**Terminal** - A special program to access command line interface

**Graphical shell** – Allows to access GUI and helps in few operations such as opening, closing, moving and resizing windows, as well as switching focus between windows

**Types of Shell**

1. Bourne Again Shell (BASH) 🡪 Normal shell
2. C Shell (CSH) 🡪 similar to C programming
3. Korn Shell (KSH) 🡪 POSIX shell

**Shell Scripts or Shell Programs:**

Shell allow us to execute multiple commands respectively using a file with .sh extension, these files are called shell scripts or shell programs.

**Major Topics in shell**

* Shell Keywords
* Shell commands
* Functions
* Control flow

**Exit status:**

By default in Linux if particular command/shell script is executed, it return two type of values which is used to see whether command or shell script executed is successful or not.

(1) If return value is zero (0), command is successful.

(2) If return value is nonzero, command is not successful or some sort of error executing command/shell script.

This value is known as Exit Status.

**Shell Keywords**

**Variables in Shell:**

1. **System variables** - Created and maintained by Linux itself. This type of variable defined in CAPITAL LETTERS

2) **User defined variables (UDV)** - Created and maintained by user. This type of variable defined in lower letters.

|  |  |
| --- | --- |
| **System Variable** | **Purpose** |
| BASH or SHELL | Name of the shell |
| BASH\_VERSION | Version of bash shell |
| PWD | Present Working directory |
| COLUMNS | No. of columns in screen |
| LINES | No. of lines in screen |
| HOME | Home directory |
| HOSTNAME | Hostname of the current user |
| PATH | Our path settings |
| OSTYPE | Current OS type |
| USERNAME | Current username |
| LOGNAME | Current log name which used to log in |

**UDV:**

**Syntax:**variable name=value

Example: a=10

**Echo**

**Syntax:**echo [options] [string, variables...]

**Options**: -n, (Do not print in new line) –e (enable following process)

**Backslash escaped characters:** \n (New line), \t (horizontal tab), \\ (backslash), \a (alert bell) , \c (suppress trailing new line)

**Escape sequence code:** It allows user to edit the format of the texts, strings in a file such as bold, blink, colors, size, etc, it begins with \033 (Octal Value)

**Syntax**:

**echo -e  "\escape-character[escape-code    your-message"**

**\escape-character 🡪 \033**

**Escape-code:**

|  |  |
| --- | --- |
| **CODE** | **Purpose** |
| 1 | Bold |
| 2 | Faint (normal) |
| 3 | Italic |
| 4 | Underline |
| 21 | Not bold |
| 22 | Normal color (neither bold nor faint) |
| 23 | Not italic |
| 24 | Underline off |
| 30-37 | Set foreground color |
| 40-47 | Set background color |

**Colors:**

