Bill Splitter for Roommates - Ethics Assignment
Group 6
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Description

This web application will help roommates/housemates manage shared expenses, such as how much each roommate owes for rent, utilities, and groceries by creating a "household." The application will support splitting bills equally among roommates, as well as custom splits for different expenses. All roommates will be able to see these bills, as no one roommate will have "admin" privileges over the group.

The application will also help them keep track of who owes who for non-shared expenses (e.g. if one roommate borrows money from another, that "bill" can be posted to be kept track of). Both the roommate who owes money and the roommate who is owed can access those bills.

General Ethical Principles

One ethical consideration we need to be aware of is **Principle 1.6** (Respect Privacy). Our application tracks financial data, and if we are to implement features without considering this principle, that could lead to our application effectively tracking not only things such as how often and how much users pay in rent, but possibly the other items they purchase. That would be an immense breach of privacy. Storing information such as user's full names or contact information also needs to be handled correctly.

Other principles we need to consider are **Principles 1.1–1.5**, which describe other general ethical stances we should take. As they state, it is important for us to consider how features in our application may cause harm or be discriminatory, but also how they can benefit others. Additionally, these principles highlight the importance of honesty, and we should make sure that we are honest and transparent with our users (and client) about the limitations of our application and give credit to any work done by someone outside the project.

As stated in **Principles 2.1, 2.2 and 2.6**, we should make sure that we do our best to produce high quality work that is within our capabilities, and keep high standards for communication within our group and with our client. We must also consider **Principle 2.9**, and make sure that our application is reasonably secure, considering the personal information that users will rely on us to keep private. Finally, we must follow **Principles 4.1 and 4.2**, and make sure that if any ethical dilemmas come up, we resolve them appropriately.

As the ACM suggests, moving forward we should be sure to respect and prioritize user privacy (Principle 1.6) by limiting the data we are collecting to only what is required. We must also follow ethical principles that contribute to the well-being of the society as well as individual well-being. We should also be sure to inform users of how their personal information and other sensitive information like financial information is stored and protected (Principle 2.9) all while being transparent about how our application works (Principle 1.3). By carefully evaluating how

some of the features may negatively affect users, we can actively avoid exploitation and harm (Principles 1.2 and 1.4). It is also equally important to give credit where it is due, so, if any external ideas are used, it is important to give it proper credit (Principle 1.5). Professionally, it is integral that we strive for top quality in our final product (Principle 2.1), while maintaining clear and strong communication with our client and team members (Principle 2.2) and only performing tasks we are qualified to do and seek help if required (Principle 2.6). Finally, it is our duty to practice and uphold these principles and take responsibility for any violations against these ethical practices (Principle 4.1 and 4.2).

Client and Employer

One ethical consideration we need to consider is related to **Principle 2.08** (Accept no outside work detrimental to the work they perform for their primary employer). Specifically, it is important to take this idea into consideration with regards to AI. With AI getting used more in programming, it is important to think about how it relates to ethics. Although the use of AI might be allowed for this project, it is imperative that we developers understand that we can't let it impact the quality of our work. As said in Principle 2.08, we have to make sure the "outside work" AI provides does not end up being "detrimental to the work [we] perform for [our] primary employer".

We are also considering other principles relating to the client and employer. Firstly **Principle 2.07**. For this principle, we're thinking about how our app affects people. Since it deals with shared money our app could easily create tension between roommates if it feels unfair or biased. That's why our app doesn't give one roommate "admin" control. This is so that everyone has equal access to shared bills. We've also intentionally kept personal debts private so that the app doesn't embarrass anyone or create unnecessary conflict. We will also be documenting these concerns where we will explain the possible social risks and how we tried to overcome them with specific design choices.

We are also incorporating **Principle 2.01**. We're designing this app based on what we realistically know how to build right now. The main features being implemented are all things we feel confident implementing (with our current web development skills). However, we know there can be some limitations. If we run into situations where our client is asking for more advanced features like advanced security or database design etc, we will not overpromise features to our client. Instead, we would ask for help and do more research. We will also be honest about our skills.

Another major principle is **2.08**. We're making sure that other outside commitments don't interfere with the quality or responsibility of this project. Lastly we are applying **Principle 2.02** whereby we will only use code, tools, and software that are legally and ethically obtained.

We will all take an active role in vetting external code and tools used in our codebase and in our development process. This will ensure we use legal and ethical means to produce our product. We will also discuss the limits of our engagement with generative AI models as it

pertains to our software. We understand that our code is proprietary to our employer, and we want to respect the ethics and laws regarding the sharing of that information.

We will monitor and address areas of social concern that arise within the functionality of our application. Engaging the open lines of communication with our client, we will ensure that social concerns are identified and handled appropriately in order to promote the wellbeing of our users and their communities.

Finally, we will inventory our individual and collective strengths and weaknesses in technical and soft skills in order to best apply our talents towards engineering an effective product for our client. We will communicate openly within our development team and with our client to maintain a work environment that plays to our strengths.