

C

30) What's the difference between use `i++` or `++i` in the next code? Which one is more efficient and why?

```
for ( int i = 0; i < 10; [increase value])  
    //do something
```

`++i` increment the value of `i` and return the incremented value

`i++` increment the value of `i` and return the original value that `i`

31) Write a function that has the following prototype:

```
char *reverse_string(char *s);
```

That takes in input a array of characters and returns the same array in reverse order. The function should use as less memory as possible .

26) What is the difference between an Index Scan and a Full Scan in a relational database query?

27) What is NoSQL?

Testing

28) Which frameworks to test websites have you used?

PHP Unit

29) What is CI? Why is important?

21) What is valgrind?

Memory debugging tool

22) What is the difference between a process and a thread in Linux?

DB

23) Which relational database engines have you worked with?

MySQL DB2

24) What ACID stands for?

25) What SQL means?

Structured Query Language

19) Describe what you see in the following screenshot:

```
top - 13:17:43 up 42 days, 1:22, 1 user, load average: 0.58, 0.66, 0.65
Tasks: 267 total, 7 running, 260 sleeping, 0 stopped, 0 zombie
Cpu(s): 3.6%us, 0.6%sy, 0.0%ni, 95.5%id, 0.1%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 65711368k total, 65360772k used, 350596k free, 413696k buffers
Swap: 4095992k total, 56k used, 4095936k free, 62575044k cached
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
24478	postgres	20	0	717m	354m	347m	R	23.0	0.6	0:09.30	postmaster
24465	postgres	20	0	719m	358m	350m	R	1.9	0.6	0:10.32	postmaster
24477	postgres	20	0	717m	352m	345m	R	1.9	0.5	0:05.33	postmaster
24565	root	20	0	15160	1260	844	R	1.9	0.0	0:00.03	top
1	root	20	0	19356	1248	984	S	0.0	0.0	0:00.46	init
2	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kthreadd
3	root	RT	0	0	0	0	S	0.0	0.0	0:10.94	migration/0
4	root	20	0	0	0	0	S	0.0	0.0	1:22.98	ksoftirqd/0
5	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
6	root	RT	0	0	0	0	S	0.0	0.0	0:12.79	watchdog/0
7	root	RT	0	0	0	0	S	0.0	0.0	0:12.72	migration/1
8	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	migration/1
9	root	20	0	0	0	0	S	0.0	0.0	0:24.07	ksoftirqd/1
10	root	RT	0	0	0	0	S	0.0	0.0	0:14.81	watchdog/1
11	root	RT	0	0	0	0	S	0.0	0.0	0:12.95	migration/2
12	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	migration/2
13	root	20	0	0	0	0	S	0.0	0.0	0:32.10	ksoftirqd/2
14	root	RT	0	0	0	0	S	0.0	0.0	0:13.40	watchdog/2
15	root	RT	0	0	0	0	S	0.0	0.0	0:12.90	migration/3

[root@ymdh2001 psalle]

System Summary image 1

List of Processes image 2

20) What is gdb?

Program that has debugging

13) How would you extend the 'document' object to include a function named sayHi which opens an alert "saying" Hi?

Linux

14) Which OSs do you have installed in your personal computer(s)?

Ubuntu 14.04

15) Which type of use of Linux do you do: user, admin, developer?

admin

16) How many years have you been working with Linux?

10 years

17) Which tools do you use for writing / editing code (editors, compilers, debuggers, etc)?

eclipse, netbeans, SublimeText

18) Which is the standard directory for holding the init scripts, and what is an init script?

/etc/init.d

Javascript

9) Which JavaScript frameworks have you been using?

Mootools and JQuery

10) What is the keyword 'this'?

this is the reference to the global object.

11) Which are the ways to call a function changing the scope of the 'this' keyword?

```
function Something () {  
    this.color = '#cc0000';  
}
```

12) What does it mean JSON? How would you write a JSON representing an array of 5 elements (the array is named "mendoza")

- JavaScript Object Notation

```
{ "mendoza": [  
    { "nombre": "Hugo" },  
    { "nombre": "Paco" },  
    { "nombre": "Luis" },  
    { "nombre": "Rogelio" },  
    { "nombre": "Marlene" }  
]
```


6) Considering the next HTML, what expression have precedence? Why?

```
<div id="no_follow" class="block">  
  <div class="middle">  
    <div id="my_own_css" class="innerdiv"></div>  
  </div>  
</div>
```

a) #no_follow #my_own_css

b) #no_follow.block div.middle div.innerdiv

R. a) id is most important than class.

7) What does the keyword !important mean?

Precedence over other definitions

PHP

8) What returns the following code?

```
<?php  
function test(&$myownvariable){  
  $myownvariable = preg_match("/[\W]*/", $myownvariable, $matched);  
  return preg_replace("/[\W]*/", "test", $matched[0]);  
}  
$o = "Hola mundo";  
$t = ((test($o)&&!$o)?"Hi!":$o);  
echo $t;  
?>
```

R. Hi

Name:

Date:

General

1) What version control tools do you know and use?

Git

Subversion -

I use Subversion

HTML

2) What does DOM stand for?

Document Object Model

3) What is the DOCTYPE used for?

Define the document codification

4) What does it mean the code is syntactically correct?

that has no syntax errors

CSS

5) What this expression selects?

```
div#main_content > span#head.wrapper.header > a + *
```

Select all elements after of tag `<a>`
Contained on `` tag with id (head) and
class .wrapper.header, Contained on `<div>` tag
with id main-container