# LAB 09

# Windows Batch Files - Using redirection and parameters

## Question 1

Create the batch file below and save it as **myCourse1.bat**. Thus, the full path (absolute path) to the batch file should be like: **c:\users\cxxxxxxxx\OS1\lab09\myCourse1.bat**

```
@ECHO OFF
REM my first batch file.
ECHO SWDev > mycourses1.log
ECHO OS >> mycourses1.log
ECHO Maths >> mycourses1.log
TYPE mycourses1.log
```

Explain what happens when you run the batch file (that is: explain what each line of the batch file does?). Record the output generated by this batch file.

## Question 2

Create a new batch file by amending the batch file in Question One (call it **myCourse2.bat**) such that it accepts ***command line parameters,*** which allow you to enter information on the command line to be passed directly to the batch file.

This batch file should allow you to enter three courses of your choice on the command line, then redirect this input to a file called `myCourses2.log`, and finally display the contents of the file `myCourses2.log` on the screen.

For example, running the batch file with the following three parameters:

```
c:\users\cxxxxxxxx\OS1\lab09> MyCourses2 OS SDev Maths
```

will generate the output:

```
CONTENTS OF myCourses2.txt:
OS
SDev
Maths
```

[HINT: You may need to review the Week 09 documents:
*9.1. Introduction to Windows Batch Files*
and the Week 08 document:
*8.3. Windows Redirection Batch Files*]

## Question 3

Create a new batch file called **findCourse.bat** to check if a student is taking a particular course (e.g. maths). To determine if a student is taking a particular course, the batch should search the contents of the output file generated by Question Two `myCourses2.log` for the course using the FIND command. The batch file should receive the course via a command line parameter.

The output generated by the batch file **findCourse.bat** should display a count of the number of lines containing the course in the file `myCourses2.log`.

For example, running the batch file with the following parameter:

```
c:\users\cxxxxxxxx\OS1\lab09> findCourse.bat Maths
```

will generate the output:

```
---------- MYCOURSES2.LOG: 1
```

[HINT: Look up the help for the FIND command]

## Question 4

Create a new batch file by amending your answer to Question Three (call it **findCourse2.bat)** to take a second command line parameter – the name of the file to be searched.

For example, run the batch file with the following parameters:

```
c:\users\cxxxxxxxx\OS1\lab09> findCourse2.bat Maths mycourse2.log
```

will generate the output:

```
---------- MYCOURSES2.LOG: 1
```

## Question 5

Create a new batch file called `delFile.bat` to perform the following seven steps in this order:

1. Send any string (via redirection) to a file called `FileToDelete.txt`
2. Check that `FileToDelete.txt` exists

   [HINT Slide 7 of Lab 8.3. Windows Redirection Batchfiles and Parameters Preparation]
3. Redirect the contents of `FileToDelete.txt` to `FileToKeep.txt`
4. Inform the user that the original file (`FileToDelete.txt`) will be deleted.
5. Delete the file `FileToDelete.txt`
6. Check that `FileToDelete.txt` no longer exists.
7. Display the contents of `FileToKeep.txt` on the screen

## Question 6

Create a file called `phone.txt` that contains, for example, the following information:

```
Bradley Tom         456-96743
Burns Andy          456-45678
Farrelly Ted        345-23987
O'Donnell Ann       765- 657389
White Rose          980-03030
```

Write a batch file called **lookup.bat** that uses the FIND command to search for a particular name. e.g. on the command line you should be able to type:

```
c:\users\cxxxxxxxx\OS1\lab09> lookup Farrelly phone.txt
```

and get the response:

```
Farrelly Ted        345-23987
```

# Extra Exercises

## Question 7

Upon successfully completing Question Four, the answer **findCourse2.bat** will contain a bug. To see the bug for yourself, run the batch file with the following parameters:

```
c:\users\cxxxxxxxx\OS1\lab09> findCourse.bat Maths details.log
```

It will generate the output:

```
File not found - DETAILS.LOG
```

Create a new batch file by amending your answer to Question Four (call it **findCourse3.bat)** to first check that the file (provided as a second parameter to the batch file as shown above) exists, before attempting to search the file for the course. *[HINT Slide 7 of Lab 8.3. Windows Redirection Batchfiles and Parameters Preparation]*

If the file does not exist, inform the user with the message “The file specified does not exist. Exiting the batch file now”. Then exit the batch file.

## Question 8

Create a text file (called towns.txt) and add some towns in Ireland along with their county on the same line. You may use the following if you wish.

```
Abbeyleix       Laois
Ardfert         Kerry
Ballina         Mayo
Kells           Kilkenny
Rosslare        Wexford
Westport        Mayo
Tullow          Carlow
Quilty          Clare
Naas            Kildare
Laragh          Wicklow
Ferbane         Offaly
Newcastle       Dublin
```

On the command line, use the FIND command to:

a. Display which county Kells is located in.
b. Display all towns not in Dublin.
c. Display the number of listed towns in County Mayo.
d. Display all listed towns in Wexford.

## Question 9

Using the file towns.txt, create a new file called towns_sorted.txt which contains all towns sorted alphabetically by town.

[HINT you must use the SORT command in conjunction with redirection.]

## Question 10

Use the HELP and the FIND commands to identify the windows console command to display or set windows environmental variables.

## Question 11

Create a new batch file called **findtown.bat** to check if a particular town is listed in a particular file.

The batch file should take two command line parameters:

1. The first parameter: the town
2. The second parameter: the filename.

The output generated by the batch file **findtown.bat** should display the town and corresponding county.

For example, running the batch file with the following parameters:

```
c:\users\cxxxxxxxx\OS1\lab09> findtown.bat Naas towns.txt
```

will generate the output:

```
---------- TOWNS.TXT
Naas        Kildare
```

## Question 12

A Question on Wildcard characters.

Recall:
The * wildcard will match any sequence of characters (0 or more, including NULL characters).
The ? wildcard will match a single character (0 or 1, including NULL at the end of a filename)

For more information, visit: [https://ss64.com/nt/syntax-wildcards.html](https://ss64.com/nt/syntax-wildcards.html)

Create a new folder called TEST. Change into that folder. Now create the following files:

- t1.txt
- t2.txt
- t3.txt
- tears.txt
- tile.txt
- tire.txt
- tide.txt
- tomorrow.txt
- ted.txt
- ted.top

Next, for each of the commands below:
- write down what (exactly) you think the command will do.
- write down the expected output to be displayed by the command.
- then run the command (from within the folder TEST on the command line) and verify if you were correct.

1. dir t*.txt
2. dir t?.txt
3. dir t???.txt
4. dir ti?.txt
5. dir ti??.txt
6. dir ??.txt
7. dir ???.txt
8. dir *e.*
9. dir *i*.txt
10. dir ?e?.txt
11. dir *r?.txt
12. dir t*r*.txt
13. dir *d?.txt
14. dir ?e*.txt
15. dir *o*o*o*
16. dir *o?o*o?.*