, rendering the group as a whole ineffective and making teamwork uncomfortable. Talkativeness, being too silent, conflicts, and excessive complaining are examples of difficult behaviors. The most effective way to deal with excessive talkativeness is to utilize comedy as a deterrent to people trying to take over conversations. Allow others to speak after the speaker stops talking, and if they continue to talk excessively, have a private conversation with them about how much the group values their contributions but that they must let others speak first.

Hints for Handling Difficult Behavior

One personality in a group may display difficult conduct, rendering the group as a whole ineffective and making teamwork uncomfortable. Talkativeness, being too silent, conflicts, and excessive complaining are examples of difficult behaviors. The most effective way to deal with excessive talkativeness is to utilize comedy as a deterrent to people trying to take over conversations. Allow others to speak after the speaker stops talking, and if they continue to talk excessively, have a private conversation with them about how much the group values their contributions but that they must let others speak first.

Group participants should try to create a welcoming atmosphere when there is a member who is overly quiet. Members can ask a member who is too quiet about ideas or personal details in a comfortable setting, and they can let them know they are valued.

Groups frequently have arguments because certain members may have strong opinions and want their opinions to be accepted as true. Use the person's criticism of ideas as a way to gauge how well the group is performing its task; they might be offering insightful criticism.

Inform them of the impact their criticism of others is having on the team as a whole and on specific team members. When there were arguments within the group, the ground rules were used to restore the appropriate degree of mutual respect.

Hints for Handling Group Problems

In addition to issues with specific team members, the group as a whole could experience some challenges. The following advice can be applied to teams that aren't operating efficiently: floundering, going off on digressions and tangents, making a decision too quickly, not making a decision, feuding between group members, ignoring or ridiculing others, and the group member who does not do his/her share of the work.

Frequently, groups fail to achieve their maximum potential in productivity, particularly when members are still getting to know one another and their individual work styles. Making a list of the things that need to get done can be beneficial. Creating groups can put members' social abilities to the test as well as their intellectual attitude when interacting with people they aren't comfortable around. It can help to make a list of the tasks that require attention. It's also okay to phrase it as "What do we need in order to move forward?"

Digressions and side tangents occur when getting to know other group members. Engaging in social interactions with fellow members can foster a comfortable work environment; yet, it may also lead to excessive time spent away from tasks. It may be counterproductive to the group's success if talk takes up too much time. When someone points out these tangents and digressions, it usually works best when that person informs the group that we need to get back on track with the project.

Frequently, a group may struggle to decide which course of action to adopt in order to move the project forward. The best strategy to make decisions is to get an agreement with every member of the team. When you are discussing opposing ideas, make an effort to pay close attention to what each person has to state. Remember that you are trying to figure out what is best for the group as a whole, not for one person in particular. Having each person vote on his or her top four options is known as multivoting, and it is the most effective technique to get a group consensus. Select the top three or four suggestions based on the number of votes. Determine the ideas' parallels and divergences, then their advantages and disadvantages. Ask each person to cast a second vote, this time selecting their top two options. Count the votes to see which proposal has the most traction.

Disagreements can arise about work-related matters or unrelated subjects and impede the growth of the group. Typically, no action is taken until the disagreement is settled. This issue needs to be settled through social engineering and a variety of concepts and strategies found in the TLL_Teamwork Basics pages.

In groups when one or more members feel alienated and unwelcome, subgroups may emerge. Throughout the course of the project, individuals who are not part of the subgroup may be treated unfairly. Each group member must try their hardest to collaborate with every other member of the group because failing to do so could lead to the team becoming ineffective.

It is possible for a group member to neglect to attend meetings, complete assigned tasks, or exhibit reluctance to collaborate with others. To let them know how their actions are impacting the group, you should have a face-to-face conversation with the individual. Formally allowing the group to express how the project is being impacted by the team member who isn't completing their share.

SECTION 5
PROBLEM STATEMENT

The product on a high level – Budget Buddy is a web-based personal finance tool which can help users to manage their spending and budgets. It features alerts for bills and budget limits, visual spending reports, transaction tracking, and secure user authentication. It simplifies financial management and promotes informed decision-making for better financial health

Whom is it for? - It is for individuals looking to manage their personal finances, track their spending and stay within their budget. It is suitable for anyone, from students to families, who wish to understand and manage their finances better.

What problem does it solve?

Budget Buddy solves following problems:

- *Overspending:* It helps users stay within their budget limits by tracking spending and alerting them when they are close to exceeding their budget.
- *Untracked Expenses:* The application allows users to log all their transactions, providing a clear overview of where their money is going, which can help in identifying unnecessary expenses.
- *Missed Payments:* It alerts users to upcoming bills, reducing the risk of late payments and associated fees.
- *Complex Financial Tracking:* Budget Buddy simplifies the process of monitoring finances by providing visual reports, making it easier for users to understand their spending habits and financial trends.
- *Insecure Financial Data:* The application ensures that user data is secure through proper authentication measures, protecting sensitive financial information.

What alternatives are available?

Mint, YNAB, PocketGuard

- Why is this project compelling and worth developing?

The Budget Buddy project is compelling due to its innovative approach to budget planning, addressing a crucial but often neglected need for financial literacy. It introduces a feature that discerns spending patterns on a daily, monthly, quarterly, and yearly basis, enabling users to

gain deeper financial insights. This analysis and personalized feedback empower individuals to effectively comprehend and control their finances. Financials being an important thing that school doesn't necessarily teach citizens, this application can help society.

- Describe the top-level objectives, differentiators, target customers, and scope of your product.

Top-level Objectives:

1. Present users with totals showing where their money is going such as food, entertainment, gas, bills, etc.
2. Provide users with an interface that's intuitive such that spending habits can be presented in graphs and diagrams.
3. Provide graphs that show past spending habits and prediction trends for future spending habits.

Differentiators:

1. This application is different then other financial planning applications because we identify and analyze spending trends over different timeframes
2. We provide authentication to ensure user information is secure

Target Customers:

For individuals looking to manage their personal finances. It is suitable for anyone, from students to families, who wish to understand and manage their finances better.

Scope:

The budget planner project aims to develop a user-friendly software application for individuals and organizations to manage their finances efficiently. Key features include customizable budgeting tools for expenses and income, tracking financial goals, generating reports, and ensuring data security. Users can set budgets, track spending, and monitor progress towards savings goals. The application will offer a seamless user interface across various devices and platforms, integrating with existing financial tools if necessary. Rigorous testing and ongoing maintenance will ensure reliability and performance, with user training and support provided for optimal use. Ultimately, the budget planner project seeks to empower users with the tools and insights they need to make informed financial decisions and achieve their financial objectives.

- What are the competitors and what is novel in your approach?

Mint, YNAB(You need a Budget), PocketGuard, Personal Capital are alternatives available in the market.

Buddy Budget differentiates itself through its trend analysis capabilities, where it offers insights about the spending habits of the user on a monthly, annually basis. It also provides user-friendly design.

- **Make it clear that the system can be built, making good use of the available resources and technology.**

Our current plan involves using Python and Java for the backend, along with HTML/CSS for the frontend

- What is interesting about this project from a technical point of view?

From a technical point of view our project is interesting because it includes machine learning to create metrics of users spending habits for past and future dates. The application will work on general devices making it openly available to a large population of users.

SECTION 6
SYSTEM REQUIREMENTS

The following components/modules that interact with each other. Each component has specific tasks to perform.

1. Alerting users:
    - It will evaluate the user balance amount, budget thresholds to trigger alerts through email, SMS or in-app notification systems.
    - User can be able to change alert preferences like frequency
2. Monthly Reports
    - It will generate graphs and charts from user transaction data.
    - It compiles the data into monthly reports using charting libraries
3. Transaction Management
    - Allows users to input their expenses and categorize them
    - Allow them to input budget for time frame
    - Application stores historical data.
4. User Authentication
    - Implement user sign-up, sign-in process to provide privacy

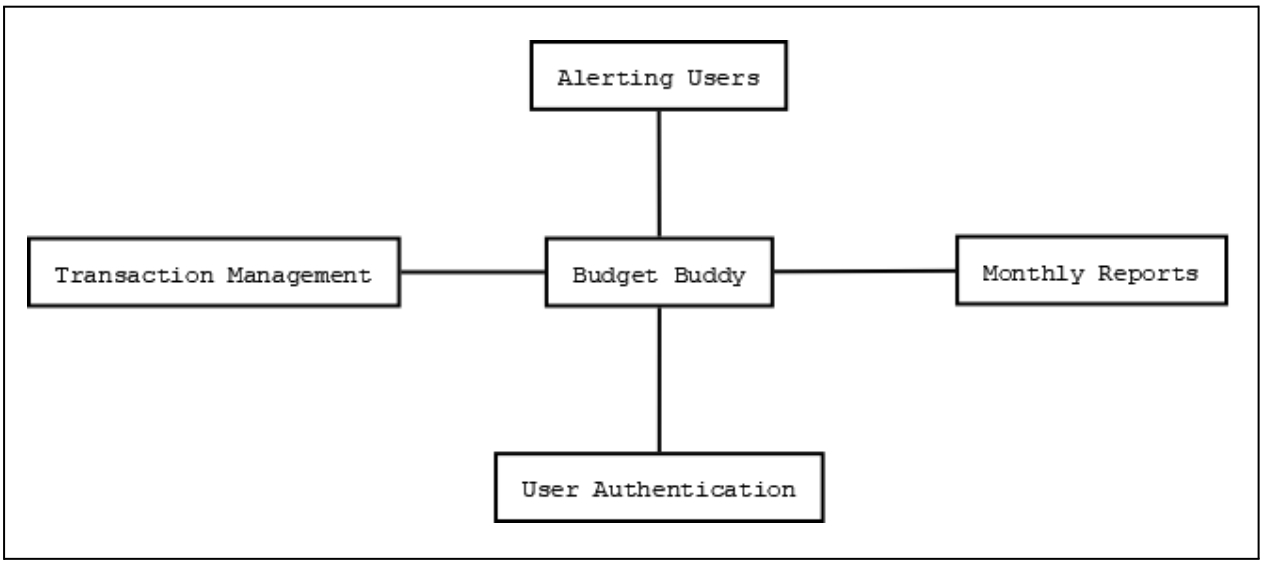

Fig: Contextual Model

APPENDIX

Github link: https://github.com/Akash8931/SWE-FlexibleDesign.git

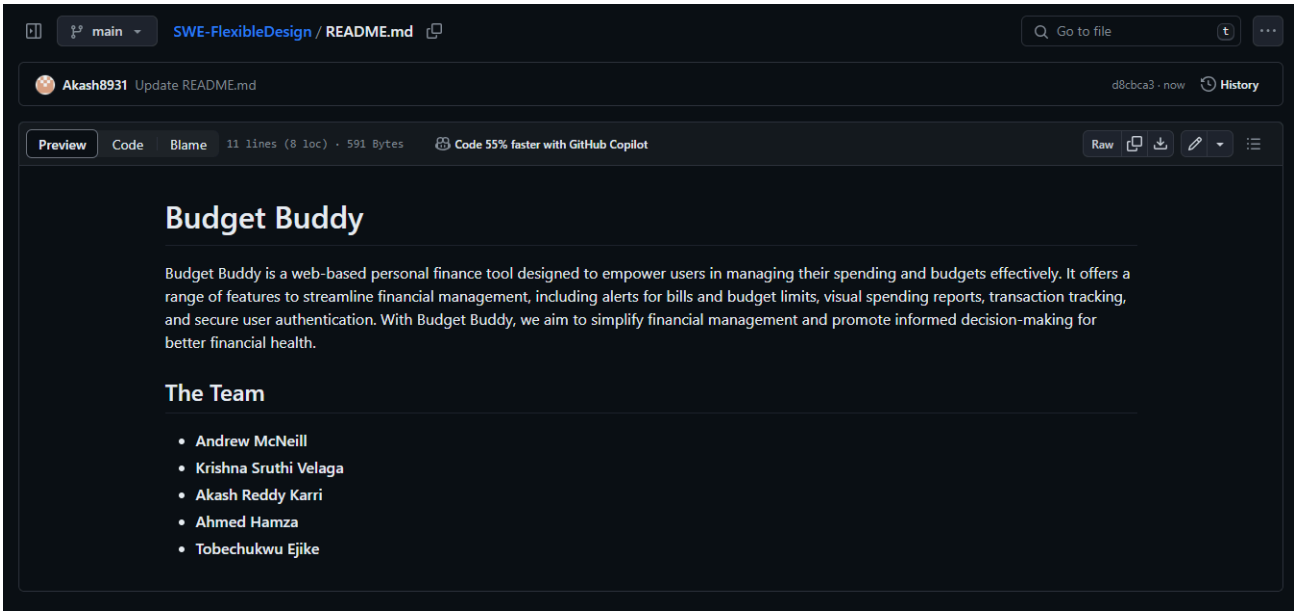

Fig: Screenshot of Github Repository

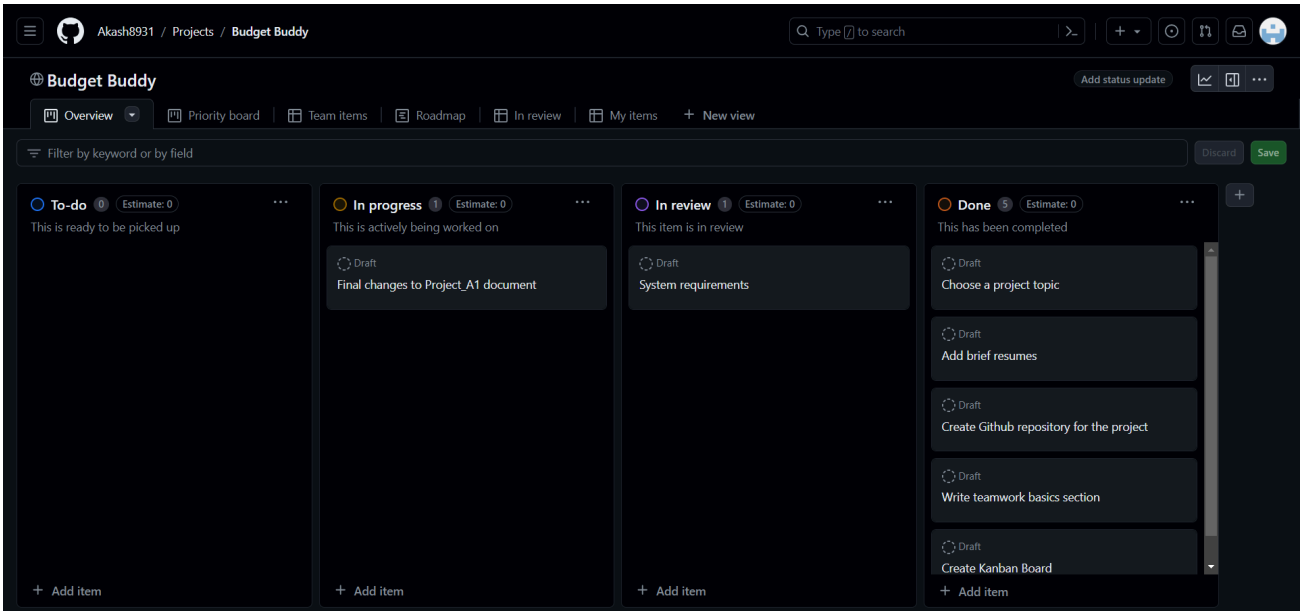

Fig: Screenshot of Kanban Board