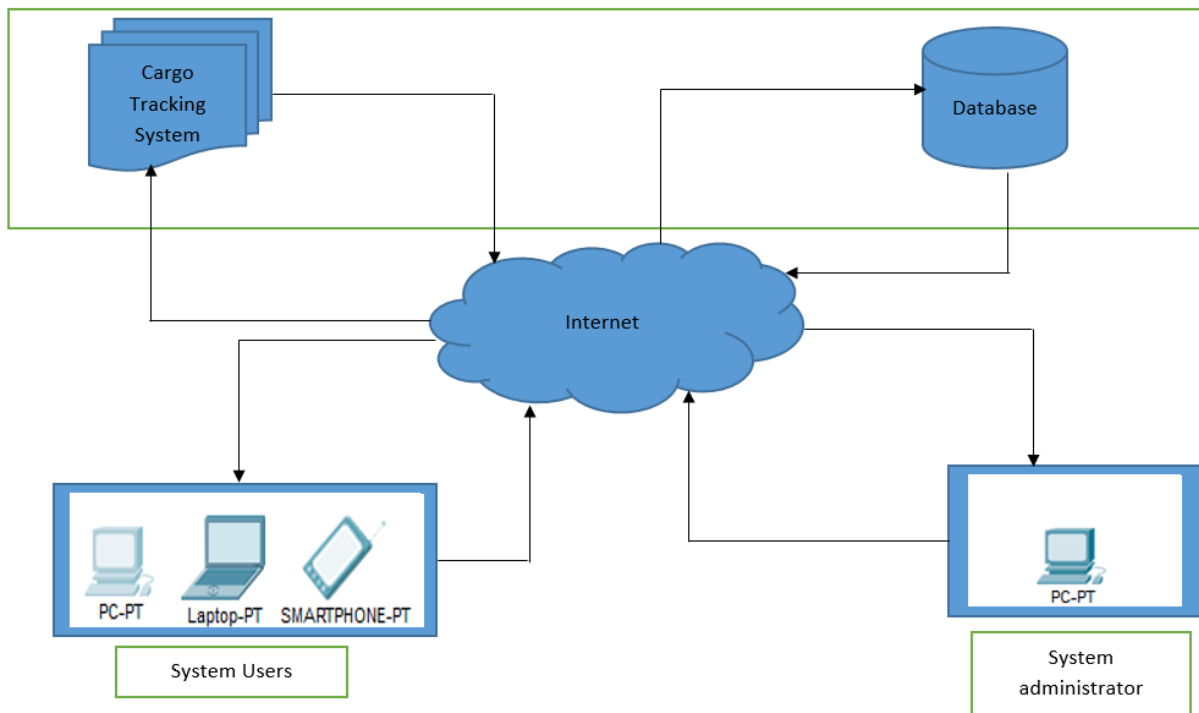# 4.4 System Design

4.4.1 Conceptual Model

Figure 4.4.1 Conceptual Model

4.4.2 Use case model

This is a high-level representation of how the system functions. It comprises of actors, the various use cases and their relationships.
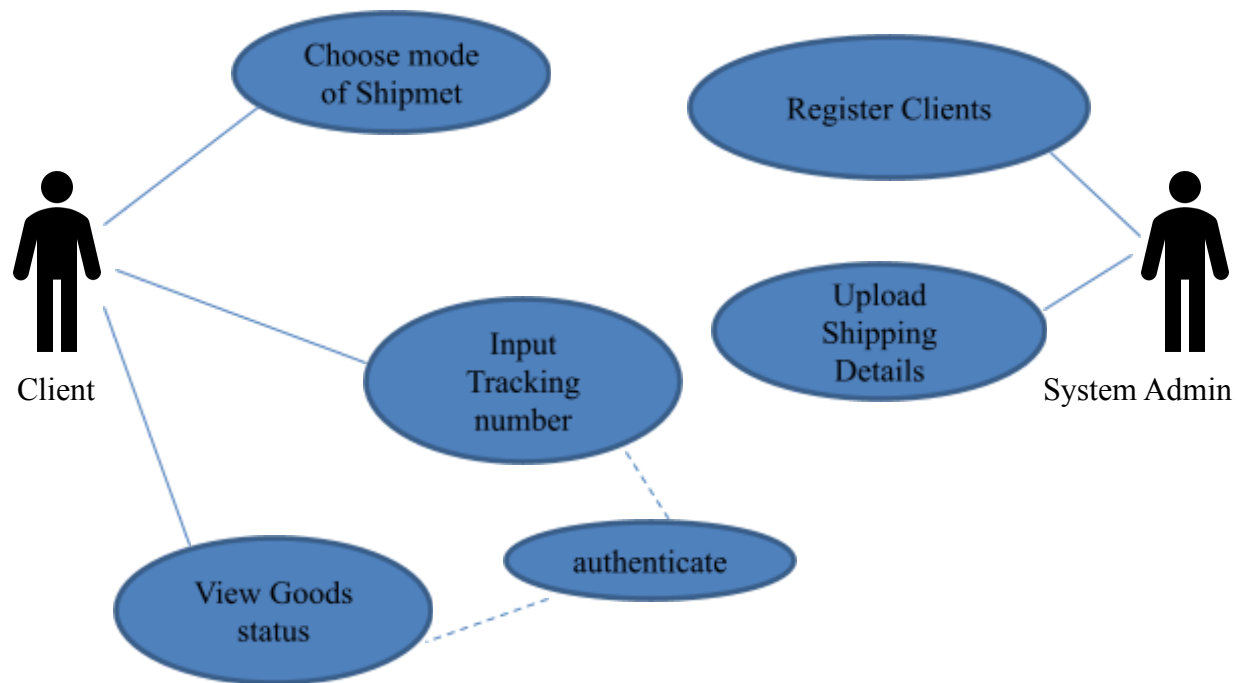

Figure 4.4.2 Use case model

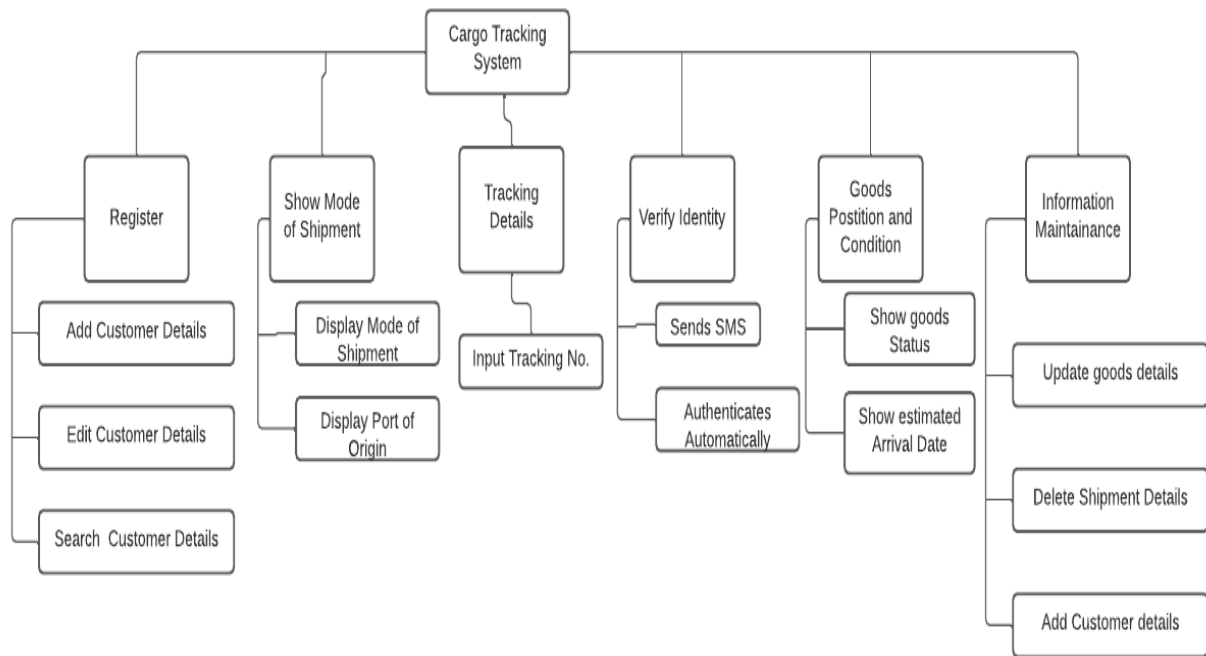## 4.4.3 Functional decomposition Diagram

Figure 4.4.3 Functional decomposition Diagram

4.4.4 Context Diagram

The context diagram below shows the entire system including inputs, outputs and other factors within which it operates.

This system is made up of two main external entities:
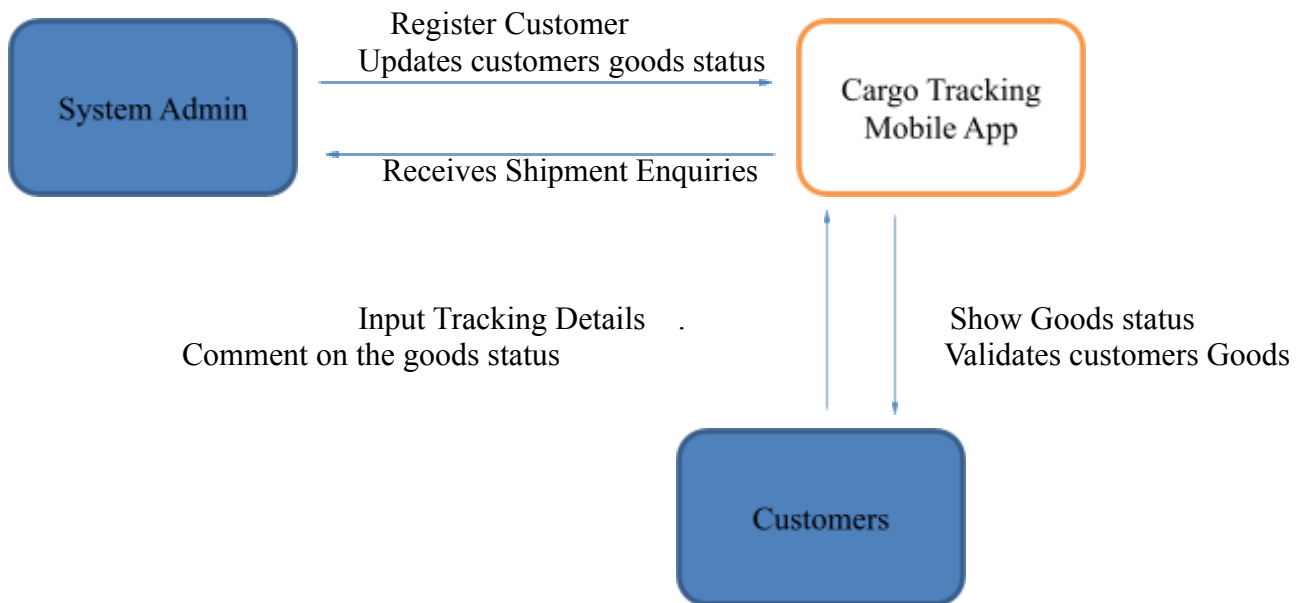1. System Admin
2. Customers

Figure 4.4.4 Context Diagram

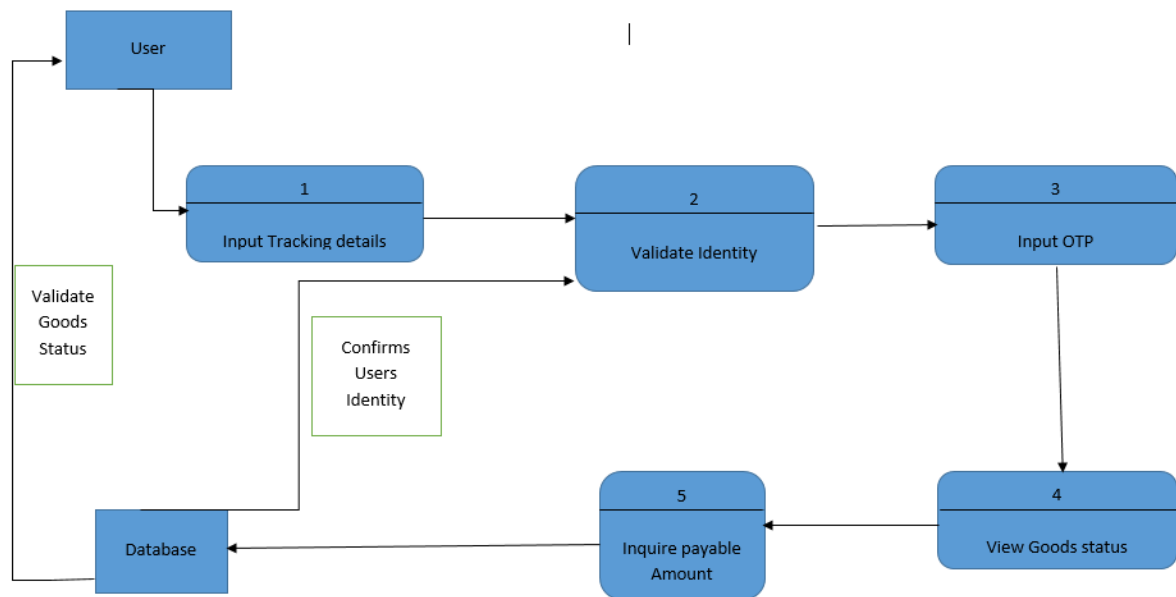4.4.5 Data Flow Diagram

4.4.5.1 User dataflow diagram

Figure 4.4.5.1 User dataflow diagram
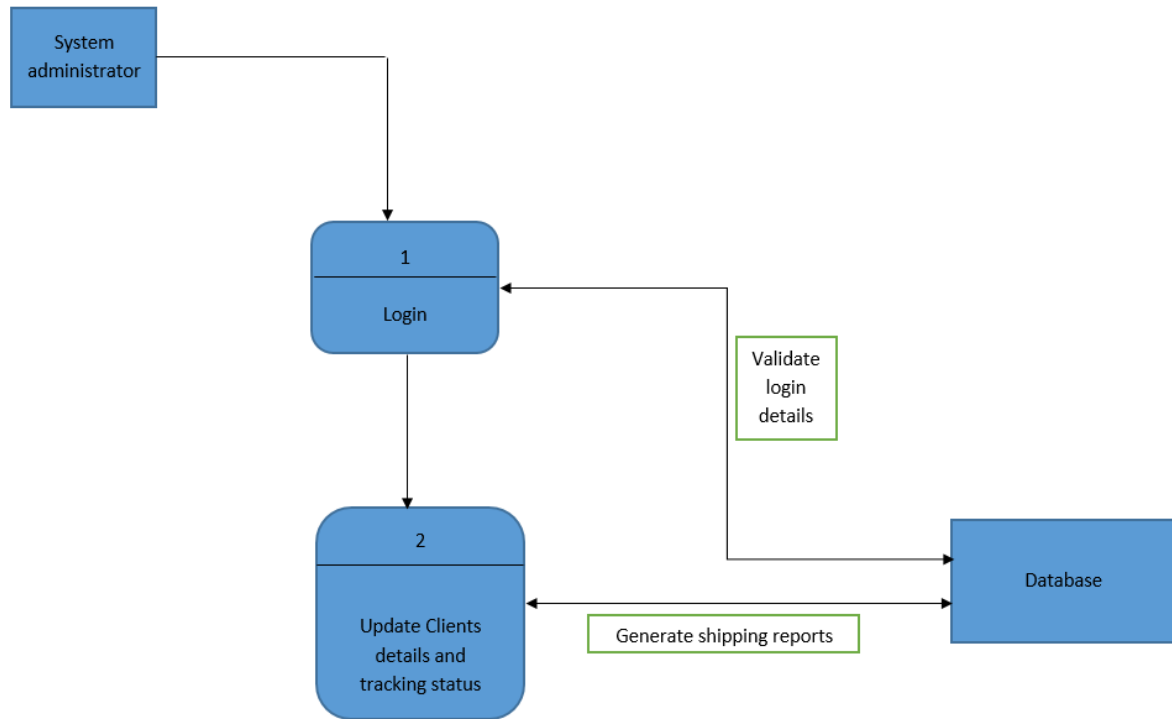
4.4.5.2 System Admin dataflow diagram

Figure *4.4.5.2 System Admin dataflow diagram*

4.4.6 System Flowcharts

4.4.6.1 Clients Flowchart

```
                    ┌─────────────┐
                   (    START      )
                    └──────┬──────┘
                           │
          ┌────────────────┤
          │         ╱───────────────╲
          │        ╱  INPUT           ╲
          │        ╲  TRACKING NO.     ╱
          │         ╲───────┬─────────╱
          │                 │
          │              ╱──┴──╲
          │             ╱  IF   ╲    NO
          │             ╲TRACKING╱───┐
          │             ╱  NO    ╲   │
          │             ╲CORRECT ╱   │
          │              ╲──┬──╱     │
          │                 │        │
          │         ╱───────┴────────╲
          │        ╱  GENERATE OTP     ╲
          │        ╲                    ╱
          │         ╲───────┬──────────╱
          │                 │
          │        ╱────────┴─────────╲
          │       ╱ INPUT TRACKING      ╲
          │       ╲ NUMBER TO VALIDATE   ╱
          │        ╲ IDENTITY            ╱
          │         ╲──────┬───────────╱
          │                │
          │        ┌───────┴────────┐
          │        │  VIEW GOODS     │
          │        │  STATUS         │
          │        └───────┬────────┘
          │                │
          │             ╱──┴──╲
          │            ╱INQUIRE╲   YES
          │            ╲PAYABLE ╱──┘
          │            ╱AMOUNT  ╲
          │             ╲──┬──╱
          │               NO
          │         ┌──────┴──────┐
          │        (    STOP        )
          │         └─────────────┘
```
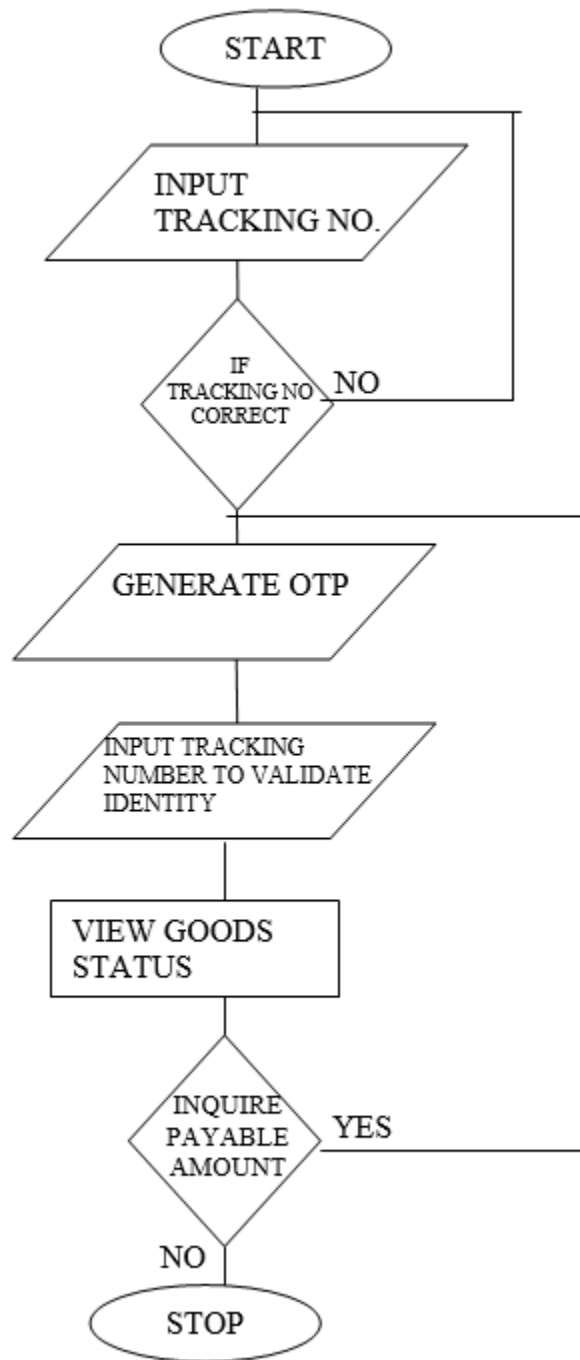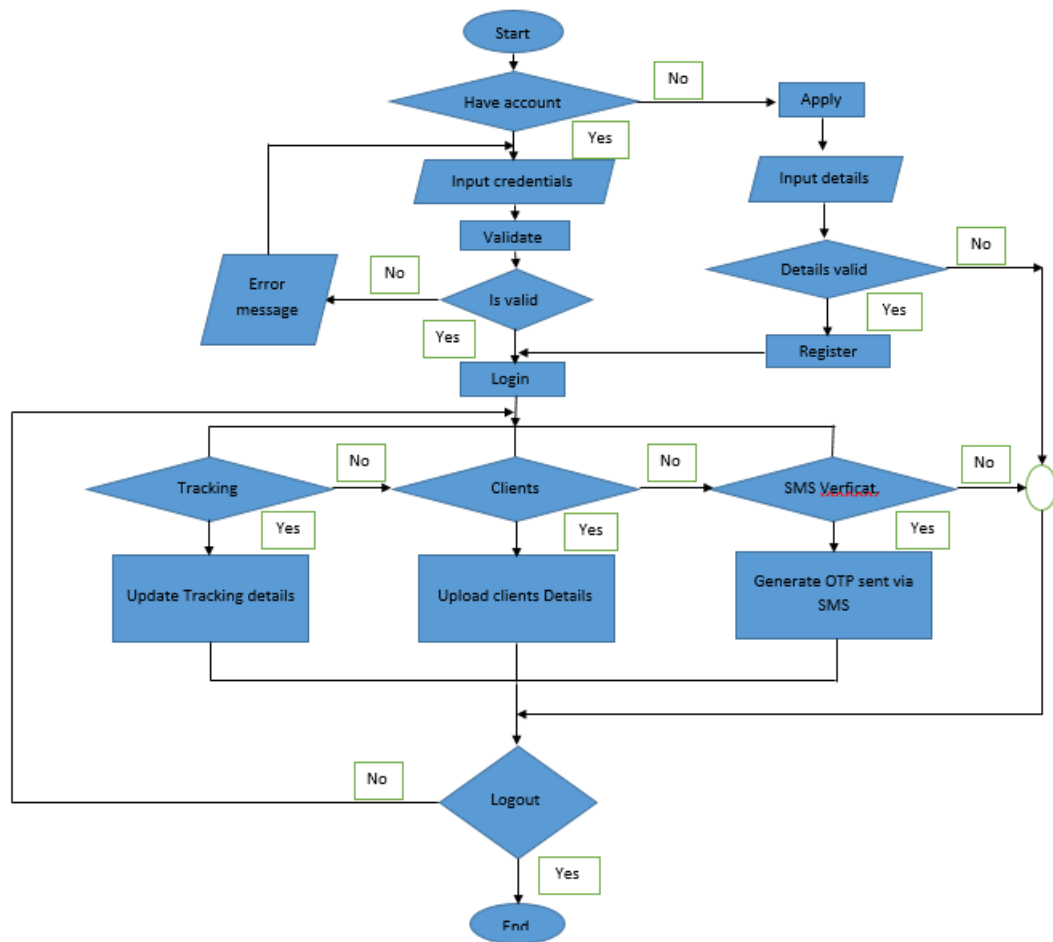
Figure 4.4.6.1 Clients Flowchart

4.4.6.2 System Administrator Flowchart

Figure 4.4.6.2 System Administrator Flowchart