***Lab 7: File test operators***

**Theory:**

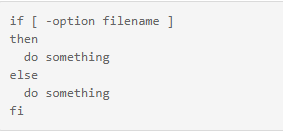
**File test operators:**

In linux and unix operating systems every thing is a file. When you are using files in your shell or bash script, it is a good idea to do some tests on the file before using it.  
The file tests include:  
1. Checking for existence of the file.

2. File is readable, writeable or executable.

3. Type of the file and so on.

The file test operators are mostly used in the if clause of the bash script. The syntax is shown below:



**Options:**

* **-e operator** : This operator checks weather the given file exits or not. If it exits this operator returns true otherwise false.
* **-d operator** : This operator checks if the given directory exists or not. If it exits then operators returns true otherwise false.
* **-b operator** : This operator check weather a file is a block special file or not. It returns true, if the file is a block special file otherwise false.
* **-s operator** : This operator checks the size of the given file. If the size of given file is greater than 0 then it returns true otherwise it false.
* **-r operator** : This operator checks weather the given file has read access or not. If it has read access then it returns true otherwise false.
* **-w operator** : This operator check weather the given file has write access or not. If it has write then it returns true otherwise false.
* **-x operator** : This operator check weather the given file has execute access or not. If it has execute access then it returns true otherwise false.
* **-c operator** : This operator checks weather a file is a character special file or not. It returns true if it is a character special file otherwise false.

**Lab task**

1. Write a Shell Script to check if a file exists.
2. Write a Shell Script to check if a directory exists.
3. Write a Shell Script to check if a file is readable, writable and executable.
4. Difference between block special file and character special files.