



Testing Plan:

**BaseBird Class Test:**

1. Condition: Test if the BaseBird class correctly initializes and retrieves bird information.

- Example Data:

`new BaseBird("Duck", "Webbed feet", false, 2, ["vegetation", "fish"])`

- Expected Value:

`getBirdType()` should return "Duck".

`getDefiningCharacteristic()` should return "Webbed feet".

`isExtinct()` should return false.

`getNumberOfWings()` should return 2.

`getPreferredFood()` should return ["vegetation", "fish"].

2. Condition: Test if the BaseBird class correctly initializes and retrieves extinct information.

- Example Data:

`new BaseBird("Dodo", "Large body", true, 2, ["vegetation", "fish"])`

- Expected Value:

`isExtinct()` should return true.

**Waterfowl Class Test:**

1. Condition: Test if the Waterfowl class correctly initializes and retrieves water bird information.

- Example Data:

`new Waterfowl("Duck", "Webbed feet", false, 2, ["vegetation", "fish"], "Lake")`

- Expected Value:

`getBirdType()` should return "Duck".

`getDefiningCharacteristic()` should return "Webbed feet".

`isExtinct()` should return false.

`getNumberOfWings()` should return 2.

`getPreferredFood()` should return ["vegetation", "fish"].

`getWaterBody()` should return "Lake".

**Parrot Class Test:**

1. Condition: Test if the Parrot class (specific bird type) correctly initializes and retrieves parrot information.

- Example Data:

```
new Parrot("Talk Parrot", "Talking ability", false, 2, ["seeds", "nuts"], 50, "Hello, World!"))
```

- Expected Value:

getBirdType() should return "Talk Parrot".

getDefiningCharacteristic() should return "Talking ability".

isExtinct() should return false.

getNumberOfWings() should return 2.

getPreferredFood() should return a list containing "seeds" and "nuts".

getVocabularySize() should return 50.

getFavoriteSaying() should return "Hello, World!".

#### **Owl Class Test:**

1. Condition: Test if the Owl class correctly initializes and retrieves owl information.

- Example Data:

```
new Owl("Barn Owl", "Facial disks", false, 2, ["seeds", "nuts"])
```

- Expected Value:

getBirdType() should return "Barn Owl".

getDefiningCharacteristic() should return "Facial disks".

isExtinct() should return false.

getNumberOfWings() should return 2.

getPreferredFood() should return a list containing ["seeds", "nuts"]

#### **Pigeon Class Test:**

1. Condition: Test if the Pigeon class correctly initializes and retrieves pigeon information.

- Example Data:

```
new Pigeon("Rock Pigeon", "Feeding young bird milk", false, 2, ["seeds", "nuts"])
```

- Expected Value:

getBirdType() should return "Rock Pigeon".

getDefiningCharacteristic() should return to "Feeding young bird milk".

isExtinct() should return false.

getNumberOfWings() should return 2.

getPreferredFood() should return a list containing ["seeds", "nuts"].

#### **Shorebird Class Test:**

1. Condition: Test if the Shorebird class correctly initializes and retrieves shorebird information.

- Example Data:

```
new Shorebird("Great Auk", "Near Water", false, 2, ["seeds", "nuts"])
```

- Expected Value:

getBirdType() should return "Great Auk".  
getDefiningCharacteristic() should return "Near Water".  
isExtinct() should return false.  
getNumberOfWings() should return 2.  
getPreferredFood() should return a list containing ["seeds", "nuts"].

### **BirdsOfPrey Class Test:**

1. Condition: Test if the BirdsOfPrey class correctly initializes and retrieves information for birds of prey.

- Example Data:  
new BirdsOfPrey("Hawk", "Sharp, hooked beak with visible nostrils", false, 2, ["other birds", "eggs"])
- Expected Value:  
getBirdType() should return "Hawk".  
getDefiningCharacteristic() should return "Sharp, hooked beak with visible nostrils".  
isExtinct() should return false.  
getNumberOfWings() should return 2.  
getPreferredFood() should return a list containing ["other birds", "eggs"].

### **FlightlessBird Class Test:**

1. Condition: Test if the FlightlessBird class correctly initializes and retrieves bird information.

- Example Data:  
new FlightlessBird("Emu", "On Ground", false, 0, ["seeds", "nuts"])
- Expected Value:  
getBirdType() should return "Emu".  
getDefiningCharacteristic() should return "On Ground".  
isExtinct() should return false.  
getNumberOfWings() should return 0.  
getPreferredFood() should return a list containing ["seeds", "nuts"].

2. Condition: Test if the FlightlessBird class correctly initializes and retrieves bird information.

- Example Data:  
new FlightlessBird("Emu", "On Ground", false, 2, ["seeds", "nuts"])
- Expected Value:  
getNumberOfWings() should return 0. Or report an error.