# Windows Batch Files 10.4

## Environment Variables

# Environment Variables

- Common to most operating systems
- They help describe the environment in which programs are running
- Programs can query these variables to find out things about the system
  - The name of the computer
  - The name of the user running the program
  - The location it is installed
  - The location for storing temporary files
  - …

# Environment Variables

- Use the **SET** command to see a list of all the environment variables available.

- You will see a long list with entries like this:
  - `NUMBER_OF_PROCESSORS=2`
  - `SYSTEMDRIVE=C:`
  - `USERNAME=Oisin`
  - `USERPROFILE=C:\Users\Oisin`
  - `windir=C:\Windows`

# 2 TYPES of Environment Variables

- **User Variables**
  - Specific to your user account
  - User Specific Data
  - You are allowed modify their values
    - e.g. PATH (a set of directories where programs are located)

Doesn't mean you should!

- **System Variables**
  - Global variables available to all users
  - Values are the same for all users
  - Users are not allowed to change their values
    - e.g. windir (the location where windows is installed)

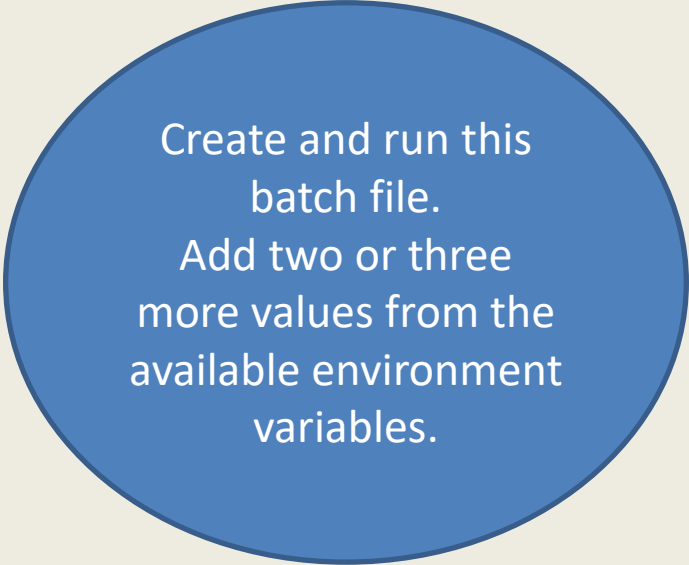# **SET**ting Environment Variables

- You can create your own environment variables with the SET command:
  - `e.g. SET MyVAR=Hello World`

- You can display the value stored in a variable as follows:
  - `ECHO %MyVar%`
  - This will then display the string "Hello World" on the screen

- These variables will be lost when you close the command prompt window. To create variables which persist (i.e. will still be there when you restart) you need to use the windows environment management tool. See document 10.3 for more details.

# Storing User Input

- Up to now we have been able to pass user input into a batch file by using parameters on the command line and accessing them using the **%** sign i.e. %1 %2 %3 etc.

- We can also use environment variables within a batch file to **prompt** the user to type something in

- The syntax is:
  - `SET /P variable=[promptString]`
    - `e.g. SET /P choice=What would you like to do?:`
  - When the user types a value and presses ENTER, a new environment variable called "choice" is created containing the value the user typed
  - We can then query the contents of the variable within an IF statement:
    - `e.g. IF "%choice%"=="1" GOTO ONE`

# Example – Try it!

- @ECHO OFF
- REM MYENV.BAT

- :START
- CLS
- ECHO Welcome
- ECHO.
- :ENTERNAME
- SET /P name=Please enter your name:
- IF "%name%"=="" GOTO ENTERNAME
- ECHO Hello %name%. Here is the system information:
- ECHO The current user is %USERNAME%
- ECHO Windows is installed in %windir%
- ECHO There are %NUMBER_OF_PROCESSORS% processors
- SET name=

Create and run this batch file.
Add two or three more values from the available environment variables.