

## In-class exercise: Iterators

Research in singles or pairs or threes and then agree (as a team) on a design before you begin to code. Follow directions. Open book, open note, open web, get it done.

At the end of class, submit your Java code online using Canvas, listing all team members present in your comments.

NOTE: As you do this exercise, focus on **understanding** every piece of code you write. Copying code examples without understanding leads to ugly code and bad exam grades.

NOTE2: Today's exercise is disposable. Make everything public and do not write any methods you don't absolutely need.

1. Write a class Triple that contains a single array with exactly three elements, 1, 2 and 3. Then write a custom Iterator<sup>1</sup> For Triple such that the iterator will return an **endless repeating sequence** of the array elements<sup>2</sup>. Use the iterator to print a sequence of ten items from your array using *exactly* this main():

```
public static void main(String[] args) {

    Triple t = new Triple();
    Iterator ti = t.iterator();

    for(int i = 0; i < 10; i++)
        if (ti.hasNext())
            System.out.print(ti.next() + " ");
    System.out.println();
} // prints 1 2 3 1 2 3 1 2 3 1
```

After you write this and it is working, compare with another team to see if they agree that you have followed all requirements.

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<sup>1</sup><https://docs.oracle.com/javase/7/docs/api/java/util/Iterator.html>

<sup>2</sup>If you don't already know how to use mod, now would be a good time to learn.