


## 1. 2016-1

Circle or cross: "T" if True – "F" if False.

**T / F** A service-mark is a mark to identify a service rather than a product. For example MGM (Metro-Goldwyn-Mayer) uses the sound of a lion's roar. 

**T / F** Regular Expression:

```
^[aiueo].[aiueo]$
```

will match this following string:

```
sate satu
```

**T / F** Free software is always free of charge.

**T / F** Open Source Software is not always free of charge.

**T / F** There are many Free Software licenses, however, there is only one copyleft license, i.e. the GNU / General Public Licenses.

**T / F** The output of script:

```
echo a b c d | echo a b c d
```

is

```
a b c d
a b c d
```

**T / F** The output of script:

```
for II in A B C
do
    echo X$II
done
```

is

```
A
B
C
```

**2. 2016-2a**

Circle or cross: "T" if True – "F" if False.

- T / F** EULA (End User License Agreement) is an example of a non-free software license.
- T / F** You don't own the propriety software you have bought.
- T / F** Public Domain software is not Free Software.
- T / F** Free Software is not always Copy-left.
- T / F** "[^c]at" matches all strings matched by "\_at" except "cat".
- T / F** "[a-z0-9]" matches any single letter or any single digit.

**3. 2016-2b**

These following are some scripting examples. Fill remaining empty "output" cells.

Script (date=19 Oct 2016)	Output
<code>echo "1 2 3 4 5"   awk '{print \$1 " " " \$5}'</code>	
<code>date +"%d %b %Y"</code>	
<code>echo abc   tr '[a-z]' '[A-Z]'</code>	
<code>echo 0123456789   cut -c5-9</code>	
<code>VAR="hallo" case "\$VAR" in   hallo) echo "Hallo too!"         ;;   *)     echo "What?"         ;; esac exit 0</code>	
<code>date +"%d %b %Y"   awk '{print \$2 " " " \$1 ", " \$3}'</code>	
<code>% ID=VWXYZ % echo "\$ID"   cut -c1-3   tr '[a-z]' '[A-Z]'</code>	
<code>VAR="hello" case "\$VAR" in   hallo) echo "Hallo too!"         ;;   *)     echo "What?"         ;; esac exit 0</code>	

## 4. 2017-1

Circle or cross: "T" if True – "F" if False.

- T / F** Free Software means software you can get for free (gratis).
- T / F** According to the Free Software Movement, free software developers should never be paid.
- T / F** Free Software never has a license.
- T / F** The Open Source Initiative (OSI) agrees with the Free Software Foundation (FSF) about how to promote the (Free or Open Source) software.
- T / F** Both Free Software Licenses and Open Source Licenses may not discriminate against anyone. Giving everyone freedom means giving evil people freedom, too.
- T / F** You don't own software, you just get a license to use software.
- T / F** Public Domain Software is Free Software.
- T / F** The Free Software Movement hates Microsoft and consider it the Great Satan.
- T / F** Copyleft is method to keep a free-software – and its modification – to be free.
- T / F** Most free software projects are developed by a single developer (or with no contributor).

Shell Script	
<pre> 001 #!/bin/bash 002 # (c) 2017 Rahmat M. Samik-Ibrahim 003 # This is a free script, lah! 004 # REV01: Thu Mar 30 17:29:35 WIB 2017 005 # START: Wed Mar 29 17:28:20 WIB 2017 006 # ===== 007 # cut      remove sections from each line of files 008 # cut -c   select only these characters 009 # sha1sum  compute and check SHA1 message digest 010 # tr       translate or delete characters 012 isADigit() { 013     [[ \$VARIABLE =~ \$REGEX ]]    { 014         TEXT1="VARIABLE \$VARIABLE is not a digit." 015         return 016     } 017     [[ \${#VARIABLE} =~ \$TEN ]] &amp;&amp; { 018         TEXT1="VARIABLE \$VARIABLE has 10 digits." 019         return 020     } 021     TEXT1="VARIABLE \$VARIABLE has no 10 digits." 022 }</pre>	<pre> 023 024 ONE='1' 025 TEN='10' 026 REGEX='^[0-9]+\$' 027 VARIABLE='1234567892' 028 HASH='echo "\$VARIABLE"   sha1sum' 029 echo      "\$HASH" 030 isADigit 031 TEXT2='echo "\$HASH"   cut -c1-3' 032 TEXT3='echo "\$TEXT2"   tr ' [a-z]' ' [A-Z]' ' ' 033 echo "\$TEXT1" 034 echo "\$TEXT2" 035 echo "\$TEXT3" 036 exit 0</pre>
Script Output (Line 029, 033, 034, 035):	
5a3ce516f19aa888e8fd3e80e7d7cb0320253d25 -	

**5. 2017-2**

According to the Free Software Foundation (FSF), (01) terms allow the software users to run the software for any purpose as well as to study, change, and distribute the software and any adapted versions. (02) software has absolutely no ownership such as copyright, trademark, or patent. (03) software requires that information necessary for reproducing and modifying the work must be made available to recipients of the software. There is a difference between the terms (04) and (05): it is possible to use (06) code in (07) projects, but the inverse is not allowed. (08) protect the expression of ideas, whereas, (09) is a right to exclude others from making, using, or selling an invention.

Match the number of the sentence above with these following phrases:

[     ] Copyleft	[     ] Copyrights	[     ] Free Software	[     ] Free Software	
[     ] Free Software	[     ] Open Source	[     ] Open Source	[     ] Public Domain	[     ] Patent

What will be the output of these following "sed" commands? Consider, the content of `thefile.txt` is:

Sukma's house is 10 km away.

```
$ sed -e s/"km "/"miles "/" thefile.txt
```

-----

```
$ sed -e s/"km "/"miles "/g thefile.txt
```

-----

```
$ sed -e s/km/miles/g thefile.txt
```

-----

```
$ sed -e s/[km]/miles/g thefile.txt
```

-----