Week 8 – Webinar A

In this webinar session, we will look at what exactly happens when we remove elements from an ArrayList, using our ArrayList of birds created in last week’s webinar.

# Learning Objectives

* **Refactor** existing code to improve maintainability
* **Remove** elements from a collection and **understand** the underlying logic when an element is removed from a collection

# Preparation

We will continue from where we left off last week. If you have made changes to your program and want to start off from the same point I will be, download [**Week 7 WebB GameFile**](https://moodle.mmu.ac.uk/mod/resource/view.php?id=3717495) from Moodle (located under week 8).

# Step 1 – Refactoring the Bird’s display method

In the last webinar, we refactored the Bird class to use an array of PImages instead of using 4 independent PImages variables. However, the display method of the Bird class is still fairly wordy. We’ll refactor this so that the method always renders the next image in the sequence without having to rely on lots of if statements to check what the value of **imgCounter** is.

# Step 2 – Removing an item from a collection within a for-each loop

Last week we implemented a for-each loop – an alternative to the traditional for loop we’re used to – that is often used when we want to iterate through a collection. We’ll see one of the key limitations of the for-each loop when it comes to trying to remove an item from a collection.

# Step 3 – Removing an item from a collection within a traditional for loop

We’ll use a traditional for loop (where we have an integer counter variable) to see how we can remove items from a collection. It won’t be a perfect implementation, since there are some nuances we need to be aware of, but I will save this explanation for the webinar so I don’t spoil anything!