ACCOUNTS MANAGEMENT SYSTEM FOR CAR SHOWROOM

Software Engineering - Practical Assignment

Group – A

M.Sc. in Computer Science, Semester II

Group Members:

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▪ ASSUMPTIONS

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1.   This software will be used to manage the financial aspects of an Accounts Management System for a Car Showroom, and as such, will only manage the financial (including billing and invoicing) activities of all branches of the company owning the showrooms.

2.   We assume that the stakeholders for the system can be grouped, broadly, into four groups: Admin (Administrator(s)), Accountants, Sales Person, and Other Employees. Each employee is identified by their unique 10-digit Employee ID. All the users of the system will be required to authenticate with the system by logging in with their Employee ID and corresponding password. A brief description of the stakeholder groups is in order:

   i. Administrator(s): Administrators will be able to modify and maintain any part of the system. They will be responsible for creating accounts for branches, managing staff (that is, addition, modification and removal of staff accounts and authentication levels), and generate a report spanning all the branches.
   ii. Sales Persons: They are responsible for the sale of cars and other merchandises/services. They generate invoices (herein referred to as *Sales Bill*) for verification, upload bill of expense for any work-related expenses incurred by them, and can view a report of all of the sales made by them.
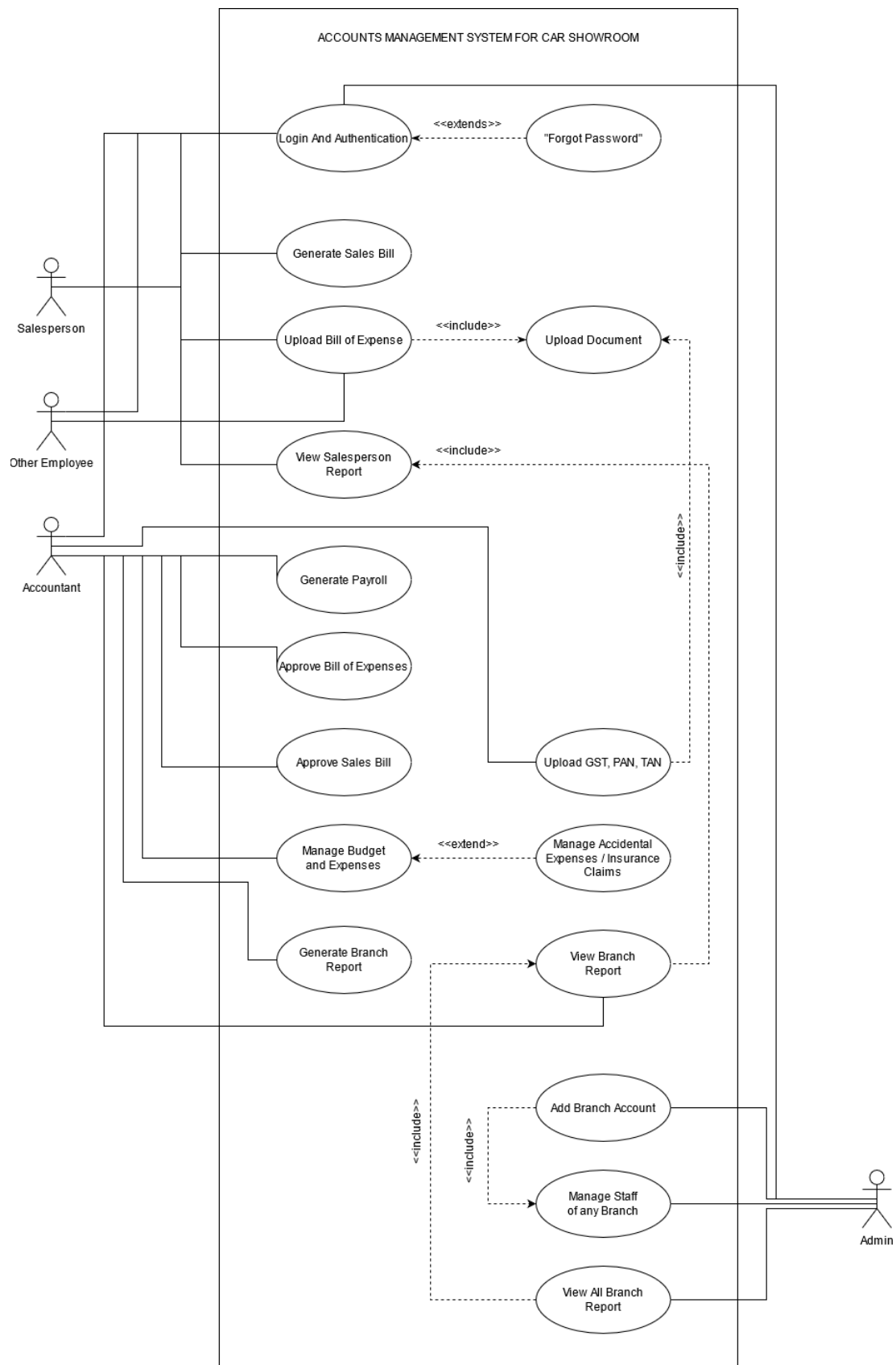   iii.   Other Employees: These are the stakeholders that can just submit bill of expenses (as in the case of Salespersons) and submit them for review.
   iv.   Accountants: They have multiple responsibilities:
   - a. They approve Bill of Expenses and Sales Bills
   - b. They create, manage, and verify Payroll generated by the system.
   - c. They manage the overall budget of the system (please refer to paragraph 3).
   - d. They can ask the system to generate report of all sales in the branch
   - e. They can adjust budget w.r.t. accidental expenses or insurance claims.
   - f. They can upload required documents like GST, PAN, TAN.

3.   **Budget**: Each showroom is assigned a basic *budget* by the system administrator (it is assumed that the administrator has clearance to do so). This budget is used to pay for employee Bill of Expenses, accidental damages, and payroll. Any profit/loss incurred by the showroom is adjusted with respect to this budget.

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USE CASE DIAGRAM

ACCOUNTS MANAGEMENT SYSTEM FOR CAR SHOWROOM

- Login And Authentication
- <<extends>> "Forgot Password"
- Generate Sales Bill
- Upload Bill of Expense — <<include>> → Upload Document
- View Salesperson Report — <<include>>
- Generate Payroll
- Approve Bill of Expenses
- Approve Sales Bill
- Upload GST, PAN, TAN — <<include>>
- Manage Budget and Expenses — <<extend>> → Manage Accidental Expenses / Insurance Claims
- Generate Branch Report — View Branch Report
- Add Branch Account
- Manage Staff of any Branch
- View All Branch Report — <<include>> <<include>>

Actors: Salesperson, Other Employee, Accountant, Admin

- ▪ **USE CASES**

1. Login and Authenticate: This allows the users of the system to log in to it. The user is automatically forwarded to the specific page. It also allows for generation of Account Reset link if the stakeholder forgets his/her password.

2. Generate Sales Bill:
   2.1. A Salesperson can generate a Sales Bill (as defined in paragraph 2) on successful sale of product or services. This sales bill is submitted to the system and is kept waiting for approval via the accountant. On approval from accountant, the sales figures are submitted to the system and is included in the Expenses/Budget/Income log of the system. The Sales Bill may contain information like:
       2.1.1. Name and Details of Customer
       2.1.2. Bill ID
       2.1.3. Amount
       2.1.4. Products/Services Purchased
       2.1.5. Date
       2.1.6. ID of Salesperson
3. Upload Bill of Expense:
   3.1. Two stakeholders can call this functionality of the system: Salesperson and other employees. Other employees may be extended to include accountants.
   3.2. A Bill of Expense contains information like, but not limited to, the following:
       3.2.1. ID and Name of Employee
       3.2.2. Cause of Expense
       3.2.3. Amount
       3.2.4. Date expense was incurred on.
   3.3. The Bill is submitted by the employee in question to the system, and after approval by the accountant, is adjusted with their payroll.
4. Upload Document:
   4.1. This functionality is self-describing. It uploads a document to the system, and returns back an ID through which the document can later be accessed. Documents must be within 1 Megabytes, though this may be changed by the admin.
   4.2. Documents may be deleted once marked not necessary.
5. View Salesperson Report:
   5.1. Each salesperson will be able to view his/her report from the system. This will include details of all of the Sales committed by him/her.
6. Generate Payroll:

6.1. This takes in information about the salaries of individual employees, adjusts all approved Bill of Expenses with it, and generates a PDF File of all the salaries needed to be paid in a form that can be used with a selected bank.

6.2. This is initiated by the accountant, but the calculations are performed automatically by the system.

7. Approve Bill of Expenses:

7.1. The accountant is presented with a list of all Bill of Expenses of his/her corresponding branch and can approve, or deny, any of the requests made by the employees.

7.2. If approved, the amount specified in the Bill of Expenses is adjusted in the Salary as per 5.1.

7.3. If denied, no such action is taken.

8. Upload GST, PAN, TAN:

8.1. These documents pull all the relevant details from the system and present it as a form which is checked by the accountant for correctness and accuracy and then is generated in PDF Form to be submitted to the system for further processing.

8.2. It includes Upload Document as a Subsystem.

9. Approve Sales Bill:

9.1. The accountant can approve a sales bill from a list of such bills from his/her branch presented to him/her through the system.

9.2. On accepting such a bill, the system will include and adjust the bill's amount with the earnings and budget of the Showroom.

10. Manage Budget and Expenses:

10.1. Each branch of the showroom will have a predetermined amount as *Budget* as assigned to it by the System Administrator(s). This budget will be the "baseline" for the earnings/losses of an individual showroom.

10.2. Expenses incurred by the branch during its day to day operation – such as via Bill of Expenses – will count *against* the Budget (subtracted from it)

10.3. Sales made by the branch will count *towards* the Budget (added to it).

10.4. At any time, the accountant responsible for that branch will be able to generate a report detailing the current status of the budget of the system.

10.5. This process will also incorporate managing accidental expenses and insurance claims:

10.5.1. Accidental damages (such as, breakage of a showroom window/equipment) will be deducted from the budget.

10.5.2. If the equipment was insured, then the accountant may add back the amount to the system. However, all expenses will be logged.

10.6. The system will automatically generate a report at the end of the financial year.

11. Generate Branch Report:
    11.1. The accountant will be able to generate a report encompassing the financial records and other details throughout the financial year for a given branch that accountant is assigned to.
    11.2. This report will also be available to be downloaded as a PDF.
12. View Branch Report:
    12.1. The accountant shall be able to view the report as generated by Use Case 10. This will also include a combined overview of the sales committed by all of the salespersons of the corresponding branch.
13. Manage Branch Staff:
    13.1. The Administrator shall be able to add, modify and remove the details of the employees working in any individual branch.
        13.1.1. The details recorded for the employee will be prompted while adding an employee.
    13.2. The Administrator will also be able to indicate an employee as an accountant, administrator or other employee, thus granting them relevant access level.
14. Add Branch Account:
    14.1. The Administrator shall be able to add an account for a new (say) branch. The system will ask for and record all of the details of that given branch. This information may include:
        14.1.1. Branch Name
        14.1.2. Address
        14.1.3. GSTIN
    14.2. During the process of adding a branch, the system will prompt the administrator to add any employees hired by/ allotted to that branch.
15. View All Branch Reports:
    15.1. Selecting this functionality of the system will provide the administrator with a report of *all* of the branches combined in a single report.
    15.2. This will include breakdowns of performances of all branches.

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