Transport Company Computerization Software Software Analysis & Software Design(SA/SD)

B419039 Pawan Kumar Mishra
B419052 Satyam Pandey
B419013 Akshit Gangawar
B419063 Sumeru Das

Problem Statement

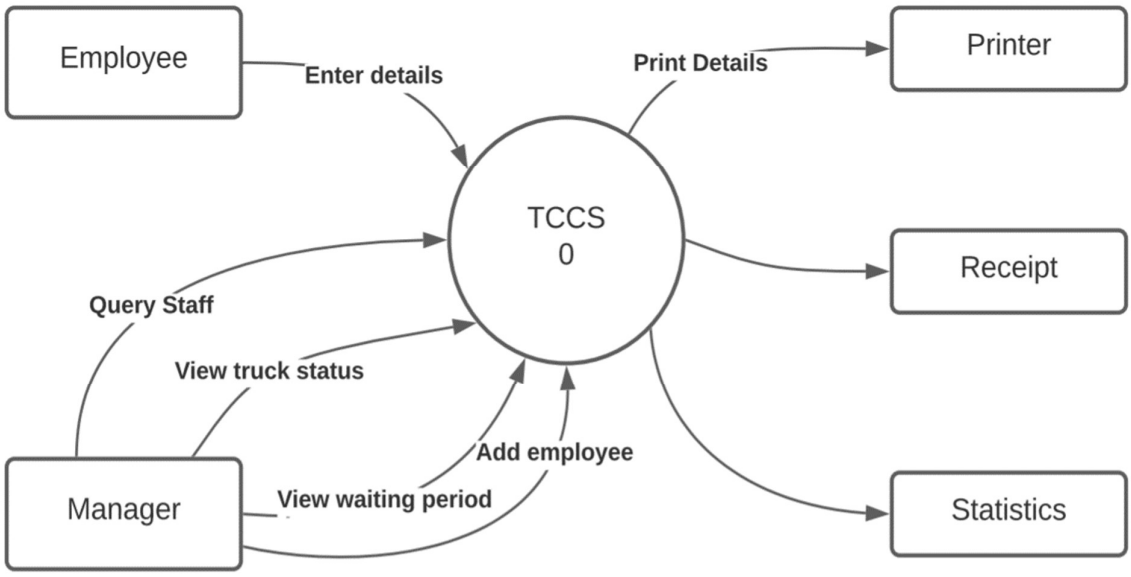
A transport company wishes to computerize various book keeping activities associated with its operations.

- A transport company owns a number of trucks.
- The transport company has its head office located at the capital and has branch offices at several other cities.
- The transport company receives consignments of various sizes at (measured in cubic meters) its different offices to be forwarded to different branch offices across the country.
- Once the consignment arrives at the office of the transport company, the details of the volume, destination address, sender address, etc. are entered into the computer. The computer would compute the transport charge depending upon the volume of the consignment and its destination and would issue a bill for the consignment.
- Once the volume of any particular destination becomes 500 cubic meters, the computerization system should automatically allot the next available truck.
- A truck stays with the branch office until the branch office has enough cargo to load the truck fully.
- The manager should be able to view the status of different trucks at any time.
- The manager should be able to view truck usage over a given period of time.
- When a truck is available and the required consignment is available for dispatch, the computer system should print the details of the consignment number, volume, sender's name and address, and the receiver's name and address to be forwarded along with the truck.
- The manager of the transport company can query the status of any particular consignment and the details of volume of consignments handled to any particular destination and the corresponding revenue generated.
- The manager should also be able to view the average waiting period for different consignments. This statistic is important for him since he normally orders new trucks when the average

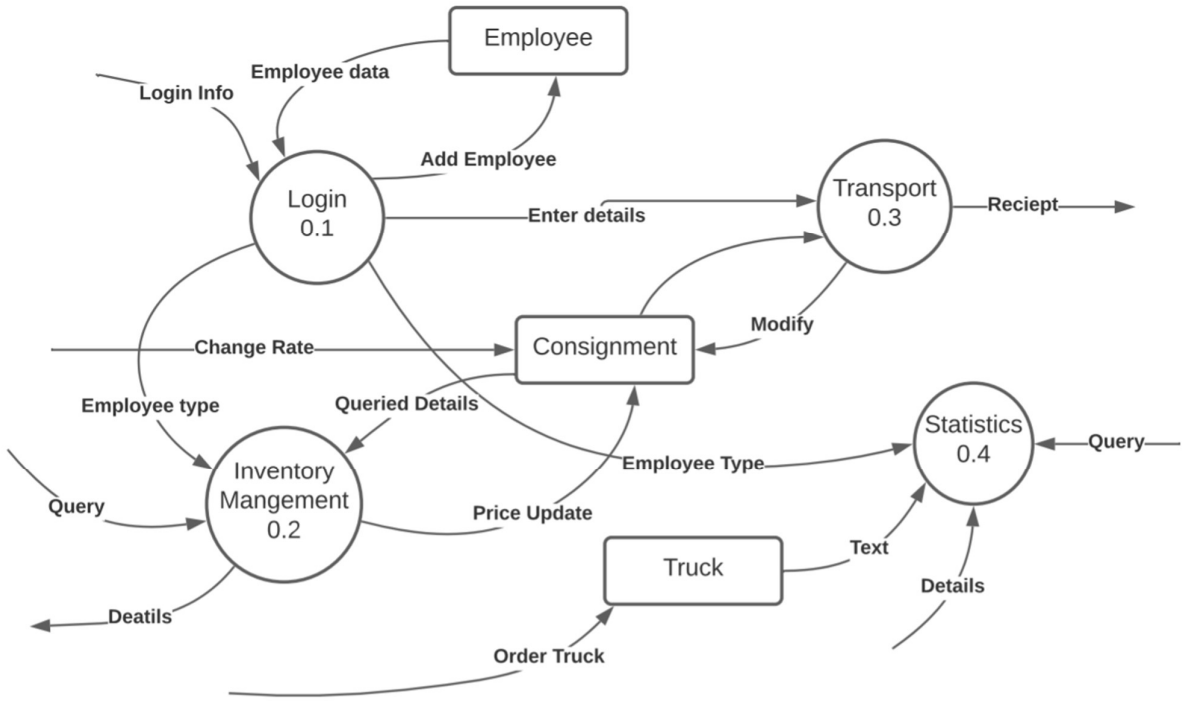
waiting period for consignments becomes high due to non-availability of trucks. Also, the manager would like to see the average idle time of the truck in the branch for a given period for future planning.

1. Data Flow Diagram

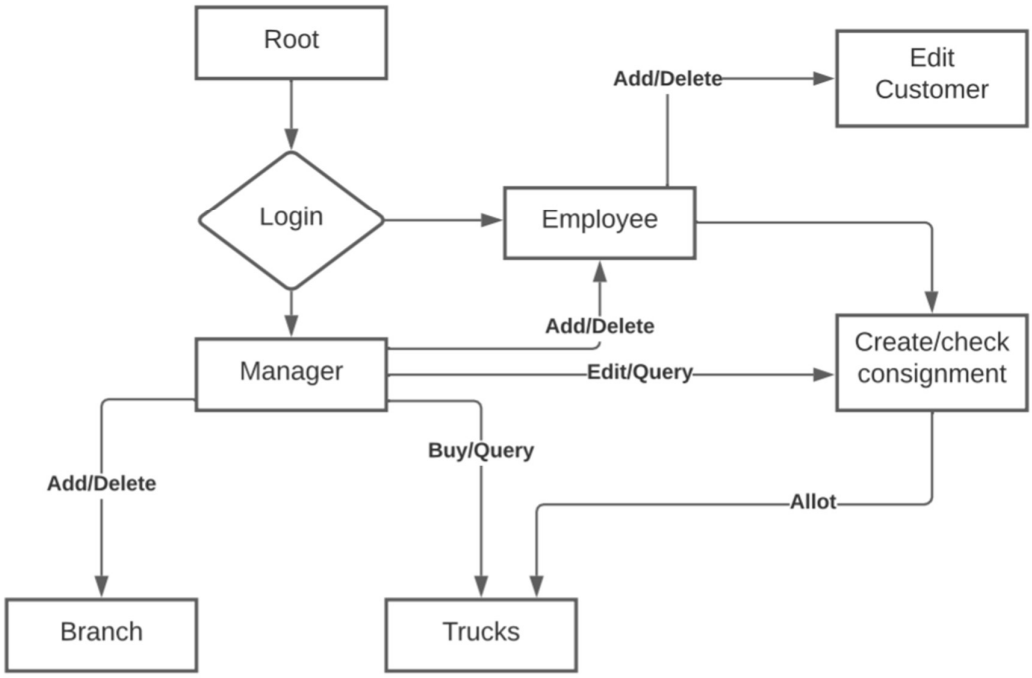
1.1 Context Diagram (Level 0)



1.2 Data Flow Diagram – Level 1



2. Structure Chart



3. Data Structure

Employee has following attributes:

1. ID
2. Name
3. Address
4. Password
5. Mobile No.
6. Email Id

Consignment has following attributes:

1. Volume
2. Sender
3. Receiver
4. SourceBranch
5. Destination Branch
6. IsTruckAssigned

Customer has following attributes:

1. Name
2. Address
3. EmailId
4. CustomerId
5. MobileNo

Truck has following attributes:

1. TruckNo.
2. CurrentBranch
3. NumberOfConsignmentsHandled
4. Status
5. Usage