

This assignment does not count toward the final grade.

# Files exercises

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**Due** Dec 3 by 6pm    **Points** 100    **Submitting** a file upload    **File Types** zip    **Available** after Dec 3 at 9am

## Files Exercises

### 1. Reading a single file

Create one file on your desktop named `hello`  
Fill the file with two lines:  
`Hello`  
`World`

Create a program to print the lines of the file.  
Modify the program to print the lines of the file backwards.

Add more content to the file and see if you can make your program work.

### 2. Reading multiple files

Create two files on your desktop named `courseCode` and `courseName`.  
Fill each file with 2 lines of data.

Try to print the contents of the files at the same time like so:  
`CS235 - Object Oriented Programming II`  
`CS135 - Intro to Object Oriented Programming`

Hint: If you can't read both files at the same time, maybe you can store each one in some kind of variable?

### 3. Storing a Student

Create a class named `Student` which contains student information.  
Specifically, create three variables: `name`, `grade`, and `gpa`.

Create an instance of type `Student` and read the values from user input.

Create three files on your desktop named: `names`, `grades`, and `gpas`.

Store the information from this `Student` in those files.  
(`name` stored in `names`, `grade` => `grades`, `gpa` => `gpas`)

### 4. Students revisited

Create a method in your `Student` class called `getInfo()`, which prints a line that looks like this:

My name is Mike. I'm in grade 15 and I have a 4.0 GPA. For now, at least...

Create three files on your desktop named: `names`, `grades`, and `gpas`.  
Create 10 lines of information in each file.

Read the lines of each file and store their `contents` in their own arrays.

Create an array of type `Student[]` and fill it using those arrays.

To confirm your work, loop through your `Student[]` array and call the `getInfo` method on each `Student`.

## 5. There has to be a better way

Instead of storing your student information in three `seperate` files,  
let's try storing them in one.

You can do this by separating columns of data with a designated character.  
For instance, `separting` student data with a comma might look like this:  
`Mike,15,4.0`

While separating student data with a space would look like this:  
`Mike 15 4.0`

For this exercise, let's stick with commas.

Create a new file on your desktop named `students.csv` (`csv` means Comma Separated Values)  
Fill it up with 10 lines of data (feel free to use the values from your old files!)

Now, read each line of the file and, with the help of `String.split()`,  
store the line in a `String` array.

Then, immediately store the data from that array in a `Student` object.

Finally, add that `Student` object to your `Student[]` array and continue with the loop.

To confirm your work, loop through your `Student[]` array and call the `getInfo` method on each `Student`.