04. Make Activity

Setup

1. Log into your Google Cloud VM.
2. Use the wget command to download the starter files (and folders) into your directory structure:

```
wget http://pages.cs.wisc.edu/~cs400/04.MakeActivity.tar.gz
```

3. After downloading this file, use the tar command to extract its contents and change to the resulting directory:

```
tar -xzvf 04.MakeActivity.tar.gz
cd 04.MakeActivity
```

4. You'll need to install make on your VM before you can use it:

```
sudo apt update
sudo apt install make
```


5. You'll also need Java installed for this activity, so install the headless version (the headless version runs on systems without a graphical user interface, like our GCP VM):


```
sudo apt install openjdk-17-jdk-headless
```

Activity

6. Read through the file RadixSorter.java and make sure you understand what it does. Do not edit the TODO in the file yet.
7. Read through the Makefile and make sure you understand all the rules in the file. The comments describe what they do.
8. Then read through the file SortPrinter.java and make sure you understand what it tests for in the output of RadixSorter.java.
9. Now run make without any argument to compile and run RadixSorter.java.
10. Open the Makefile in the editor of your choice. Add one or more rules to this make file to introduce a new target named "test" which executes the main method within SortPrinter.java. When this make target is invoked, it should also ensure that the SortPrinter.java and RadixSorter.java files are re-compiled whenever their contents have been changed since their last compilation.
11. When you run the command: *make test*, the printer should run and display the lists out of order.
12. Open RadixSorter.java and edit this file so that it sorts the lists using **radix sort**. You can edit, and run the make test command as many times as you need to resolve this bug so that the test passes when run. You can also add more lists to SortPrinter.java if you want to run more tests.

Submit

13. Navigate to the 04.MakeActivity folder and run the submission script (which will prompt you for your cs login and password) by typing:

```
./submit
```

- As was described in last week's Bash activity, feel free to use this script's -download option to retrieve and check the contents of your most recent submission, and its the -feedback option to check for grade feedback after this activity has been graded (approximately one week after this assignment's late deadline).