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Class BankAccount:
    Def __init__(self, account_number, account_holder_name, initial_balance=0):
        Self.__account_number = account_number
        Self.__account_holder_name = account_holder_name
        Self.__account_balance = initial_balance

    Def deposit(self, amount):
        If amount > 0:
            Self.__account_balance += amount
            Return f”Deposited ${amount}. New balance is ${self.__account_balance}”
        Else:
            Return “Invalid deposit amount.”

    Def withdraw(self, amount):
        If 0 < amount <= self.__account_balance:
            Self.__account_balance -= amount
            Return f”Withdrew ${amount}. New balance is ${self.__account_balance}”
        Else:
            Return “Invalid withdrawal amount or insufficient balance.”

    Def display_balance(self):
        Return f”Account Balance for {self.__account_holder_name}: ${self.__account_balance}”

# Testing the BankAccount class
If __name__ == “__main__”:
    Account = BankAccount(“123456789”, “John Doe”, 1000)

    Print(account.display_balance())  # Display initial balance
    Print(account.deposit(500))       # Deposit $500
```

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Print(account.withdraw(200))       # Withdraw $200
Print(account.display_balance())  # Display updated balance
```