

CMSC131 Fall 2021

(<https://www.cs.umd.edu/class/fall2021/cmssc131-01XX-03XX/>)

Project #6, Array Utilities (Due Wed, Nov 10, 11:55 pm / Fri, Nov 12, 11:55 pm)

Objectives

This project will allow you to practice one-dimensional arrays. There are no public tests associated with this project.

Overview

For this project you will write static methods that support array operations. **For this project you can discuss the project with classmates, but you may not implement code together and you may not share code (that includes student tests).**

This project has two deadlines:

- **Wed, Nov 10, 11:55 pm** - Your code must pass the first 4 release tests. This is the only requirement for this deadline. We will not grade the code for style. This first part is worth **0.5%** of your course grade (NOT **0.5%** of this project grade). You can still submit late for this part.
- **Fri, Nov 12, 11:55 pm** - Final deadline for the project. You can still submit late (as usual).

Grading

- (80%) Release Tests
- (6%) Secret Tests
- (10%) Student Tests
- (4%) Style

Code Distribution

The project's code distribution is available at [ArrayUtilities.zip \(https://www.cs.umd.edu/class/fall2021/cmssc131-01XX-03XX/prot/projects/zipFiles/ArrayUtilities.zip\)](https://www.cs.umd.edu/class/fall2021/cmssc131-01XX-03XX/prot/projects/zipFiles/ArrayUtilities.zip). Download it and import it as you have imported our class examples. The code distribution provides you with the following:

- **sysImplementation** → A package (folder) where you will complete the implementation of the **Utilities** class.
- **tests** → A package (folder) where you will find a file called **StudentTests.java** where you are expected to write tests for your program.

Specifications

You need to implement the static methods associated with the Utilities class. Feel free to add any private static methods you understand can help, but do not add any instance nor static variables. A description of the methods you need to implement can be found at [javadoc \(doc/index.html\)](https://www.cs.umd.edu/class/fall2021/cmssc131-01XX-03XX/doc/index.html).

Style

Verify your project satisfies style requirements as defined at [Java Style Guide](http://www.cs.umd.edu/~nelson/classes/resources/javastyleguide/) (<http://www.cs.umd.edu/~nelson/classes/resources/javastyleguide/>).

Requirements

- You may not use ArrayLists or methods from the Arrays class ([Arrays](https://docs.oracle.com/en/java/javase/11/docs/api/java.base/java/util/Arrays.html) (<https://docs.oracle.com/en/java/javase/11/docs/api/java.base/java/util/Arrays.html>)).
- Verify that your project passes the submit server release tests (<https://submit.cs.umd.edu/> (<https://submit.cs.umd.edu/fall2021/>)).

Student Tests

Test your code as you develop it, by writing tests in the **StudentTests.java** file. Unlike previous projects, your student tests must use assertions. It is OK if you they generate output using System.out.println. **You may not be able to get help during office hours unless you have student tests.**

Submission

Submit your project as usual.

Academic Integrity

Please make sure you read the academic integrity section of the syllabus so you understand what is permissible in our programming projects. We want to remind you that we check your project against other students' projects and any case of academic dishonesty will be referred to the [University's Office of Student Conduct](https://www.studentconduct.umd.edu/) (<https://www.studentconduct.umd.edu/>).

[Web Accessibility](https://www.umd.edu/web-accessibility/) (<https://www.umd.edu/web-accessibility/>).