

Aim:

To develop a system using UML for BPO management system. The system should hold the details of the customer and all approaches to it. It is managed by the central system.

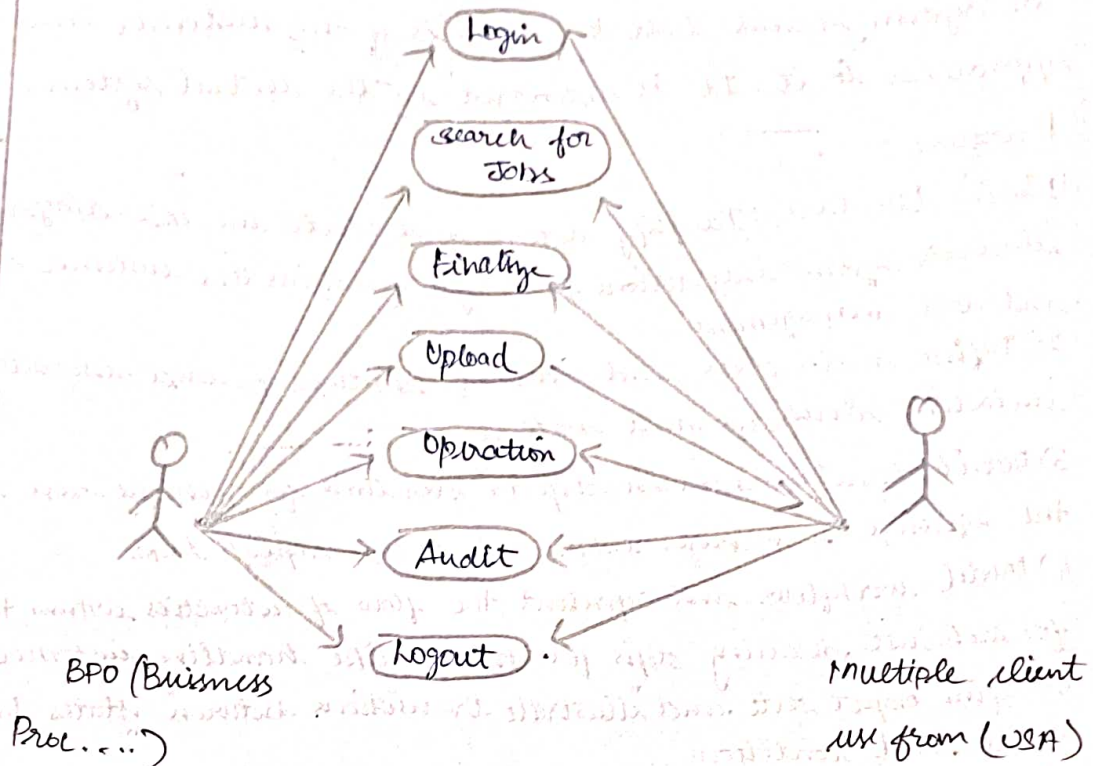
Procedure:

- 1) Define Use Case: Identify actors and create use case diagrams to illustrate system interactions for major functions like customer inquiries and data management.
- 2) Define main class and establish relationships and associations, including attributes and methods.
- 3) Detail interactions between objects over time for each use case showing the sequence of messages exchanged to accomplish tasks.
- 4) Model workflows and represent the flow of activities within the system for each use, detailing steps for process like handling customer inquiries.
- 5) Define object state and illustrate transitions between states based on event and conditions.
- 6) Identify main system components and illustrate their interactions and dependence.

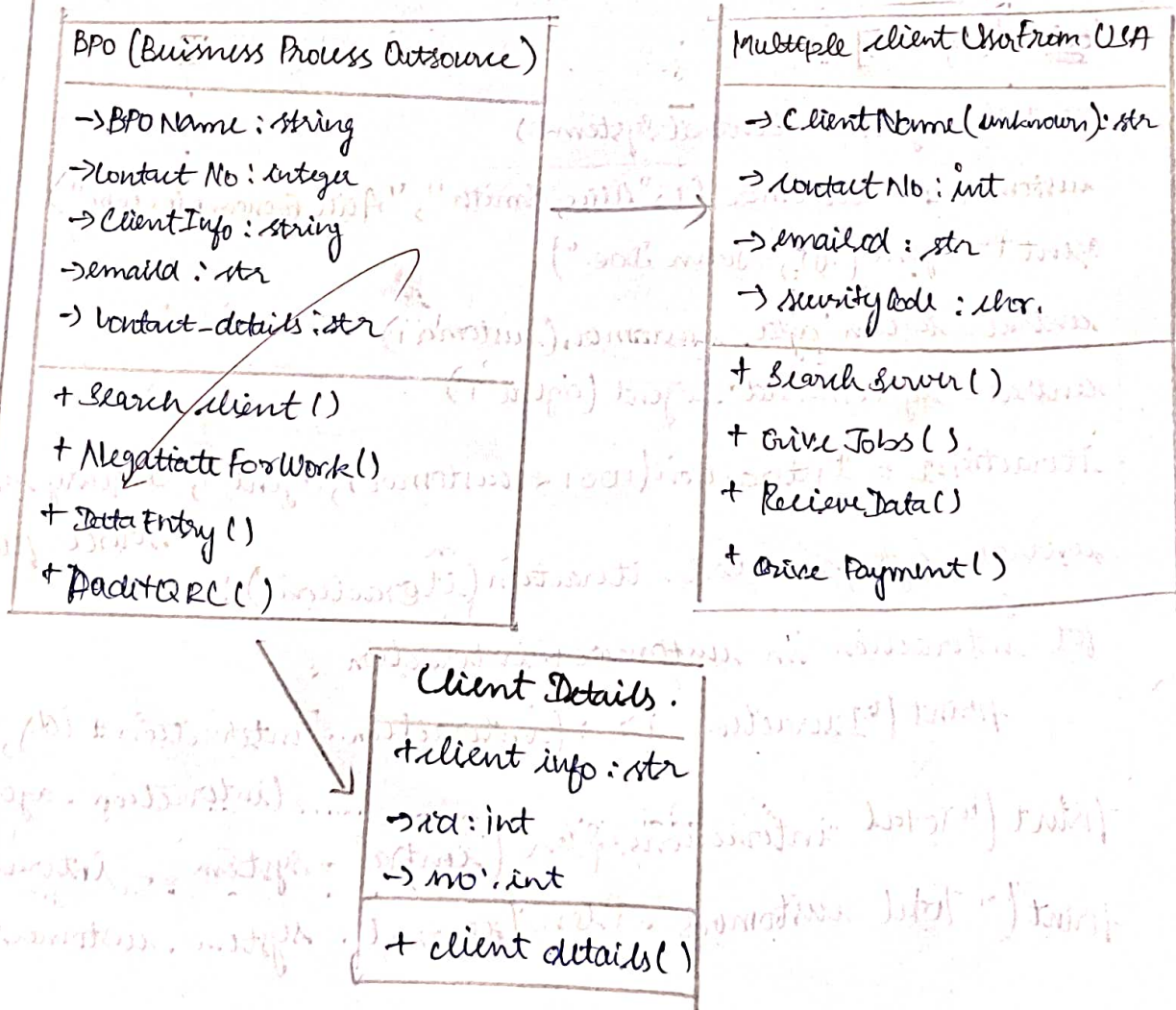
Code: [Python]

```
central_system = CentralSystem()
customer_1 = Customer(1, "Alice Smith", "Alice@example.com")
agent_1 = Agent(101, "John Doe")
central_system.add_customer(customer_1)
central_system.add_agent(agent_1)
interaction_1 = Interaction(1001, customer_1, agent_1, "Inquiry about service flows")
central_system.record_interaction(interaction_1)
for interaction in customer_1.interactions:
    print("Interaction ID: (interaction.interaction_id), Agent: (interaction.agent.name);")
print("Total interactions: {len(central_system.interactions)}")
print("Total customers: {len(central_system.customers)}")
```

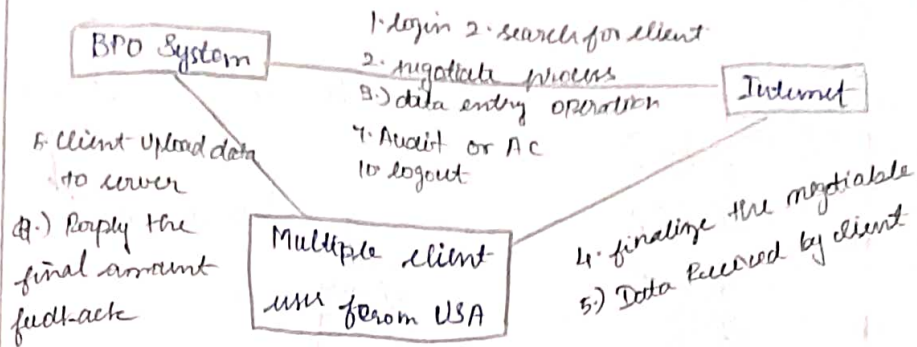
Use Case Diagram:



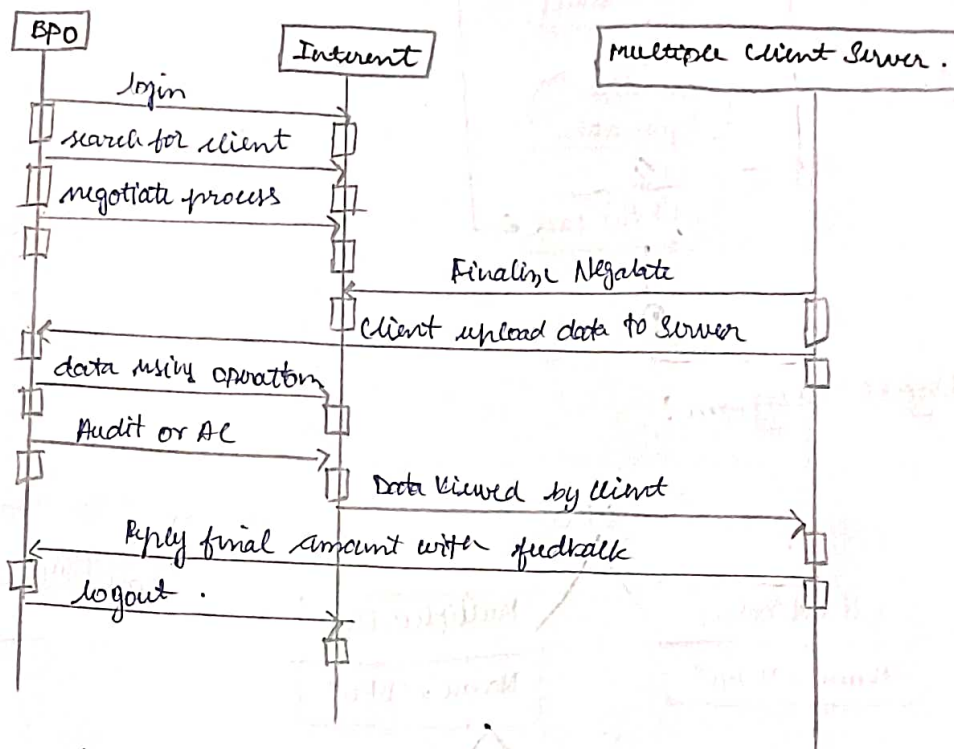
Class Diagram:



Collaboration Diagram:



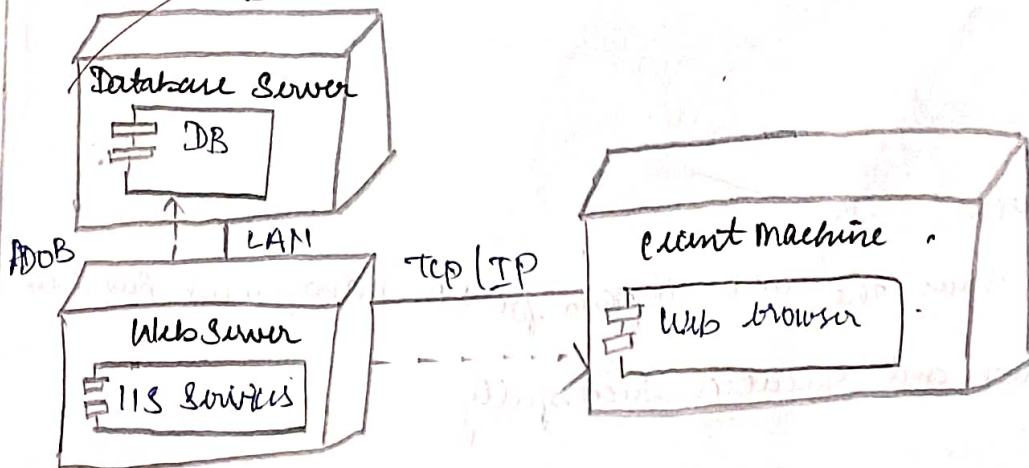
Sequence Diagram:



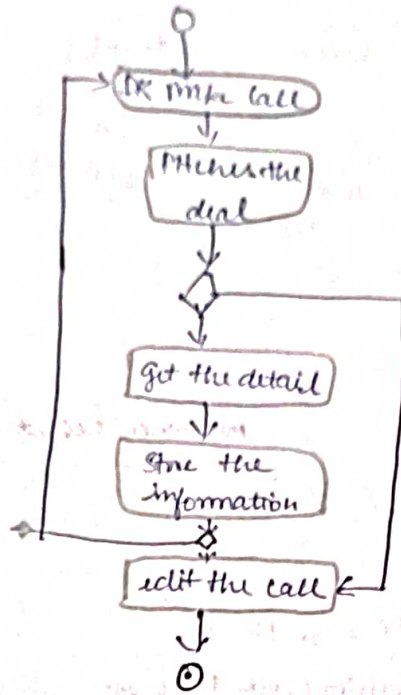
Deployment:



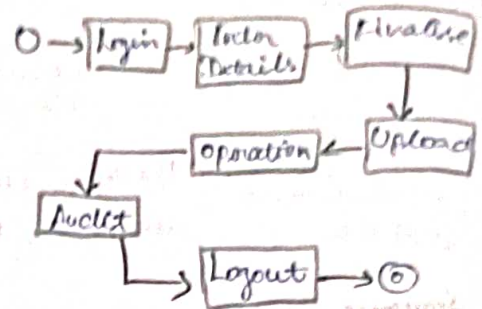
Component Diagram:



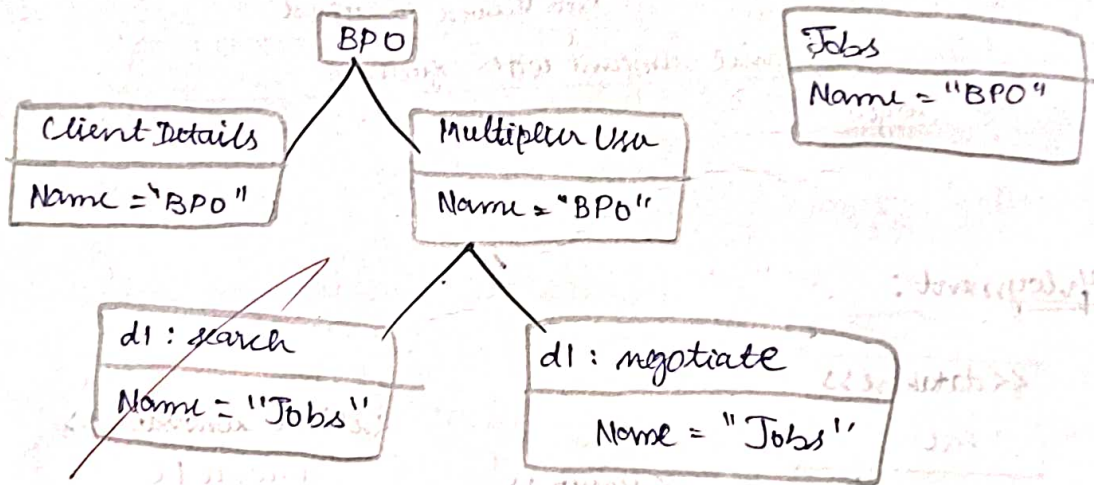
Activity Diagram:



Sequence Diagram:



Object Diagram:



Result:

Thus, the UML diagram for BPO management has been drawn and executed successfully.