

My project: Housing accommodation management system

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What my project is

My project will be a housing accommodation management program that's role is to track service users living at rented properties and manage moving service users between properties to maximise profit. My program will calculate service users cost and generate invoices monthly automatically for the company to send to its clients (i.e. councils). The program will also monitor utilities cost such as energy bills and expenses such as housing repairs and maintenance to allow the user to see where they can cut costs to maximise profits.

The features it will have

- Manage service users (SUs)
  - Remove SUs from properties
  - Add SUs from properties
  - Move SUs from properties to another property
  - Record amount of nights/days stayed
- Manage properties
  - Calculate rent that needs to be paid
  - Record the type of property (House/flat/studio/room)
  - Notify user as to what rent is due
  - Calculate the amount of rent that needs to be paid
  - Record the rent paid
- Manage expenses paid towards a property
  - Record expenses paid towards a property and categorise it
  - Record utilities paid as well as keeping track of account numbers for the utilities
- Manage company's finance
  - Track profit/loss per property
  - Track amount of expense paid per property
  - Track amount of income gained from each property
  - Possibly import bank statements from online banking and automatically place each transaction into its correct category

Why I've chosen this project

The reason why I have decided to pursue this project is because I myself work in the housing accommodation industry where we house council tenants and ensure that their necessities are met whilst profits are maximised. However, we currently use many spreadsheets to allow us to monitor the rents, utilities and expenses using Microsoft's Excel. The main issue we have with using spreadsheets is that since there are multiple spreadsheets being used, there isn't a central monitoring system in place that takes information from each of the spreadsheets and combining it to give an overall view of the current state of the business. Also, a spreadsheet can only be accessed by one user at a time therefore only one user can be monitoring at a time on a specific part of the business.

What will be different about it

Currently there are no programs that can accommodate change of rates in service user's rents as well as being able to have a services user inventory that would allow the users to pick and choose what property the service user in the inventory should go to.

Technology I will be using and how I will be testing it

My program will be in java, preferably using the latest java 1.8.0 and will be created using the IDE called IntelliJ from IDEA, whilst using a SQLITE database (not 100% decided on type of database).

As for testing, since my user group will be landlords and letting/accommodation agents as the application will have the functionality that landlords and letting /accommodation agents would use. Since I already work for an accommodation service, I will use my colleagues as testers to test certain aspects of the application based on their role in the company.

- Book keeper/Accountant
  - Will Test the managing of expenses and rents of properties
  - Will Test the managing of company finances
  - Test the ease of creating invoices for customers on how many days services users have spent
- Service User manager
  - Will Test the managing of service users
  - Test the relocation of service users
- Manager
  - Track Company's general profit/loss