

# Online Mobile Recharge

## Problem Statement:

The case study 'Online Mobile Recharge' gives us the information about all the mobile service providers. This application provides us the complete information regarding any mobile service provider in terms of their plans, options, benefits, etc. Suppose, any Airtel customer wants to have the information of all the schemes and services provided by the company, he/she can have the information and according to his convenience he can recharge the mobile from the same application. The major advantage of this proposed system is to have the recharging facility of any service provider under same roof.

## End users:

### Service Provider:

Service Provider is the one who is nothing but the mobile service provider like all the companies who are giving the mobile connections come under this module. Functionality of this module is to make the mobile recharging of their company basing on the availability of balance in the admin account. Request comes from the user and it is going to be verified at the admin for the availability of balance and then the request is forwarded to the service provided to make the mobile recharge.

### Third party System Administrator:

Administrator is the one who monitors all users and user transactions. Admin also monitors all the Service Providers, all the user accounts, and amounts paid by the user and amounts paid to Service providers. When the request given by the user admin checks the available balance in the user account then request is forwarded to the Service Provider from there user request gets processed. Admin has the complete information related to user and all the information related to the schemes and other information of different recharge coupons provided by the Service Providers. All the data is maintained at the Admin level. Admin is having the rights to restrict any user.

### User:

There are 2 categories in the user Module:

- Registered User and
- Visitor

Any person who wants to utilize the services of Online Mobile Recharge at any time from any where they should get registered in this application. After getting registered user can recharge the mobile at any time and from any where. Visitor is the one who visits the Online Mobile Recharge application and have the complete information related to the Service Providers and can make the mobile recharge by entering the bank details or by giving the credit card details.

## Class Diagram

Classes Identified:

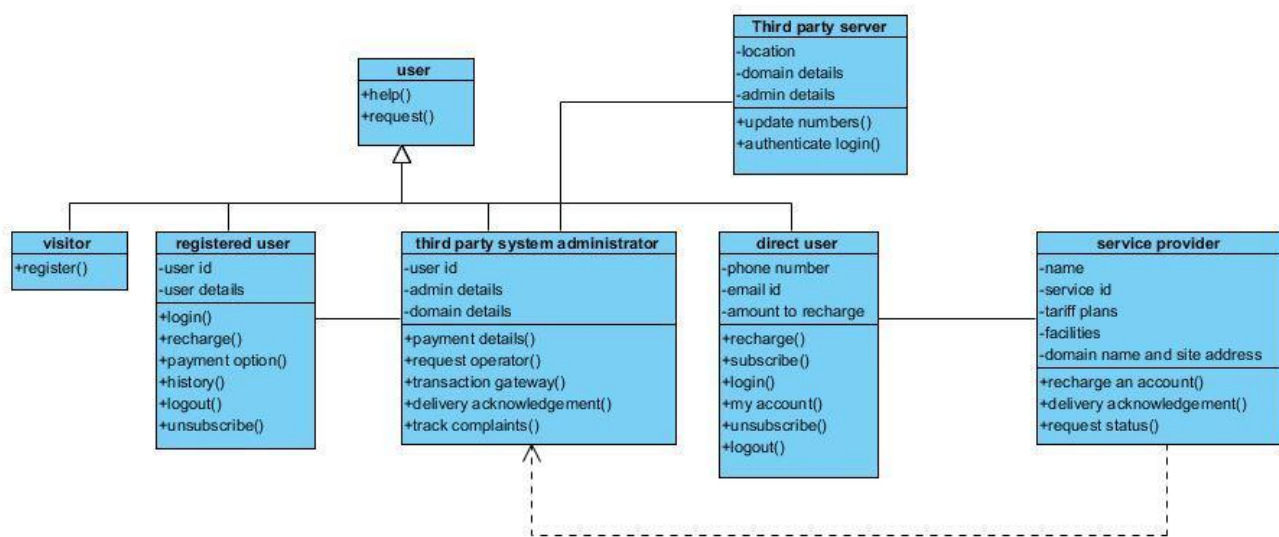
User: Registered , Visitor

Third Party System Administrator

Third Party Server/ Database

Service Provider

Direct or Non- Third Party User (Direct access through Service Provider Site)



## Use-Case Diagram

Actors vs Use Cases:

User

- Register.
- Recharge.
- Select Payment Gateway.
- Select service Provider.
- Make payment.

Third Party Administrator

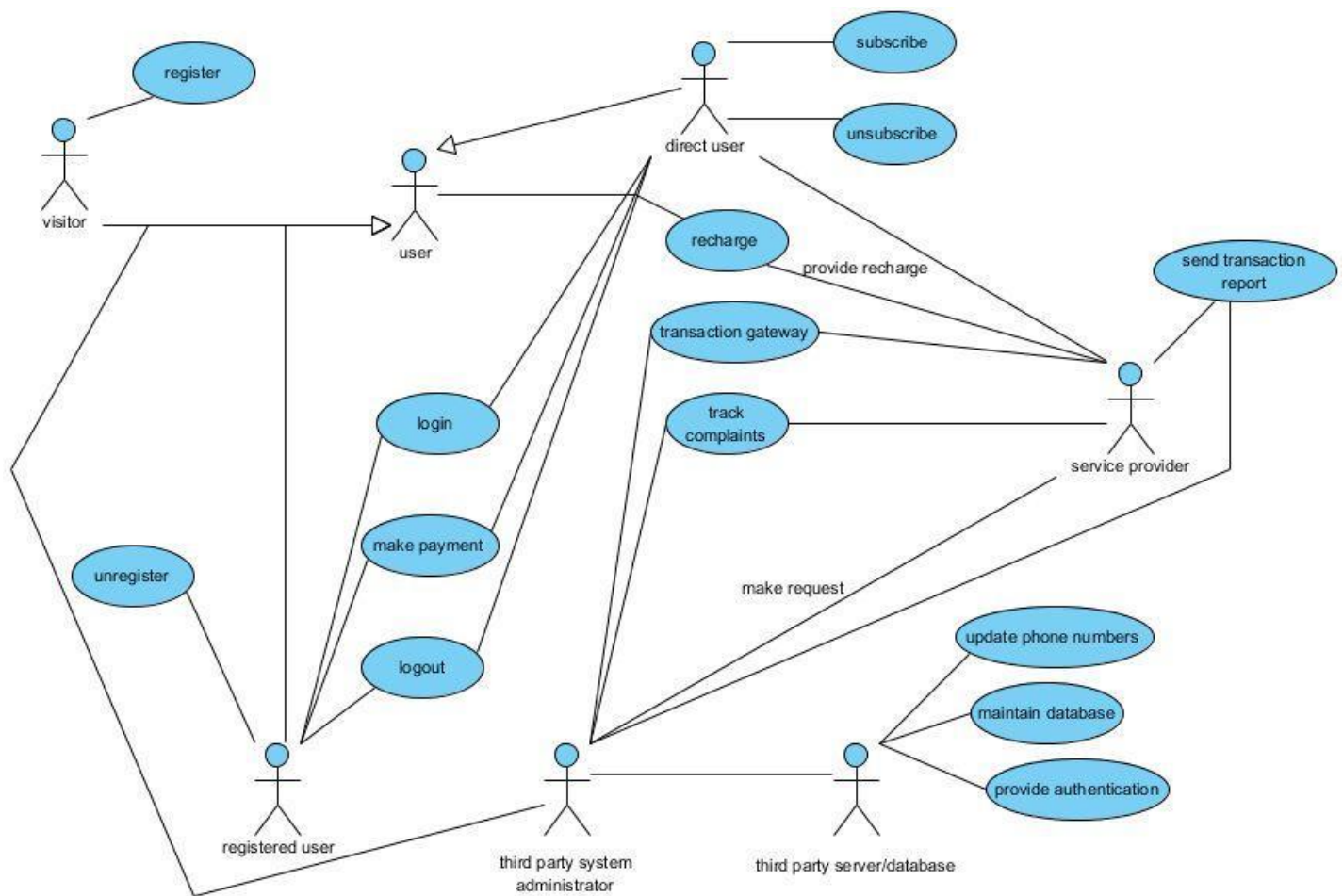
- Forward User request to Service Provider.
- Track Complaints.

Third Party Server/ Database

- Authenticate the Registered users.
- Maintain the Log.

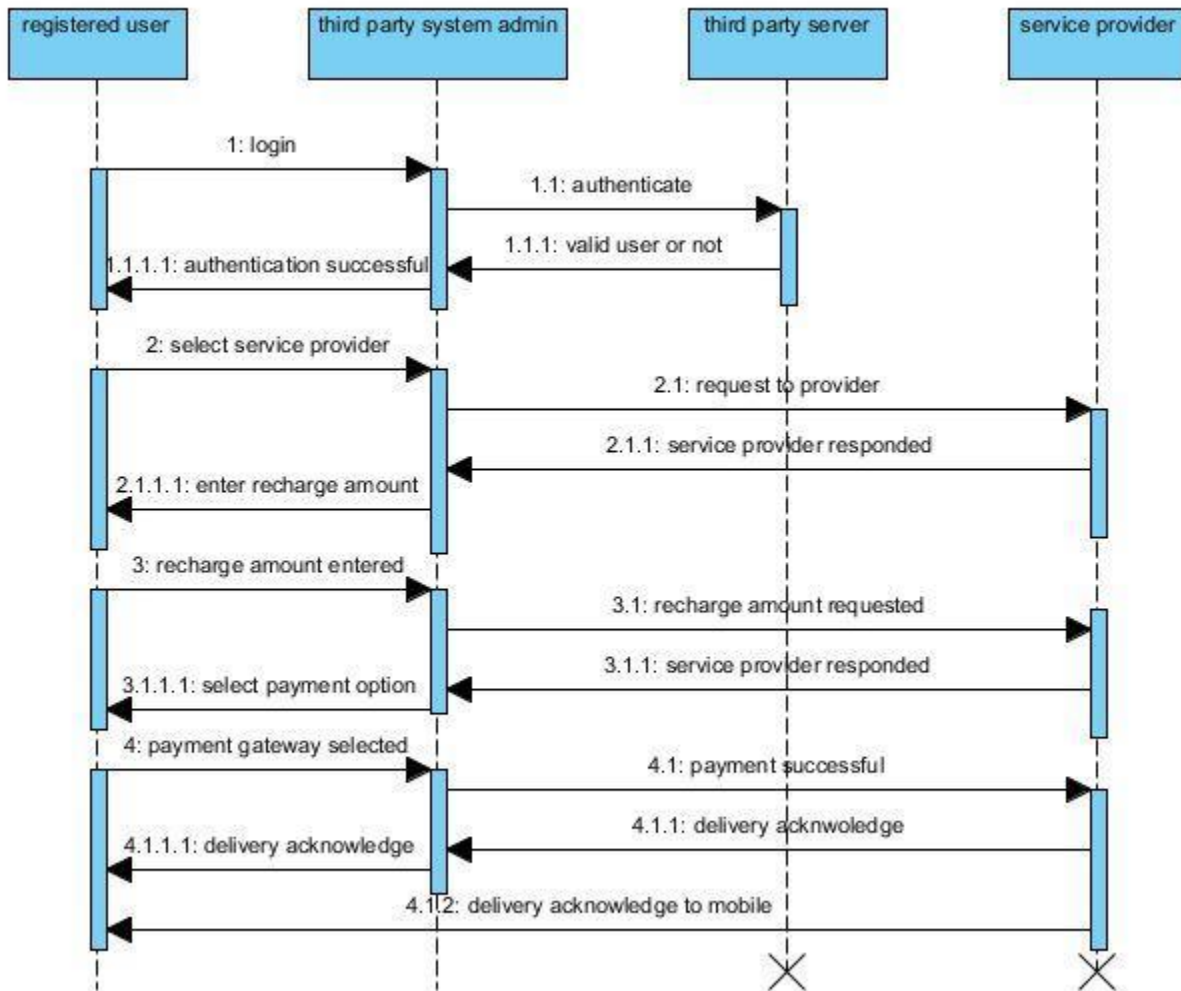
## Service Provider

- Recharge the user requested either directly or through the third party system.
- Provide various plans to the user.



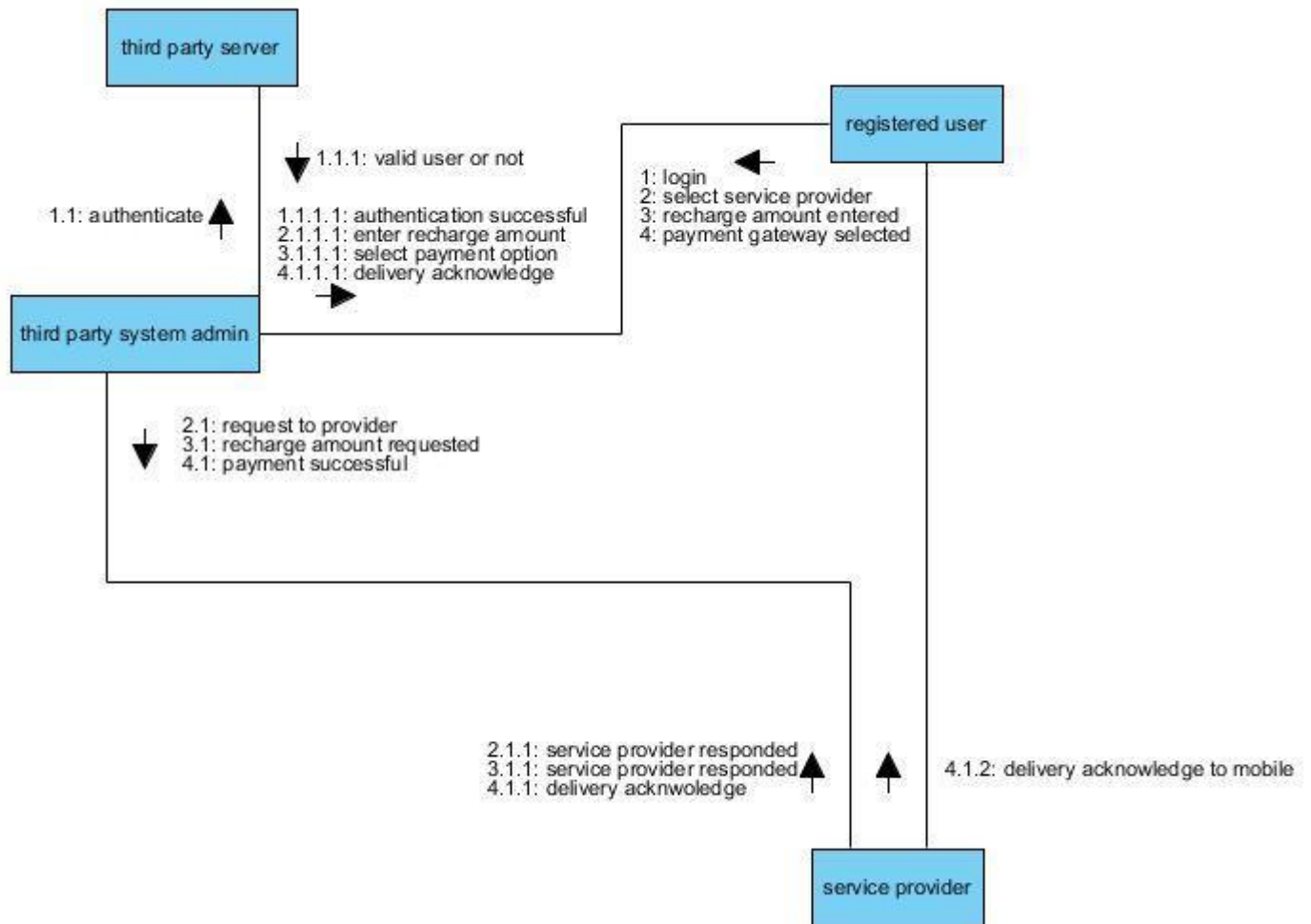
## Sequence Diagram

Sequence Diagram for a user to recharge his account through third party site:



### Collaboration Diagram

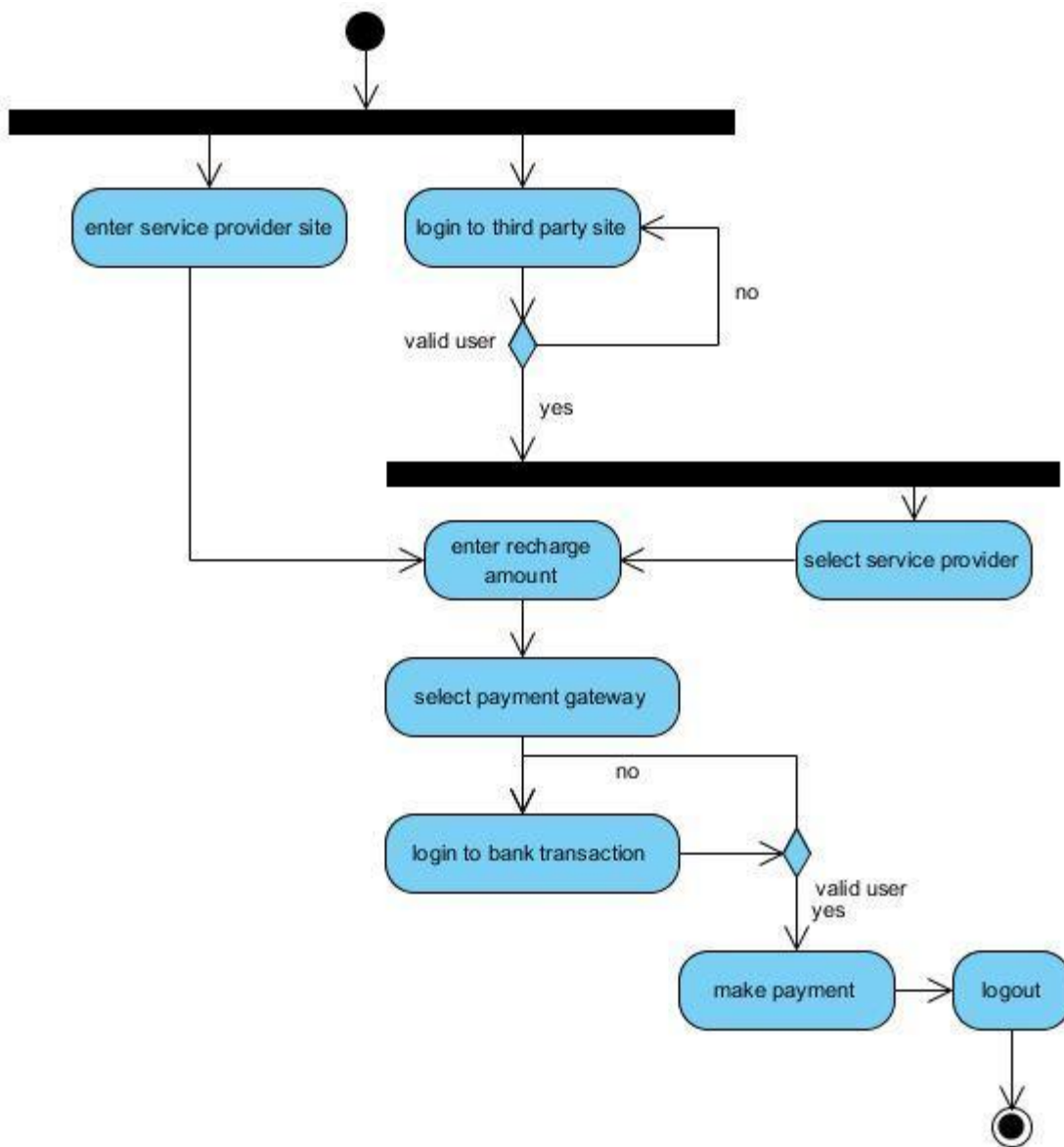
Collaboration diagram for a user to recharge his account through third arty site:



## Activity Diagram

### Activities:

- User login and authentication for Registered user.
- Forward the request to service provider if logged in as a Administrator.
- Enter service provider site for a direct user.
- Enter recharge amount.
- Select Payment Gateway.
- Login and authenticate Bank Account.
- Make payment.
- Check for the recharge processed successfully or not.



## State Chart Diagram

States:

Authentication for registered users / Registration for unregistered users

Successfully logged on or re-login

Operator Selection

Show the tariff plans available and applicable

Request recharge

Go through Payment Gateway Transaction process

- Authentication to enter the gateway site

- Successfully logged on or re-login

- Payment made

Logged off.

Transitions:

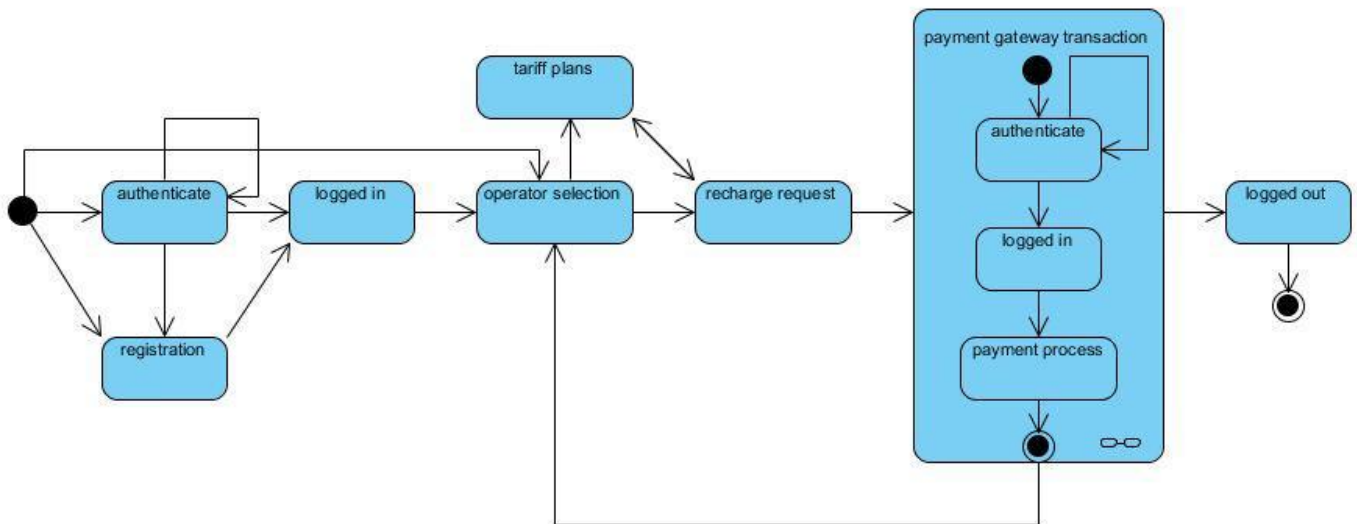
Registration ---> Authenticate ---> Logged in

Logged in ---> Operator Selection ---> Tariff Plans <---> Request Recharge

Operator Selection ---> Request Recharge ---> Payment Gateway Transaction

Payment Gateway Transaction ---> Operator Selection

Payment Gateway Transaction ---> Logged off



## Component Diagram

Components:

Third Party Home Page (visitor / registered user / admin / service provider)

Third Party Register Page (visitor)

Third Party Login Page (registered user)

Third Party User History Page (registered user)

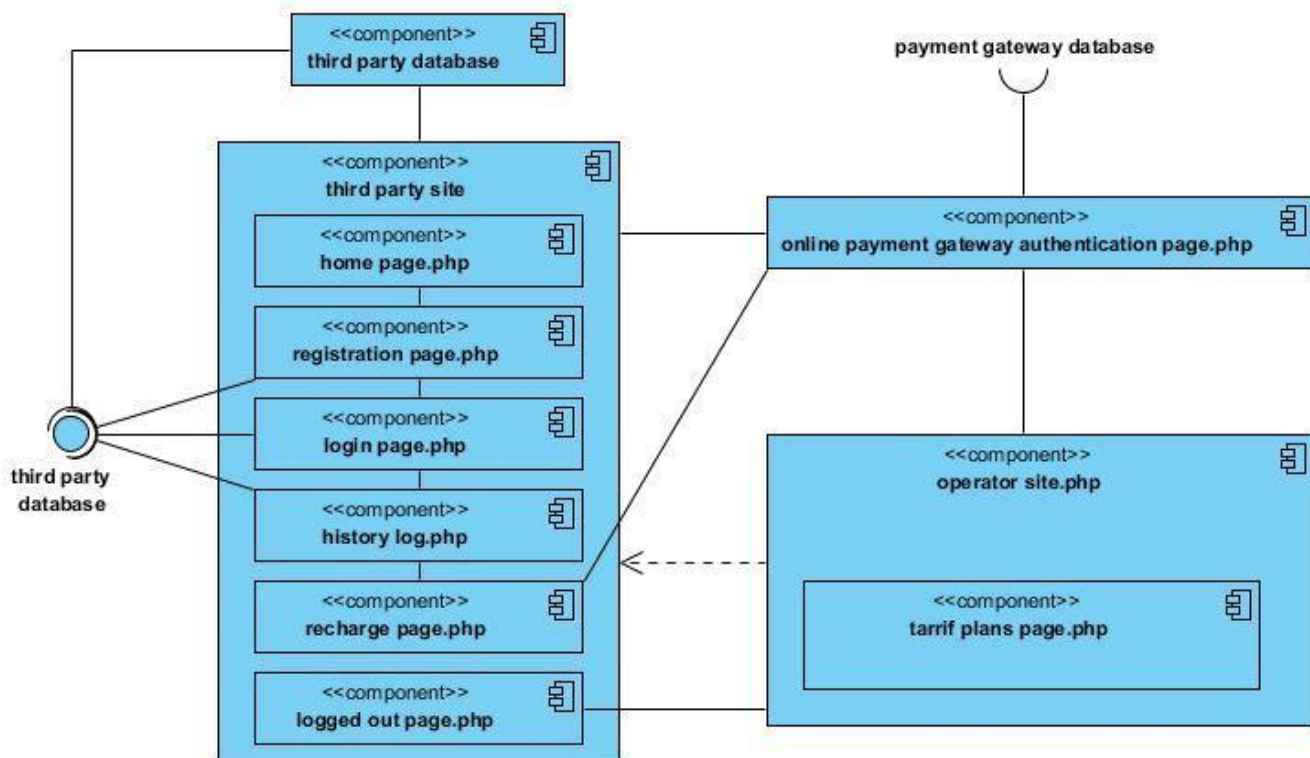
Request Recharge Page (registered user)

Third Party Logout Page (registered user)

Online Payment Transaction Gateway Page (direct user / registered user)

Service Provider Home Page (visitor / registered user / admin / service provider)

Tariff Plans Page (visitor / registered user / admin / service provider)



## Deployment Diagram

### Systems Used:

- 1) Consoles / Computers for registration, login purposes by third party users and for quick recharge by direct users.
- 2) Third Party Server to receive and respond to all the requests from various users.
- 3) Internet to provide access to users to recharge their accounts through payment gateways by placing requests through Third Party Sites and Service Providers sites.
- 4) Payment Gateway Server like Bank's server to provide online payment through their personal accounts to meet the requirements of the users.
- 5) Service Provider Server to maintain the records of the requests made by the users.



