

## Unit 2

### Challenge 1 Q

Implement a class called BankAccount that represents a bank account. The class should have private attributes for account number, account holder name, and account balance. Include methods to deposit money, withdraw money, and display the account balance. Ensure that the account balance cannot be accessed directly from outside the class. Write a program to create an instance of the BankAccount class and test the deposit and withdrawal functionality.

```
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"${amount} deposited
successfully."
        else:
            return "Invalid deposit amount. Please
enter a positive amount."

    def withdraw(self, amount):
        if amount > 0 and amount <=
self.__account_balance:
            self.__account_balance -= amount
            return f"${amount} withdrawn
successfully."
        else:
            return "Invalid withdrawal amount or
insufficient balance."
```

```

def display_balance(self):
    return f"Account Holder:
{self.__account_holder_name}\nAccount
Number: {self.__account_number}\nAccount
Balance: ${self.__account_balance}"

# Example usage:
if __name__ == "__main__":
    # Creating a bank account
    my_account = BankAccount("123456",
"Archana", 1000)

    # Depositing money
    print(my_account.deposit(500)) # Output:
$500 deposited successfully.

    # Withdrawing money
    print(my_account.withdraw(300)) # Output:
$300 withdrawn successfully.
    print(my_account.withdraw(1200)) #
Output: Invalid withdrawal amount or
insufficient balance.

    # Displaying the account balance
    print(my_account.display_balance())

```

Output:

\$500 deposited successfully.

\$300 withdrawn successfully.

Invalid withdrawal amount or insufficient  
balance.

Account Holder: Archana

Account Number: 123456

Account Balance: \$200