UML DIAGRAMS

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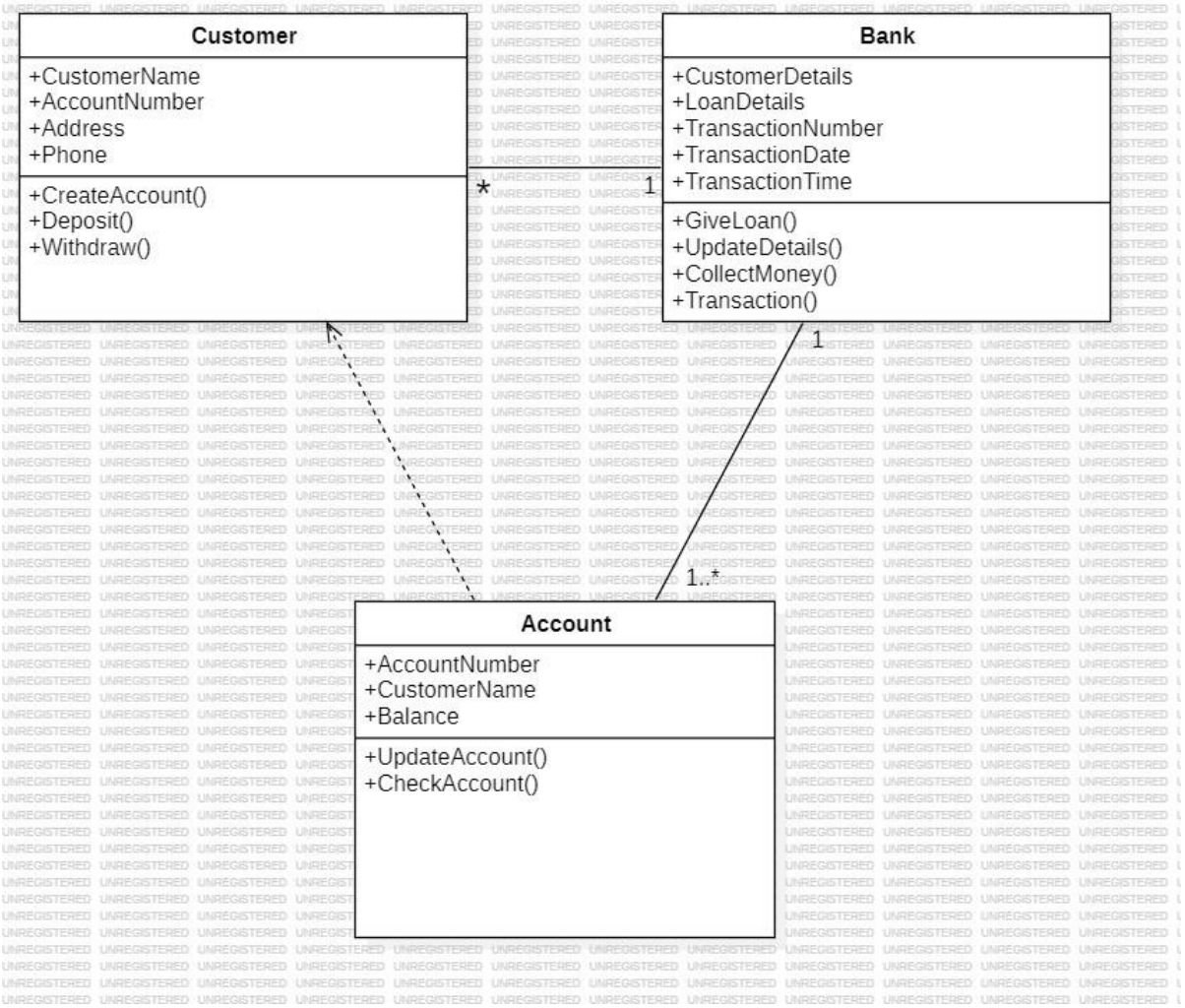
Class Diagram :



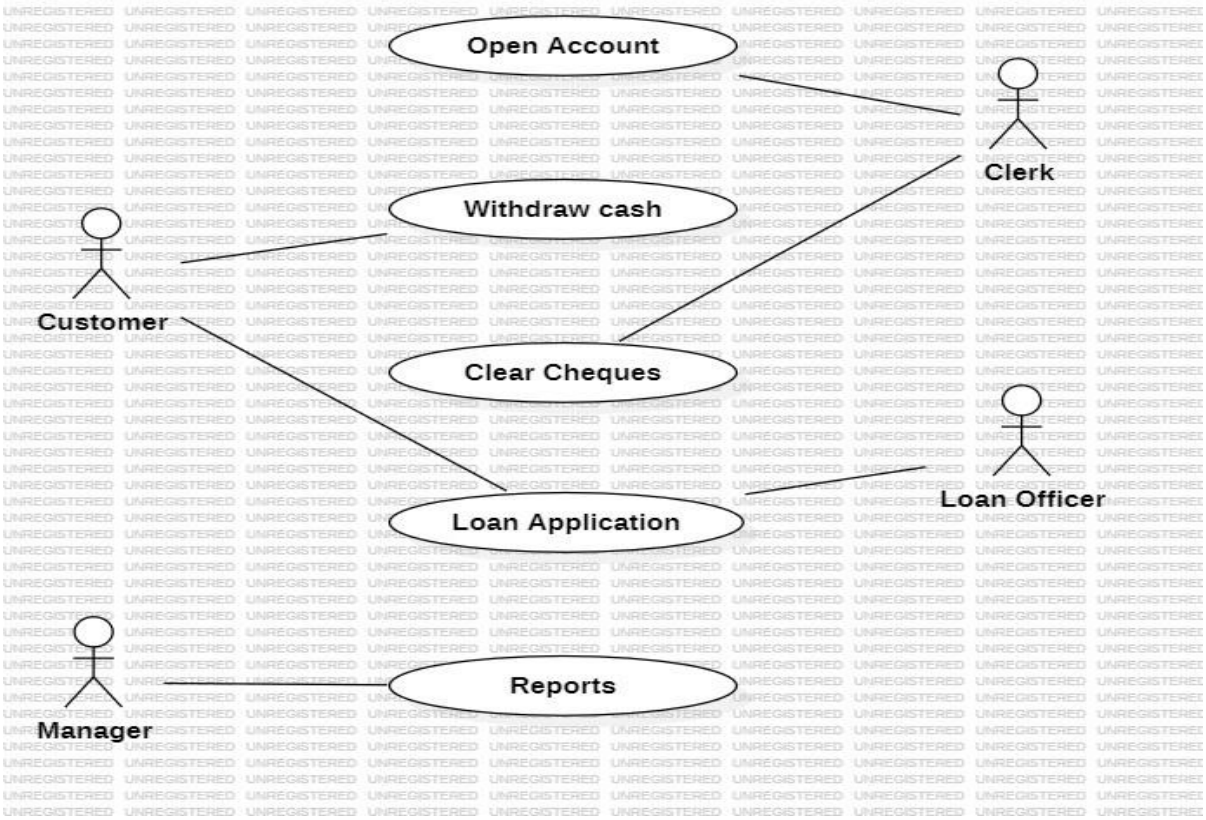
CODE :

```
class Customer:
    def __init__(self, customer_name, account_number, address, phone):
        self.customer_name = customer_name
        self.account_number = account_number
        self.address = address
        self.phone = phone
    def create_account(self):
        # Logic to create an account
```

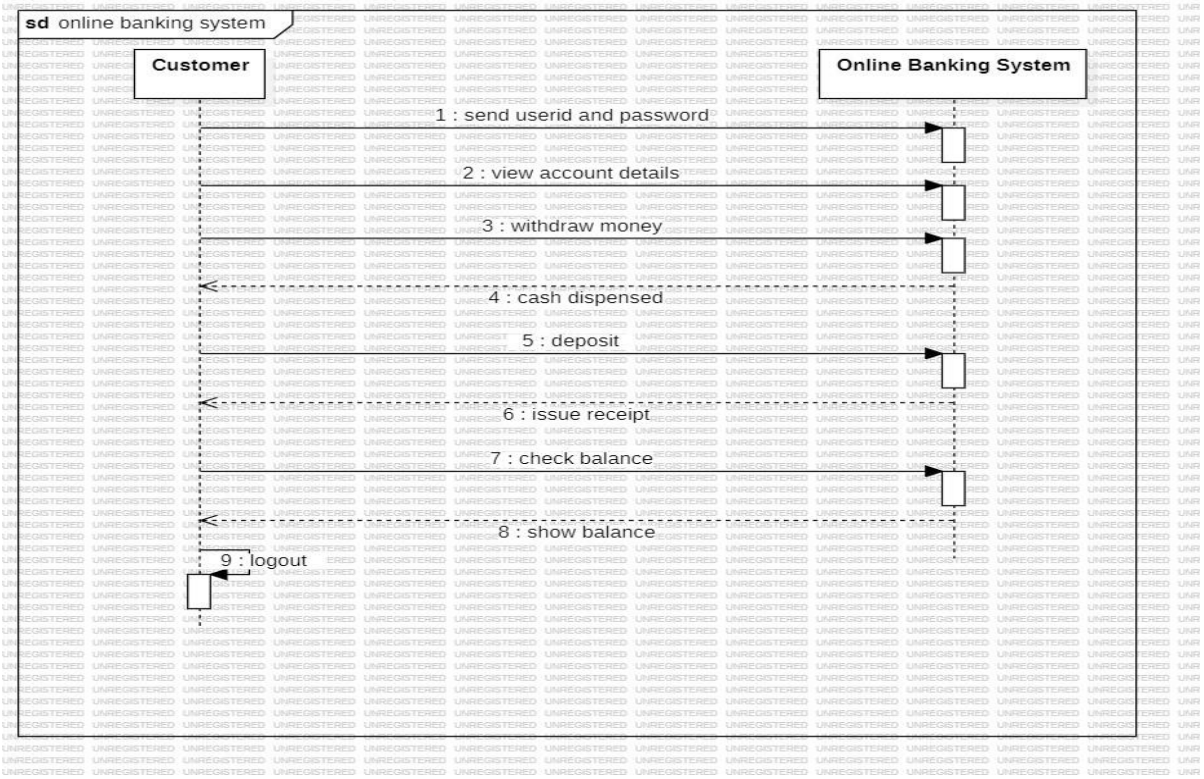
```
        pass
    def deposit(self, amount):
        # Logic to deposit money
        pass

    def withdraw(self, amount):
        # Logic to withdraw money
        pass
class Account:
    def __init__(self, account_number, customer_name, balance=0):
        self.account_number = account_number
        self.customer_name = customer_name
        self.balance = balance
    def update_account(self):
        # Logic to update account details
        pass
    def check_account(self):
        return self.balance
class Bank:
    def __init__(self, customer_details):
        self.customer_details = customer_details  # A list of customers
        self.loan_details = []
    def give_loan(self, customer, amount):
        # Logic to give a loan to a customer
        pass
    def update_details(self):
        # Logic to update bank details
        pass
    def collect_money(self, customer, amount):
        # Logic to collect money
        pass
```

```
    def transaction(self):
        # Logic to handle transactions
        pass
# Example of creating objects and using the classes
if __name___== "__main__":
    # Creating a customer
    customer1 = Customer("John Doe", "12345", "123 Elm St", "555-1234")
    # Creating an account for the customer
    account1 = Account(customer1.account_number, customer1.customer_name, 1000)
    # Creating a bank
    bank = Bank(customer_details=[customer1])
    # Example actions
    account1.deposit(500)
    account1.withdraw(200)
```

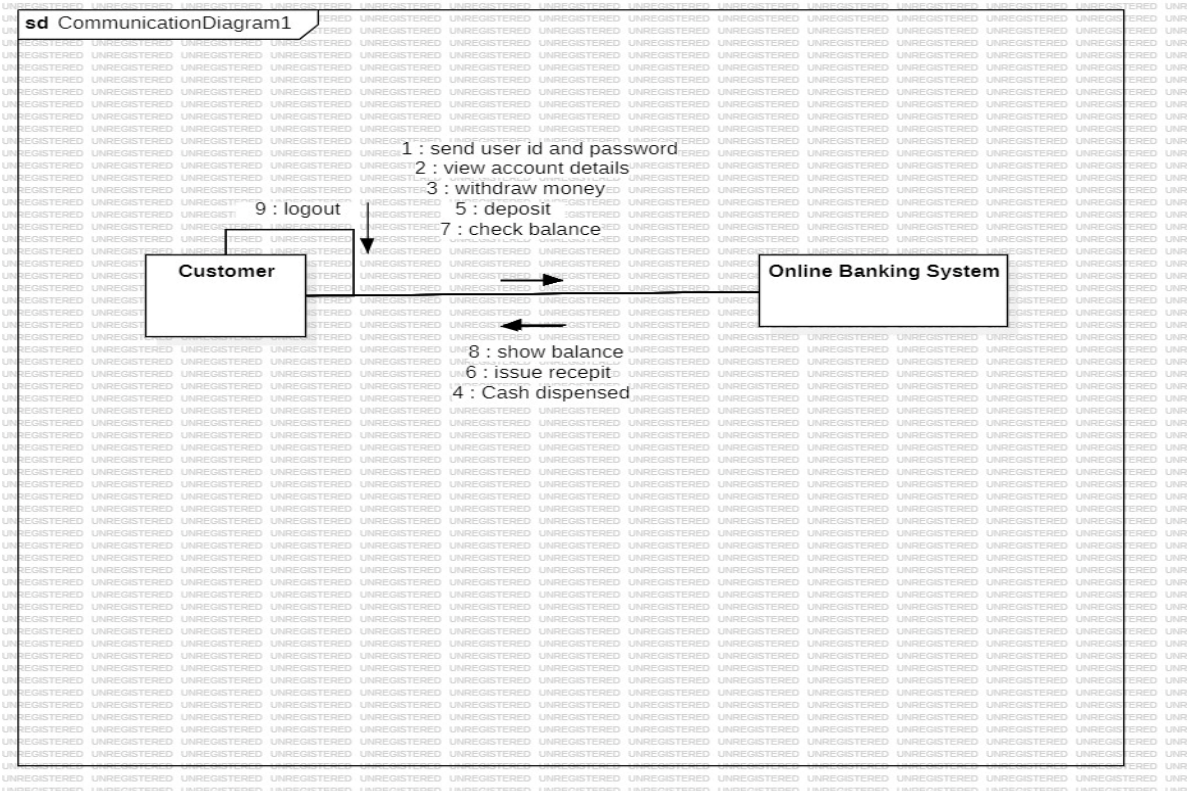
Use Case Diagram :



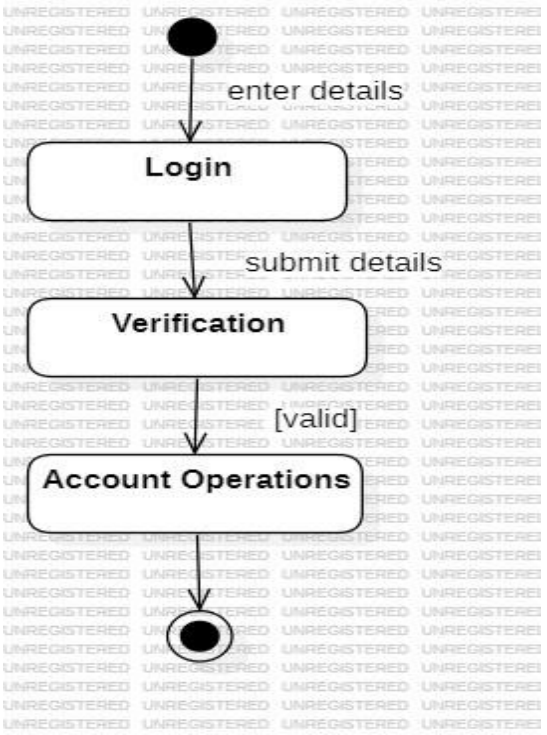
Sequence Diagram :



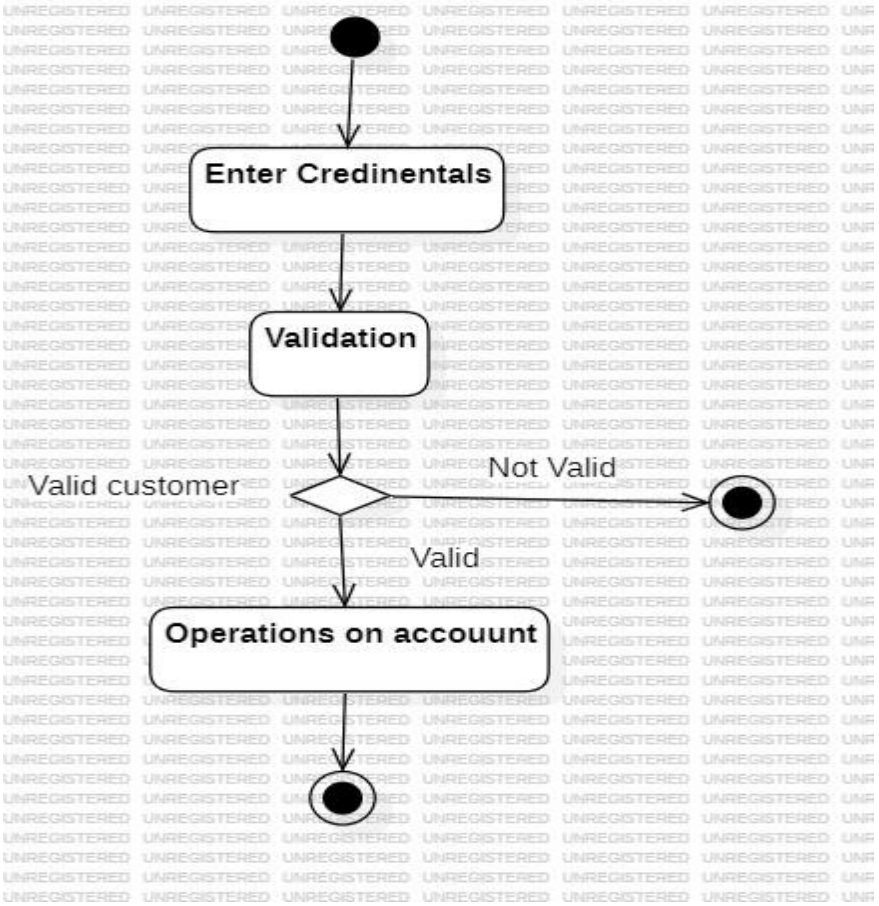
Collaboration Diagram :



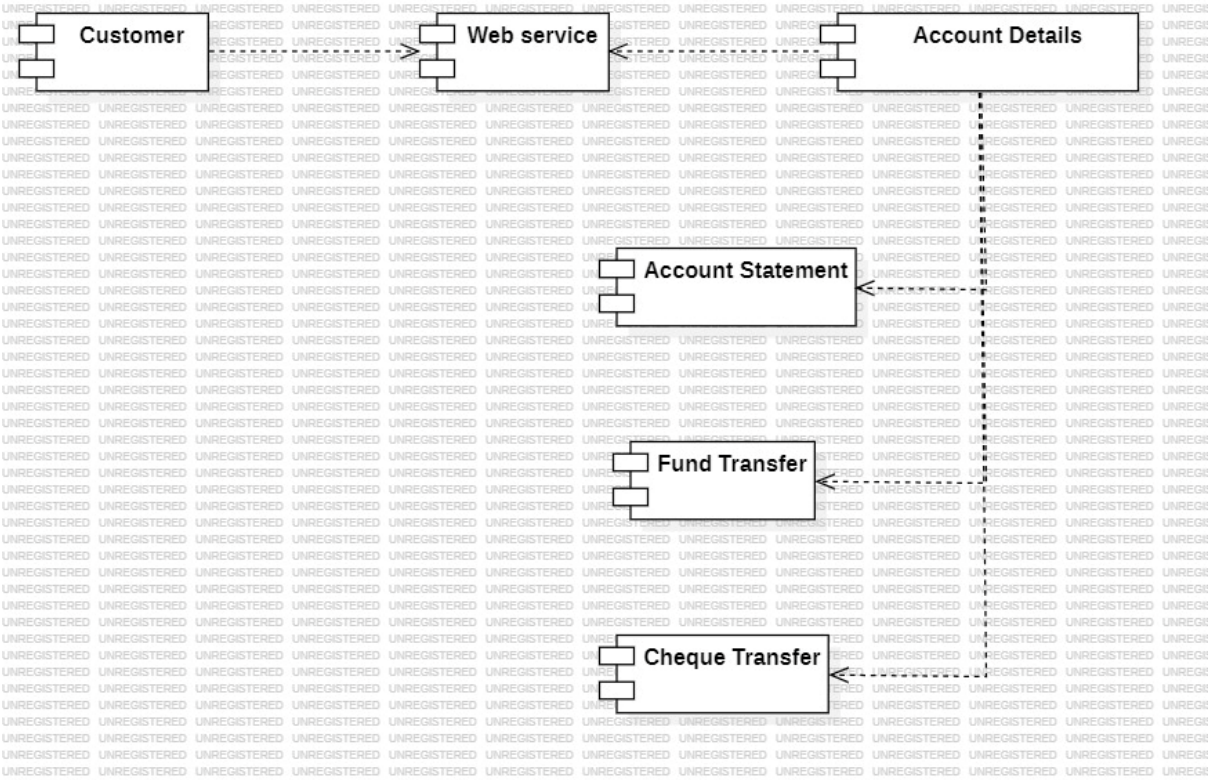
Statechart Diagram :



Activity Diagram :



Component Diagram :



Deployment Diagram :