# Practice 4: ToolRunner to pass parameters

Eclipse package/project `practice_4`

Java files:☐ MR2ToolRunner.java

Data: shakespeare

**In this Exercise, you will implement a driver using ToolRunner.**

ToolRunner code resembles code you wrote/used in Practice_3.  You will tweak that code so that your program now implements a Tool.

## Pass a parameter programmatically

1. **Modify the driver - AvgWordLength.java**

    Set a new Boolean configuration parameter called `caseSensitive` . Add the following code to your driver:

    ```
    conf.setBoolean("caseSensitive", false)
    ```

2. **Add a setup() method to LetterMapper.java**

    Mapper contains a method called `setup()`.   It is used to set parameters for the map() method.  It runs only once before there are any calls to the map() method.

    In `setup()` get the value of the configuration parameter `caseSensitive`, and use it to set a member variable indicating whether to do case sensitive or case insensitive processing as follows:

    ```
    @Override
    public void setup(Context context) {
         Configuration conf = context.getConfiguration();
         caseSensitive = conf.getBoolean("caseSensitive", false);
    }
    ```

### 3. Modify the map() method in LetterMapper.java

In the `map()` method, choose whether to do case sensitive processing (leave the letters as-is), or insensitive processing (convert all letters to lower-case) based on the `caseSensitive` member variable.

## Pass a parameter as a runtime parameter

Test your code twice in Eclipse, once passing false and once passing true.

When set to true, your final output should have both upper and lower case letters; when false, it should have only lower-case letters.  The RunConfiguration arguments should look like this:

```
-D caseSensitive=true data/shakespeare output/toolrunner
```

Test passing both `true` and `false` to confirm the parameter works correctly. □

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If you like you can also run against the cluster by building the jar with Maven Install and running thus:

```
$ hadoop jar <name of practice.jar> hints.MR2ToolRunner \
-DcaseSensitive=true <hdfs location of shakespeare> <output dir>
```

# This is the end of the Exercise