

## JC2002 Java Programming - Practical 1 (Day 1)

The aim of this practical is to get familiar with Codio and create a GitHub student account (if you do not have one already), which will be useful during your university studies.

1. We will use Codio for this course as an online place for you to run your applications, and to program them too. Every time you access it from the Codio Practical Box you'll always end up in the same space with your files. If you have a Codio Practical Box in another course (probably for python) then that will be a different box. You can find the link to the Codio Practical Box for this course in MyAberdeen course page. Codio boxes run Ubuntu Linux, so you can look at their [beginner tutorials on the command line](#), if you are not familiar with Linux already.
2. GitHub is a cloud repository for source code both public and private. Git is a version control system to keep track of your applications as they grow, and GitHub is an online repository to store them for individuals, organisations, and companies. You should [create a student account](#) now to use all through your university studies. This will allow you private (instead public) repositories, which you should always use for your assessment work.

Use GitHub regularly to store all of your assessment work to avoid the hassles of when your laptop fails you at a crucial time. You are a computing student, so now is the time to start your good backup habits.

Do the 'hello world' tutorial at GitHub. You can set your SSH key on your Codio settings page, which you will find as follows:

- 1) Go into the JC2002 Codio Practical Box. Look in the top right corner and you will see an icon with your name. Click on that to go to your Codio dashboard page.
- 2) In the bottom left of the Codio dashboard page you will see your account name. Click on that to get to your 'settings. Now you will see two columns of menus on the left. In the one closest to the middle of the page you will see '**Applications**'. This is the page to tie your Codio account to GitHub by logging into your GitHub account. After you do that then you can upload your Codio SSH key to GitHub.
3. Next, you should get familiar with editing source code, as well as compiling and running Java programs in Codio. For your convenience, you can split the Codio view in file editing area and terminal area by choosing '**View**' -> '**Layouts**' -> '**2 Columns**', and after that activating one side and choosing the terminal from '**Tools**' -> '**Terminal**'.

Create a new Java source file by choosing '**File**' -> '**New File**'. You should name the file as 'HelloWorld.java'. In the file, you should write the Java code given below (you can paste it from this document, or write it manually, the code is not very long):

```
public class HelloWorld {  
    public static void main(String[] args) {  
        System.out.println("Hello world!");  
    }  
}
```

In Codio, the source files are saved automatically as you edit them. When the file is ready, you can try to compile by writing the following command in the terminal window:

```
javac HelloWorld.java
```

If the file is compiled successfully, file HelloWorld.class should appear in the directory. Then, you can execute the file by writing command:

```
java HelloWorld
```

If everything went correctly, text “Hello World” should appear in the terminal window. You can try to modify the text “Hello World” in the source code to something else and then try to recompile and run the program again.