

BUY-n-RENT is a mobile application that runs on all mobile platforms. This app will provide the details like availability of rented houses, rented commercial buildings, properties on sale, rental cars, selling cars, and selling used two-wheelers. This app must create two types of accounts for a user, owner, and broker. The user account will be provided with two types of services: free search with limited features and premium with unlimited information and contact numbers of property owners. The owner account will also have two types of services: A free account with a limited number of views to the property and Premium services with promotion to the property as well listing for a long time. The user can search the required properties by giving inputs like location, budget, type of need (buy or rent), and what they are looking for. Based on user inputs, the app must sort the information from the database and it must list the premium owner properties at the top. The Owners can set their price for their properties, list out the conditions of the property for rent, they can post photos of their property, and description of the property. So this app must be run in two versions free and premium and both will have separate features.

- a) Identify the suitable process model with a thorough understanding of the given problem. Draw the series of interactions between the user and the system to build a perfect app for the given scenario.
- b) Draw the use case diagram, class diagram, and state diagram for the project
- c) The system is developed by 5 developers. The system will be using three input files and 9 output files, 5 inquiries, 4 internal logic files, and 3 external interface files. The system will have average complexity and the weighting factor. The development requires 14 hours to complete one FP and the team works 9 hours per working day and 25 working days in a month. Calculate the effort to develop the app.
- d) Convert the FD to a suitable architectural style and then perform the integration testing and system testing.
- e) Explain the steps to conduct the validation testing and acceptance testing for the given scenario