

```
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

            print(f"Deposited ${amount}. New balance: ${self._account_balance}")

        else:

            print("Invalid deposit amount. Please enter a positive value.")

    def withdraw(self, amount):

        if amount > 0 and amount <= self._account_balance:

            self._account_balance -= amount

            print(f"Withdrew ${amount}. New balance: ${self._account_balance}")

        elif amount <= 0:

            print("Invalid withdrawal amount. Please enter a positive value.")

        else:

            print("Insufficient funds for withdrawal.")

    def display_balance(self):

        print(f"Account Balance for {self._account_holder_name}: ${self._account_balance}")

# Create an instance of BankAccount

account = BankAccount("12345", "John Doe", 1000)
```

```
# Test deposit and withdrawal
```

```
account.display_balance()
```

```
account.deposit(500)
```

```
account.withdraw(200)
```

```
account.display_balance()
```

```
class Player:
```

```
    def play(self):
```

```
        print("The player is playing cricket.")
```

```
class Batsman(Player):
```

```
    def play(self):
```

```
        print("The batsman is batting.")
```

```
class Bowler(Player):
```

```
    def play(self):
```

```
        print("The bowler is bowling.")
```

```
# Creating objects of Batsman and Bowler classes
```

```
batsman = Batsman()
```

```
bowler = Bowler()
```

```
# Calling the play() method for each object
```

```
batsman.play()
```

```
bowler.play()
```

```
def sort_students(student_list):
```

```
    # Sort the student list based on CGPA in descending order
```

```
    sorted_students = sorted(student_list, key=lambda student: student.cgpa, reverse=True)
```

```
return sorted_students
```

```
# Define a Student class
```

```
class Student:
```

```
    def __init__(self, name, roll_number, cgpa):
```

```
        self.name = name
```

```
        self.roll_number = roll_number
```

```
        self.cgpa = cgpa
```

```
# Test the function with a list of student objects
```

```
students = [
```

```
    Student("Alice", "S001", 3.9),
```

```
    Student("Bob", "S002", 3.7),
```

```
    Student("Charlie", "S003", 4.0),
```

```
    Student("David", "S004", 3.8),
```

```
]
```

```
sorted_students = sort_students(students)
```

```
# Print the sorted list
```

```
for student in sorted_students:
```

```
    print(f"Name: {student.name}, Roll Number: {student.roll_number}, CGPA: {student.cgpa}")
```

```
def linear_search_product(product_list, target_product):
```

```
    indices = []
```

```
    for index, product in enumerate(product_list):
```

```
        if product == target_product:
```

```
            indices.append(index)
```

```
    return indices
```