



## Writing An Algorithm

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### Goal of this lab

This lab presents a number of tasks that a system administrator might be asked to perform. You are to answer the questions and write PowerShell Scripts for the items listed.

### What To Turn In

For questions: Provide your answers (highlight them in yellow) using well written, complete sentences.

For code: Copy and paste your code in the place indicated.

### Activities

1. What is a PS cmdlet that will produce a random number?

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2. What is a PS cmdlet that will produce the current date and time?

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3. What type of object does the cmdlet from question 2 produce (What is the type name of the object produced by the cmdlet)

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4. Using the cmdlet from question 2 and Select-Object, display only the current day of the week in a table like the following. (Caution: the output will be right aligned so make sure your PS Window does not have a horizontal scroll bar.)

```
DayOfWeek
```

```
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```

```
Monday
```

5. What is a cmdlet that will display information about installed hotfixes?

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6. Using the cmdlet from #5, display a list of installed hotfixes. Sort the list by the installation date, and display only the installation date, the hotfix description, the user who installed the hotfix and the hotfix ID (starts with KB and is followed by a series of numbers). Remember that the column headers shown in the command's default output aren't necessarily the real property names - you'll need to look up the real property names to be sure.

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7. Repeat task #6. but this time sort the results by the hotfix description and include the description, the hotfix ID, and the installation date. Put the results in an HTML file.

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8. Remember that Windows 10 keeps track of its activities in logs. For this activity, display a list of the 50 newest entries from the Security event log (you can use a different log such as the System or Application log if your security log is empty). Sort the list with the oldest entries appearing first and with entries made at the same time sorted by their index. Display the index, time, and source for each entry. Put this information into a text file (not an HTML file but a plain text file). You may be tempted to use `Select-Object` and its `-first` or `-last` parameters to achieve this; don't. There's a better way. Also, avoid using `Get-WinEvent` for now. There is a better cmdlet available to achieve this task..

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9: Write a very simple PS script using the If Then Else construct that generates 10 random numbers between 0 and 50. If the number is  $\geq 25$ , print "High End" next to it, if the number is  $< 25$  print "Low End" next to it.

## Tools and Hints:

You may need to know what the following cmdlets do as part of completing this assignment. Use PowerShell HELP or Google for additional information.

- `select-object`
- `get-member`
- Sort (In PowerShell, how do I sort results that are listed)