

What is automation ?

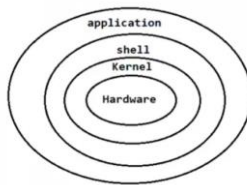
Automation is a process by which we can complete any task with less human intervention or without human intervention

Exaple : shell scripting,Perl,ruby

Why automation?

1. accuracy in data handling
2. To improve productivity
3. To reduce employee power
4. Faster and cheaper

What is shell scripting?



1. Shell is responsible to read commands given by user
2. Shell is interface between user and kernel
3. When user executed a command then shell will take that command and will verify syntax of that command. if syntax is valid shell will give command instruction to kernel
4. Kernel will interact with hardware and will perform operation

There are several shells

1. korn shell
2. Bourne shell
3. Cshell
4. Bash shell
5. Tshell
6. Zshell

Out of all the above shells, bash shell is the most powerful and most used shell

See the shells

```
vagrant@server2:~$ cat /etc/shells
# /etc/shells: valid login shells
/bin/sh
/bin/dash
/bin/bash
/bin/rbash
/usr/bin/tmux
/usr/bin/screen
```

See the default shell

```
vagrant@server2:~$ echo $SHELL  
/bin/bash
```

Where bash is located

```
vagrant@server2:~$ which bash  
/bin/bash
```

What is shell scripting

A shell script is a text file that contains a sequence of commands for a UNIX-based operating system. It is called a shell script because it combines a sequence of commands, that would otherwise have to be typed into the keyboard one at a time, into a single script. The shell is the operating system's command-line interface (CLI) and interpreter for the set of commands that are used to communicate with the system.

Example 1

```
#!/bin/bash  
# Author: sazzadul  
# Date created: 09/12/2020  
# Description: Run Basic Administrator task
```

```
whoami  
pwd  
date  
ls -l
```

Example 2

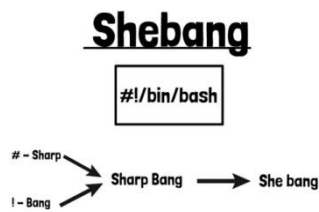
Run Basic Administrator task

```
#!/bin/bash  
# Author: sazzadul  
# Date created: 09/12/2020  
# Description: Run Basic Administrator task
```

echo Run Basic Administrator task

Top
Df -h
Free -m
Uptime
lstat

What is shebang



On Linux, a shebang (`#!`) is a special line at the beginning of a script that tells the operating system which interpreter to use when executing the script. This line, also known as a hashbang, shabang or "sharp-exclamation", is the first line of a dash and starts with `"#!"` followed by the path to the interpreter.