where to ask this question? includes Android and other languages

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Karen West · 4 days ago

I am wondering if anyone on this discussion forum knows the answer to this question, and if not, if anyone knows a good place to ask this kind of question. I apologize in advance for ignorance! ;-)

I'm in job search mode as I take this class as one of my skill expansions to add to what I already have done before, and I've done other similar type skill expansion classes from the free online community during this period, along with some humanities as well (economics/law, outside my high tech skills). However, when I do get interviews, people often ask me about me about my high tech skills, what I know well, what I've learned that is new, etc, and this morning it occurred to me that if asked in an interview situation about some of these newly acquired skill expansion skills, I would not have a good answer as to where they all fit into the high tech product development markets, and that is what I'm trying to determine in regard to the recently added skills for me.

I know embedded C fairly well since I worked in the market for 18 years, and my background is EE for BS and MS, although I do know a bit of the CS world through random courses.

I understand that Android is an OS that was based on Linux, with a (?) Java Virtual Machine on top (?), and I've come to see where the database language I recently learned, XML, fits into that world, and how it describes your mobile device GUI elements. I hardly knew any Java coming into this class, but it's not been that hard to pick up, the bits we have written to respond to activities and mobile device user interactions, since Java seems to work similarly to the C and C++ I already know, but I understand (?) that one major difference with Java, is that when it is compiled, that same code can be used for different computer architectures, and the compiler generates different byte codes from the same Java code based on what computer architecture you tell it to generate the machine code for. I know that with C and C++, the compilers usually compile for one architecture for usually for (?) performance type reasons and environments, but it may need tweaking to be used for a different computer architecture.

Here is where more confusion comes in from my recent skill expansion efforts, when I learned some interpreted languages, such as Python and Ruby. I understand that those languages are not compiled for any computer architecture, but are interpreted as they run by an interpreter that is running on the computer. I understand that an interpreter is somewhat analogous to a C shell, in that when I once wrote a C shell program running on Linux, it would read in a UNIX/Linux command and it's arguments, and fork and exec processes to run these commands, and I've heard that interpreters work similarly, in that they are a program that runs on your computer, analogous to a C shell program, that reads and interprets the Python and Ruby code as it is run, but does not generate any bytes for any computer architectures. I also know that if you are using Python in the web world, there is some language I do not know called Django that is analogous to Rails in the Ruby world, that helps you interface to databases and the web but within a browser environment (?), not run directly from a mobile device icon, but from within the browser there (?). I also heard that you sometimes use interpreted languages for algorithmic development, to quickly try out new algorithms without having to recompile.

Where does the interpreter run if you are using an interpreted language for web development? For multicore architectures, do some things run on some cores, and other things on the other cores? When I learned all these things, there was just one core.

I recall the MVC architecture being mentioned (Model, View, Controller) in the Ruby on Rails class, where you would deploy a web application that could be downloaded, as we do in this class too, and I assume that people who use Python and Django do a similar thing. Do Android apps follow this design paradigm too? I know there are Views that we use in Android. Are the Java activities the controllers? Sorry--trying to sort how these worlds work! I know in Android there are TextView's, EditView's, ImageView's, and they form different GUI's on the mobile device. What is the Model part? I'm not clear on how the Android apps class overlaps in that world and how it is different, except that I know with Android apps, you can run them directly on Android, without having to use a browser. Is that one major difference? I also know that I am generating machine code that the microprocessor runs, specifically meant for it, but the reason for the interpreter in Python and Ruby is to intepret the code as it is run for the web app.

I understand about operating systems, and I know Android is an OS (Linux with a JVM?), and that when we click an icon, it runs our Android app, just as in Linux, when we forked and execed a command that I ran for my C shell. I'm not clear though what is happening in the web app world when you are running in the browser, where the interpreter comes in, etc, who is running what, and where?

As I said in advance, sorry for stupid questions, and this may not be the place to ask, but if anyone knows where the question would be better asked, that may help too! I'm EE educated (both BS and MS) and have randomly taken CS classes outside what I've done in my 18 years working in various embedded C markets, and I'm trying to sort out where all these things I've done fit together, in the product development market, as I review and expand my skill set during this period of job searching. If someone asked me where my recent skills I added during my job search period all fit in together, I would have trouble answering that in an interview, and that is why I asked this question today.

If anyone read this, thank you for your patience while reading it, and any advice is appreciated! ;-)

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Jonathan Lee Slew · 4 days ago

"the compiler generates different byte codes from the same Java code based on what computer architecture you tell it to generate the machine code for" - Java compiler, if I remember correctly, generates 1 type of byte code and run on a Virtual Machine JRE, that's why it doesn't matter what type of OS/architectures you are running.

Django is not a language but a framework built with python.

Do Android apps follow this (MVC) design paradigm too? I would say Yes and your model would be your data.

"I'm not clear though what is happening in the web app world when you are running in the browser, where the interpreter comes in, etc, who is running what, and where?" - If it is a single page application, then it is the JavaScript interpreter who is doing most the work and send ajax request to the server. If it is a multipage application, then the work load might be split between the Client and the Server where JavaScript will take care of the client-side stuff and languages like php, python, ruby, asp, .net, javascript would take care of server-side stuff.

Just my 2 cents.

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Lindsay Steele · 4 days ago

"I recall the MVC architecture being mentioned (Model, View, Controller)"

The Android platform would fit into this. Your layout files are you views, they do not have much intelligence. They pass back to the controller which as the Activity Java Class. The Activity classes can then talk back to other Java classes which form your data model.

This way of looking at things has more to do with a larger business type application but in a general sense you could say that Android is following the same model.

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 Karen West · 4 days ago

Thank you all for helping try to sort out where these all fit in! ;-)

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Ivan Furone Signature Track · 6 minutes ago

As far as I know from my Rails development background, Ruby 1.x does not come with native multithreading. You may refer to this very detailed article: http://www.igvita.com/2008/11/13/concurrency-is-a-myth-in-ruby/. For all that concerns disributed programming, support is available through drb and other gems (obviously this doesn't mean for the global interpreter lock to go away). Some more hints and fun await for you here: http://www.rubyinside.com/classroom-a-ruby-class-server-or-drb-on-steroids-139.html

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Karen West · just now

Thank you!!

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