

Criterion A

Scenario

Mr Ozgul Kazanci is the Student Council Advisor at my school. Student Council is involved in organising activities for students, running a daily snack shop and raising money for charities. One difficulty encountered by Student Council is finance management; currently a spreadsheet is used to keep track of the available funds and record transactions. This has proven to be inefficient as it is easy to forget to input expenses, leading to money not tallying up. It also is only accessible to a single person which creates difficulties for Student Council when planning events. The other problem encountered is a lack of stock control for Tuck Shop. At the moment, all items are ordered on an as-needed basis. This means that Student Council often runs out of snacks to sell, leading to a loss in potential revenue. (Appendix A)

I suggested that a mobile application with individual log ins for Student Council members. It could be used as a cash register at Tuck Shop allowing easy tracking of stock and quicker selling times. This would mean that the Tuck Shop data could be kept on a central database and be accessible to all Student Council members. From this, stock levels could be easily monitored. The second function of the app would be finance management. This would log transactions concerning expenditure and income from different categories, then using this data to create visuals such as a graph showing a breakdown of income/expenditure by category. To ensure that decisions are made responsibly, writing to the database for transactions and products in the stock list will need to be carried out by either a Student Council Advisor or a higher level Student Council member. The overall budget, stock inventory and checkout system will also be available to all Student Council members. As Student Council members use a wide range of devices, the application would have to run on both Android and

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iOS. After suggesting a few names, the client chose StuCo Management to be the name of the app. (Appendix B)

StuCo Management is an iOS and Android app that allows Student Council members to run a checkout system, manage Tuck Shop stock and manage the overall finances.

Since the app will be for both iOS and Android, it will be developed using the Visual Studio Code IDE, mainly in the Dart language with the Flutter framework which allows for cross-platform operation using a single codebase. In order to develop the backend, I will use Firebase, a Backend-as-a-Service platform that handles authentication (Firebase Auth) and uses a realtime NoSQL document database (Cloud Firestore) that apps connect to through WebSockets.

Success Criteria

As determined with client. (Appendix B)

Criterion Number	Description
1	Student Council members can be added and removed with levels of accessibility
2	Student Council members have individual logins and passwords
3	Student Council members can access their account from any Android or iOS device using login details
4	Information is synced across devices and accounts
5	Products can be added and removed from the Stock List, only by administrators
6	Information about the product can be added and updated. (Selling Price, Stock, Name)
7	Stock of any Tuck Shop product can be checked at any given time.
8	A Tuck Shop checkout system can be used to calculate totals and update stock inventory and add transactions that can be used by all users
9	A budget section showing the overall budget of Student Council is available
10	Spending and Income can be sectionalised and shown in a graph
11	Non-Checkout Transactions can be added, edited and deleted by administrative accounts

Alternative Solutions

Student Council could continue using the spreadsheet or an online version, but its problems have already been listed above. Searches on Google and the Google Play Store (Android) revealed no appropriate software for this purpose. (Appendix C)

(479 Words)