Web Dev & Sausages Vol.4 Coder's Quiz

A. General Knowledge
B. Language Recognition
C. Code Understanding

Guidelines

No devices

Turn in answers after each round.

Questions presented once.

General knowledge

General knowledge #1   1 point

What does PHP stand for?

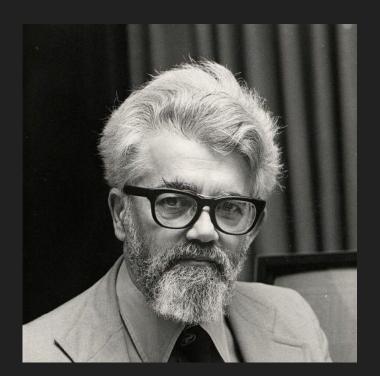# General knowledge #2   1 point

What company originally developed MS-DOS (first known
as 86-DOS)?

    A. IBM

    B. Washington Digital Research

    C. Seattle Computer Products

    D. Microsoft

Who primary inventor the language Smalltalk?

General knowledge #4   1 point

Who is this?

What is a monoid in the category of endofunctors?

General knowledge #6   1 pt./ 2 pt. bonus

Who has the highest reputation on Stack Overflow?

Bonus: what is his score (+/- 5%)?

Code recognition

```php
function Hex2RGB($color){
    $color = str_replace('#', '', $color);
    if (strlen($color) != 6){ return array(0,0,0); }
    $rgb = array();
    for ($x=0;$x<3;$x++){
        $rgb[$x] = hexdec(substr($color,(2*$x),2));
    }
    return $rgb;
}


// Example usage:
print_r(Hex2RGB('#B3DAF5'));
```

Code recognition #2   1 point

```
(module
  (import "env" "printInt" (func $printInt (param i32)))
  (func $add (param $lhs i32) (param $rhs i32) (result i32)
    get_local $lhs
    get_local $rhs
    i32.add
  )

  (func $main
    (call $printInt
      (call $add (i32.const 9) (i32.const 8)))))

  (export "main" (func $main))
)
```

```
1   .add(@a, @b) {
2       @-: (@a + @b);
3   }
4
5   .mul(@a, @b) {
6       @-: (@a * @b);
7   }
8
9   usage {
10      .1; .2;
11      .1() {@a:  @-;.add(1, 2)}
12      .1() {@b:  @-;.add(3, 4)}
13      .2() {@r:  @-;.mul(@a, @b)}
14      result: @r;
```

Code recognition #4   1 pt./ 1 pt. bonus
What is the language version name?

```
        REAL A(0:10)
        READ (5,*) A
        DO 10 I = 10, 0, -1
            Y = FUN(A(I))
            IF (Y .LT. 400) THEN
                WRITE(6,9) I,Y
  9             FORMAT(I10. F12.6)
            ELSE
                WRITE (6,5) I
  5             FORMAT(I10,' TOO LARGE')
            ENDIF
 10     CONTINUE
        END

        REAL FUNCTION FUN(T)
        REAL T
        FUN = SQRT(ABS(T)) + 5.0*T**3
        END
```

Code recognition #5   1 point

```swift
 1    var explicitDouble: Double = 70
 2
 3    var implicitInteger = 70
 4    var implicitDouble = 70.0
 5
 6    let numberOfApples = 3
 7    let numberOfOranges = 5
 8    let appleSummary = "I have \(numberOfApples) apples."
 9    let fruitSummary = "I have \(numberOfApples + numberOfOranges) pieces of fru
10
11    println("Hello, world")
12
13    let people = ["Anna": 67, "Beto": 8, "Jack": 33, "Sam": 25]
14
15    for (name, age) in people {
16        println("\(name) is \(age) years old.")
17    }
18
19    func sayHello(personName: String) -> String {
20        let greeting = "Hello, " + personName + "!"
```

```
<html>
  <body>
    Hello $customer.Name!
    <table>
    #foreach( $mud in $mudsOnSpecial )
      #if ( $customer.hasPurchased($mud) )
        <tr>
          <td>
            $flogger.getPromo( $mud )
          </td>
        </tr>
      #end
    #end
    </table>
  </body>
</html>
```

Code recognition #7

1.5 points

Acc.

```erlang
1   -module(qsort).
2   -export([qsort/1]).
3
4   qsort([]) -> [];
5   qsort([Pivot|Rest]) ->
6       qsort([Front || Front <- Rest, Front < Pivot])
7       ++ [Pivot] ++
8       qsort([Back || Back <- Rest, Back >= Pivot]).
```

Code recognition #8

```
bubbleSort = (list) ->
    anySwaps = false
    swapPass = ->
        for r in [0..list.length-2]
            if list[r] > list[r+1]
                anySwaps = true
                [list[r], list[r+1]] = [list[r+1], list[r]]

    swapPass()
    while anySwaps
        anySwaps = false
        swapPass()
    list
```

Code Recognition #9   1.5 pts./ 1 pt. bonus

```
x = 1 : scanl (+) 1 x
```

Bonus: what is the name of this sequence?

```
function! g:Foobar(arg1, arg2, ...)
        let first_argument = a:arg1
        let index = 1
        let variable_arg_1 = a:{index} " same as a:1
        return variable_arg_1
endfunction
```

Code understanding

Code understanding #1 .5 +.5 point

A. What is this called?
B. What does it do?

```
.div:after {
  content: "";
  display: table;
  clear: both
}
```

Code understanding #2 (C#)   1 point

What will this print when run?

```csharp
class Program {
  static String location;
  static DateTime time;

  static void Main() {
    Console.WriteLine(location == null ? "location is null" : location);
    Console.WriteLine(time == null ? "time is null" : time.ToString());
  }
}
```

Code understanding #3   1 point

What does this do in your terminal (explain or example)?


```
ls -l | sed -e 's/[aeio]/u/g'
```

Code understanding #4 (js)   1 + 1 + 1 pts
What do these evaluate to in the console?

A. const f = () => {}; f();

B. parseInt('f*ck', 16)

   a. NaN

   b. 42

   c. 15

   d. 0

C. 0.1 + 0.2

Code understanding #5 (Python)   1 point

What does this print when run?

```
import pprint;pprint.pprint(zip(('Byte', 'KByte', 'MByte', 'Donald Trump'),
(1 << 10*i for i in xrange(4))))
```

Code understanding #6 (Kotlin)   2 points

What does this print when run?

```kotlin
fun main(args:Array<String>) {
    val m = 3
    val n = -3

    val c = Math.max(m, n) downTo Math.min(m, n)
    c.forEach(::println)
}
```

Code understanding #7 (Nim)   2 points
What does this print when run?

```nim
const msg = ""

import macros, strutils, sequtils

const wtf = [72, 101, 108, 108, 111, 32, 119, 111, 114, 108, 100]

static:
  var ast = parseStmt(slurp("nimrec.nim"))
  let current = $ast[0][0][^1]

  if current.len == wtf.len:
    echo msg
  else:
    ast[0][0][^1] = newLit(current & wtf[(current).len].char)
    writeFile "nimrec.nim", (($ast.repr).split("\n").mapIt(it[2..^1])).join("\n")
    echo staticExec "nim --hints:off c nimrec.nim"
```

Answers: General knowledge

General knowledge #1   1 point

What does PHP stand for?

Originally: Personal home page

Now: Php: Hypertext Preprocessor

General knowledge #2   1 point

What company originally developed MS-DOS (first known as 86-DOS)?

A. IBM

B. Washington Digital Research

C. Seattle Computer Products

D. Microsoft

General Knowledge #3   1 point

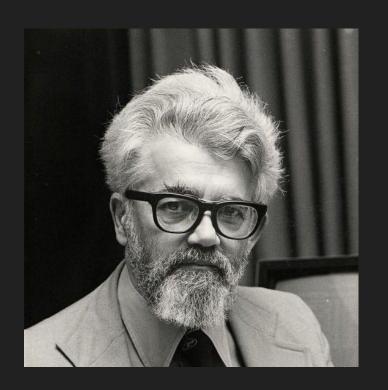Who first developed the language Smalltalk?

Alan Kay (also can accept Dan Ingalls)

General knowledge #4   1 point

Who is this?

John McCarthy

(developed Lisp)

What is a monoid in the category of endofunctors?

monad

General knowledge #6   1 pt./ 2 pt. bonus

Who has the highest reputation on Stack
Overflow?

Jon Skeet

Bonus: what is his score (+/- 5%)?

Score: **191,393** (18,597 posts)

Code recognition

Code recognition

1. PHP
2. WebAssembly
3. Less
4. FORTRAN (Bonus: FORTRAN 77)
5. Swift

Code recognition

6. Velocity

7. Erlang

8. CoffeeScript

9. Haskell (Bonus: Fibonacci)

10. Vim script

Code understanding

Code understanding #1   .5 +.5 point

A. Clearfix

B. What *clearfix* does is to force content after the floats or the container containing the floats to render below it. -Joseph , Stack Overflow

Code understanding #2 (C#)   1 point

location is null

1/1/0001 12:00:00 AM

Code understanding #3   1 point

What does this do in your terminal (explain or example)?

```
tutul 1
drwxr-xr-x  137 ruchurd.vuncump  1349604816    4658 Mur
26 09:19 nudu_mudulus
(example)
```

Code understanding #4 (js)   1 + 1 + 1 pts
What do these evaluate to in the console?

A. Undefined

B. 15

C. 0.30000000000000004

Code understanding #5 (Python)   2 points

What does this print when run?

```
[('Byte', 1),
 ('KByte', 1024),
 ('MByte', 1048576),
 ('Donald Trump', 1073741824)]
```

Code understanding #6 (Kotlin)   2 points

What does this print when run?

3
2
1
0
-1
-2
-3

What does this print when run?

At run time, nothing

At compile time "Hello World"