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CSCI - 0052

**Final Project - Envy**

**Solution**

It can be difficult to manage your finances without some personal accountability, but even then it can be easy to get carried away with spending. So why not have other people hold you accountable too? Our application merges concepts of social media and banking into one package. With this system, you can track your spending and income all while competing with your friends on who has the greatest personal growth. No sensitive information would be shared to the public of course. Instead, your assets will be calculated and shown on your profile on a weekly basis. The idea is to give you just a bit of extra pressure in this dog eat dog world.

No sensitive information will be shared such as income, amount in the bank, assets, etc. The only thing that your friends will be able to see is your information that you upload (e.g occupation, bio) and weekly score. The assets and financial information are inputted by the user anytime they wish. In a sophisticated system, we would ideally be connected to the user's bank account and request verification of assets (e.g house, cars) to keep track of everything dynamically but as that is out of our scope we will be doing it this way. Users will also be able to delete their account and dump info that is connected to them as that info is their property.

We implemented a simple animation called dotAnim which waits for an input such as a number to choose a menu item. Once chosen, it brings a new interface that includes more options to add, such as profile options to add more information about yourself, posting for posting a quick post such as a social media would for their home feed, friends list to check your current friends followed, home feed to check others posts, guild feed for seeing other guild members post specifically, and follow someone to get updates and posts.

The app will allow you to create an account and profile where you will be able to create your biography, set your current job title, education level, and goals. You will also be able to post on a home feed where you and your friends can upload text (like facebook). Every week the app will update your profile based on your income and current assets, showing a rank going from; Coal: score of 0 - 149, Bronze: score of 150 - 249, Bronze +: 250 - 349, Silver: 350 - 449, Silver +: 450 - 549, Gold: 550 - 649, Gold+: 650 - 749, Diamond: 750 +. These Ranks will only show the calculations with no sensitive information being shown. We had some problems trying to implement this in the beginning but once the program started becoming more in depth from your information store in the tables it became easier to implement these algorithms. We then worked on reducing redundancy in our tables by making our primary keys the username, account id, content id, finance id, group id, home content id, guild content id, member id, and rank. These primary keys are important for our database to work properly.

***Lesson Learned***

What we have learned from this lesson is how to utilize the use of triggers, tables, and views for creating a visual for our program. We first use our parent table, “envy\_accounts” to enter and store information that will be used for the login script. The primary key “username” is the unique field that will be used for identifying each field. Each user will create usernames, passwords, regions, and a hint to remember their passwords. We utilize our other tables to store more information about their financial status and use that information to create an algorithm to show “ranks” in our leaderboard table.

Using the techniques we learned in our class modules about data manipulation and control statements helped us create this program and we utilize as much as we can from what we learn this semester. This application will be used to create an account, store information in that profile and share a calculation of assets without showing any sensitive information that the user inserted in their financials table. Because this application is strict about safety and privacy, it is easy to remove any information you entered and dump that info that is connected to that as that info is their property. Throughout the project, we used many join techniques and we used an administrator role for one of us to keep in check all of our data. This way there is only 1 place where the data is stored to reduce redundancy and make sure our data and information stored isn’t repeated or lost anywhere. This made our project very stable to consistently work correctly.

We made sure to separate the weeks to give ourselves enough time to correctly implement our work efficiently. Week 1, we worked on login script, account database, profile features, and the features databases. Week 2, we worked on a financial database, though we still had many issues implementing this correctly as it just took a while to figure out how to do this well, as well as queries and interweaving all our features and databases together. The last week of our program, we worked on our Final Project solution, creating a dictionary, database normalization and recreating our entity relationship diagram to correctly show what we added and removed from the first time we proposed the application. There were many issues with trying to use triggers in our finance table, we ended up trying to make it as simple as possible to get rid of as many errors as possible.

**Conclusion**

This project seemed very daunting at first, but once we started doing more quality improvement and adding more tables to store information of our clients, it became much easier to implement a ranking system to our leaderboard. The program itself turned out better than expected and we tried to implement everything we learned this semester into our project. Utilizing Data manipulation languages to include many commands to permit the users to manipulate the data in the database, helped us create a great interface that is simple to use and pleasing to the eye.

Since we wanted our program to be a safe place for data to be stored, we implemented a drop program to drop any information a user did not want in the program anymore. Adding this increases security and gives the user privileges to manage their data. Our application merges concepts of social media and banking into one package.

With this system and added security , you can track your spending and income all while competing with your friends on who has the greatest personal growth. No sensitive information would be shared to the public of course. Instead, your assets will be calculated and shown on your profile on a weekly basis. We had a very tough time finishing this with the information we had, but we did a lot of independent research to get our program correctly working. This program shows our mastery in trying to implement all of our studies in the application.