

Software Developer's JOURNAL

new ideas & solutions for professional programmers

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QT5

**how to become a
professional developer**

Using Qt to Target Mobile Devices
Application Logging and Profiling
Developing Scientific Software with Qt



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NEW COLUMN DEVELOPER@LIFE BY MATTHEW RUPERT

06 Digia Releases Qt 5.1

DIGIA, QT

Digia has announced the release of Qt 5.1, the leading cross-platform application and user interface (UI) development framework. New version includes over 3000 enhancements, significant improvements to Qt Quick and preliminary Android & iOS support.

NEW COLUMN – DEVELOPER@LIFE BY MATTHEW RUPERT

08 Hello World

MATTHEW RUPERT

While I will certainly enter into some of the technical subjects, my goal in this column is to discuss the other side of things – the life side. What goes on when we leave the cubicle? When we leave the building? How do we present ourselves in meetings, on a resume, at an interview, or in life in general (hence the title, Developer@Life). Subject matter of this nature may be called “soft skills.”

QT'S SECRETS

10 How to Develop and Monetize apps and Games with Qt and V-Play

CHRISTIAN FELDBACHER

This article explains why Qt is a great choice for developing cross-platform applications to desktop AND mobile platforms. It introduces V-Play, a game engine built on top of Qt to create mobile 2D games which can also be used for developing normal apps.

20 Using Qt to Target Mobile Devices

ALEXANDER BLASCHE

This article provides an overview how Qt is managing to address the new features required by mobile and embedded software developers. It's based on an author's speech presented during Qt Contributors Summit 2013, the main, invitation-only event of the Qt Project.

24 A Classical Number Puzzle in Qt Quick 2.0

FRANK MERTENS

In this tutorial we will create a classical number puzzle in Qt Quick. We will try to show how to create the basic mechanics of the game board without going deeper into the logic of the game itself. The goal is to give you a brief introduction into creating applications with QML, JavaScript and Qt Quick.

28 Application Logging and Profiling

STIAN BROEN

This article will discuss several techniques related to application logging and profiling. By mastering such techniques you will be able to respond faster to any unforeseen issues discovered by your customer and to identify performance bottlenecks.

36 Developing Scientific Software with Qt

MARCUS D. HANWELL

Science is founded on the principles of reproducibility, and at Kitware we develop cross-platform, open-source software for scientists around the world. It is important to

have stable software, which is tested and able to operate on data at many different scales and in different fields. Qt is a natural choice for us in our work, and is used in applications that visualize data from the atomic to the cosmological length scales, and pretty much everything in between.

42 Qt Enhances BlackBerry 10 Platform Tools

DIGIA, QT

Qt developers have an unparalleled opportunity to bring their applications and work to the new BlackBerry 10 platform, Digia announced. The BlackBerry® 10 platform uses the Qt cross-platform application and UI framework on top of a C/C++ foundation for BlackBerry Cascades™, the UI toolset for developing native applications for BlackBerry 10.

EXTRA +

44 A C Developer's Utility Belt

BEN STRAUB

Jealousy is an emotion commonly associated with C developers. It's easy to see why; developing in other languages is just so nice. Automated refactoring, dynamic reloading, garbage collection, exceptions, object-orientation, lambdas...

50 Developing Applications for use with Continuent Tungsten and Tungsten Replicator

MC BROWN

As a developer of an application there really isn't a problem better than finding that you have to scale up the application and the database that supports it to handle the increased load. The main bottleneck to most expansion is the database server and in many modern environments that replication is based around MySQL.

60 Beginners PTC J-Link (Asynchronous) App

MANOJ KUMAR

The aim of this article is to show some basic steps how to get started with J-Link application development and IDE. The article is focused on Asynchronous J-Link application. JLink has enormous capacity, and is waiting to be utilized. Not many developers are able to start with JLink due to limited documentation available on the internet. I have tried my best to make it as simple as possible.

64 Android OS in the Enterprise

DAVID JARAMILLO, VINEY UGAVE, CHARISSE LU, RICK ALTHER

Serve to innovate; innovate to serve is apparently the new mantra for this age defined largely by its technical conquests and cutting edge trophies. In keeping in lieu with this never-say-die spirit, enterprise computing from time to time has faced numerous challenges.

MATTHEW RUPERT'S COLUMN – DEVELOPER@LIFE

72 Interview Tips for Software Developers

MATTHEW RUPERT

Interview Tips for Software Developers

I've been on countless interviews, and I've learned a few things along the way. I don't consider myself an expert by any means, but I've learned how to interview well. It took a while to figure it out, but I've learned that interviewing isn't difficult. On the contrary, if you are focused and willing to view the process as a potentially fun learning experience, interviews can be great experiences.

I was astonished to read this article on CNBC: Managers to Millennials: Job Interview No Time to Text:

Human resource professionals say they've seen recent college grads text or take calls in interviews, dress inappropriately, use slang or overly casual language, and exhibit other oddball behavior.

"It's behavior that may be completely appropriate outside the interview," says Jaime Fall, vice president of the HR Policy Association. "The interview is still a traditional environment."

Oh my! If you are texting or taking a phone call during a job interview, you have MUCH to learn. My hope is that such an occurrence is rare. Having been on both sides of the interview table, if I saw someone read a text message I would probably inquire as to the reason. I've never had this happen. Perhaps there is a family emergency.

I once went into a job interview very near my wife's due date. I explained up front that my wife and I had an agreement: If my phone buzzes twice in a row and it is her, I have to take it. "My wife is going into labor," is a perfectly fine reason to take a call in an interview. I can think of a few other reasons that necessitate taking a call or text during an interview, but only a few. (My wife, thankfully, did not go into labor during that interview. And yes, I did get the job.)

I love interviewing. I mean it: I enjoy going on a job interview! That sounds strange to some, I know. I look at it this way: Either I'll get a job offer or I won't. In either case, I am meeting new people and making contacts – and, whatever the outcome, I am becoming a better interviewee. As a child I was a very shy kid – scared to death of talking to people. Perhaps I'm mak-

“ (...) if you are focused and willing to view the process as a potentially fun learning experience, interviews can be great experiences. ”

ing up for lost time, but talking to people – getting to know new people – is fun. So here is my list of tips:

Be yourself

There are few better ways to come across as awkward than by trying to present a fake personality. It won't work. Unless you are an extremely gifted actor, it never works (and unless you are auditioning for a part in a movie, you don't want to be an actor during a job interview). Besides, if you to get the job, it isn't likely that you'll be able to show up as Mr. or Mrs. "Fake" for long. The people we work with see more of us through the week than our families!

So don't try to be what you *think* the interviewer wants to see. *Just be yourself!* This is the best interview advice there is. Maybe you are not the most socially outgoing person. Maybe you're a bit of a nerd. So be it. Companies are looking for a few good nerds.

There's a real benefit to being yourself during the interview. You'll find that being yourself allows you to put your guard down and relax. When you're relaxed, you're confident. And when you're confident, you can engage in an important conversation. Think of the people interviewing you as new friends – and be friendly. Don't pretend or feign friendliness... Be *genuinely* friendly. If this is difficult, there may be more serious social skills that need to be addressed.

I'm not an outgoing, "life of the party" type of guy (in fact, I'm a bit of an introvert), but I do enjoy shaking hands and meeting people. Introverted or not, if you are relaxed, friendly, and happy to meet new folks, it will speak highly of your overall compatibility in a workplace. When you're overly guarded, the person interviewing you will have trouble discerning whether or not you are likeable. Do you have friends? If so, there is obviously something likeable about you. Let it show!

The interview is a process in which both parties are attempting to determine two things:

- Does this person have the ability to perform the job?
- Is the person someone I would like to work with every day?

This is perhaps even more important than one's set of skills. There are many Java programmers in the world, and many that are way better than you. But nobody wants to work with a super smart person with the social skills of a slug.

“*There are few better ways to come across as awkward than by trying to present a fake personality.*”

Along with this, the interview isn't the time or place for complaining. If you are looking for a new job because you hate your current job, there is no need to go into detail. Do not complain about how unfair or inept you think your current boss is. Don't complain about coworkers. All that is required here is the general truth: You are looking for a new opportunity.

Remember that an interview is a two-way street

The company is not just interviewing you: You are *also* interviewing the company. This is a fact which is, too often, overlooked.

With this in mind, asking great questions *should* be easy (and if you have no questions, perhaps it is a sign that this position isn't the one you're after). Never go into an interview with the assumption that you already want the position. You may find out during an interview that this is not a place you want to work for. Maybe the hiring company is looking for someone who will work 120 hours a week. Maybe the environment is toxic (figuratively). Maybe the manager lost the previous employee(s) because he or she is *really* difficult to work for. Maybe the company is barely breathing, and hoping to find a superstar to set it back on track. It should be obvious that a question like, "Are you a royal pain to

work for?" is inappropriate, but other targeted questions can point certain things out.

I once had a phone interview with a guy who spent most of the time complaining about his employees: They didn't work hard enough. They weren't focused enough. He didn't understand why they had so much trouble following his direction. That was all I needed to hear. I declined a followup.

On the other hand, I once interviewed with a VP who raved about his employees. He was tremendously proud of his team, and quick to brag on them. He spoke of their collective intelligence and performance with high regard. In turn, I was eager to learn more and pursue the position. *Who wouldn't want to work for someone like that?*

Be sure to get an idea of not just the current needs to the employer, but the future plans as well. You'll want to understand future goals and vision (and hopefully the hiring manager can speak to these). Will there be room for growth? It is perfectly reasonable to ask about future opportunities within, as long as you don't make it sound as though you are looking for a position merely as a stepping stone. Stepping stone or not, it is the current role that interviewer is looking to fill. That said, it is likely that an enthusiastic candidate with plans of growth will shine.

You definitely want to know the vision for the role you are interviewing for with regard to your personal objectives. If you're looking for a role as a software engineer without any upward mobility, that's fine, but ask. Maybe you do want to have the opportunity to move into management. Maybe you don't want that expectation. Know what it is you're getting into, and be cautious to make sure that it is a good fit for each party. If you take a position simply to make a move and for no other reason, it won't be long before you're discontent and looking again.

Don't try to BS

This is kinda of like the first tip, "be yourself," but a little different. You may get some targeted questions about a specific skill. If you've lied on your resume (don't lie on your resume), you're in for a very awkward conversation. There will inevitably be some sort of question that you do not know the answer to.

I've heard it recommended that you should never say "I don't know," during an interview. I disagree. It is okay to not know something. When it comes to most careers, and software especially, there is an abundance that we do not know. That, to me, is part of the draw of any career: Learning new things.

To be clear, you shouldn't just say "I don't know" and leave it at that. Talk about what you *do* know. If you are asked about Websphere and you've never used it, take this as an opportunity to talk about other things you may

have done that are similar. In my mind, its never a good idea to take a job that will be boring – and a boring job is any job that you already have all the skills for.

So use this as an opportunity to discuss your eagerness to learn all about Websphere, or any of the “stuff” that the employer is looking for. Enthusiasm goes a long way. Articulate your interest and desire to learn. Enthusiastic people, I've found, are much better workers than unenthusiastic smart people.

If you are sick, reschedule the interview

Its just plain rude. Nobody wants your germs. I think you'll find that those interviewing you appreciate the fact that you are being considerate of others. Also, it is very difficult to interview without a clear head. And if you're blowing your nose every 2 minutes, nobody will want to shake your hand.

Be prepared

There is no possible way to prepare for all the technical questions that may be thrown your way. Cramming for the SATs would be easier than cramming for a job interview. If you need to refresh your memory on some things, by all means, do it. But you're not going to learn everything there is to know about Spring MVC or FuseESB in an evening. At best, your studying may help you with a few light questions. At worst, it can lead to an attempt to BS your way through. And BS'ing is *always* obvious!

“*This is kinda of like the first tip, “be yourself,” but a little different. You may get some targeted questions about a specific skill. If you've lied on your resume (don't lie on your resume), you're in for a very awkward conversation*”

Dress Appropriately

Does this even need to be said? Wear a suit (well, sort of). These days, I think a suit coat is optional (especially in the sometimes sweltering heat of Raleigh). Some would argue that point, and there are certainly positions (executive and sales come to mind) that may require a full suit. Personally, I'd rather be comfortable and not sweaty during an interview. I've interviewed candidates who have scrapped the coat, and I didn't think anything of it.

Does it even need to be said that you should wear a tie and your clothes should be ironed? No khakis allowed. Dress pants. If you aren't one who is very good in this area, ask for help. I always ask my wife to assist when it comes to picking out a shirt and a tie.

Don't chew gum. Do have a breath mint

Enough said.

Smile

You may be nervous. You may be thinking forward in your head, trying to formulate your next response. I'm not suggesting that you shouldn't be zoned in and focused on the interview. Clearly you should. But a smile goes a long, long way. Not a fake smile – a genuine “I'm happy to be here” smile. Not a crazy, forced smile either.

Use the restroom before the interview

Trust me.

Ask questions

But don't just ask a question so that it sounds like you've done what is expected. Ask real questions – things that you are curious about what want to know. This part requires that you have done your homework and researched the company. You can learn a lot by digging through a company's web site. If you've done your homework, you won't feel any pressure to make up a question – you'll have honest questions. These are the best kind.

Take notes

Use something semi-professional looking. Not your kid's notebook. Not your phone. Not the palm of your hand. Pickup an inexpensive daily planner if you don't have anything else.

Assuming you want the job, be interested

This is no time to zone out. Hopefully you got some sleep the night before. And if you didn't, drink some extra coffee.

I'll never forget the interview I had in Raleigh before moving here. I was interested. They were interested. I flew in the night before, and my flight was delayed by nearly 3 hours. I didn't arrive at the hotel until midnight. I then had to iron my clothes. I was exhausted, but because I was nervous, I couldn't sleep. The following morning I had some extra coffee beforehand. This was the longest interview of my life: Literally 7 hours of interviewing, including lunch, meeting with 5 different people one-on-one, and a 30 minute presentation to a room of about 15 people.

How did I get through it all? Caffeine certainly helped. But that alone wasn't enough. I had to tell myself repeatedly, “There will be plenty of time for being tired later. For now, I need to be on.” I got the job.

Check LinkedIn. Do you have any shared connections either with the company or with the people you will be interviewing with? Find out from the people you already know what they know. Maybe you'll learn that you don't

really want the job. Maybe you'll learn that you really, really want the job. Maybe a friend of a friend can put in a good word for you.

Follow up, but don't be annoying

There is plenty of advice out there on how to write a follow up letter. Be sincere, but not ridiculous in an effort to flatter or seal the deal. If you enjoyed meeting someone, say it. If you want the position, use the proper wording to articulate the fact that your part of the interview (remember, you interviewed them as well), went well. If writing a letter or email like this off the cuff isn't your thing, look to Google for some tips. And yes, following up by email is perfectly appropriate. Personally, I can't imagine getting a "thank you for interviewing me" letter with a stamp on it.

As part of your follow up, you should have gotten the appropriate names, contact info, and business cards. If the hiring manager doesn't offer a business card during the interview, ask for one.

One follow up email is sufficient. If you don't hear back for a long time, go ahead and send another. Be sure to include your contact information and say something like, "If you have any further questions for me, don't hesitate to contact..."

Generally, if an employer doesn't want to hire you, you'll get a quick response. If the employer is interested

it may take a while. They may have other interviews to conduct. Additionally, the process of presenting a job offer can take some time.

Assuming you don't want the job, don't interview!

If you've done the research, and you have discovered that you don't want to work for the company after all, it is courteous to cancel the interview. Interviews take time – yours and theirs. Any company that is interviewing has blocked off time from multiple employees for the interview. If they are interviewing a candidate who is not interested, it is a big waste of time. They could be continuing their search. It is not a courtesy to follow through with a job interview because you'll feel bad if you cancel.

Finally, for the love of God, don't take phone calls or text during an interview.

CNBC: Managers to Millenials: Job Interview No Time to Text.

MATTHEW RUPERT

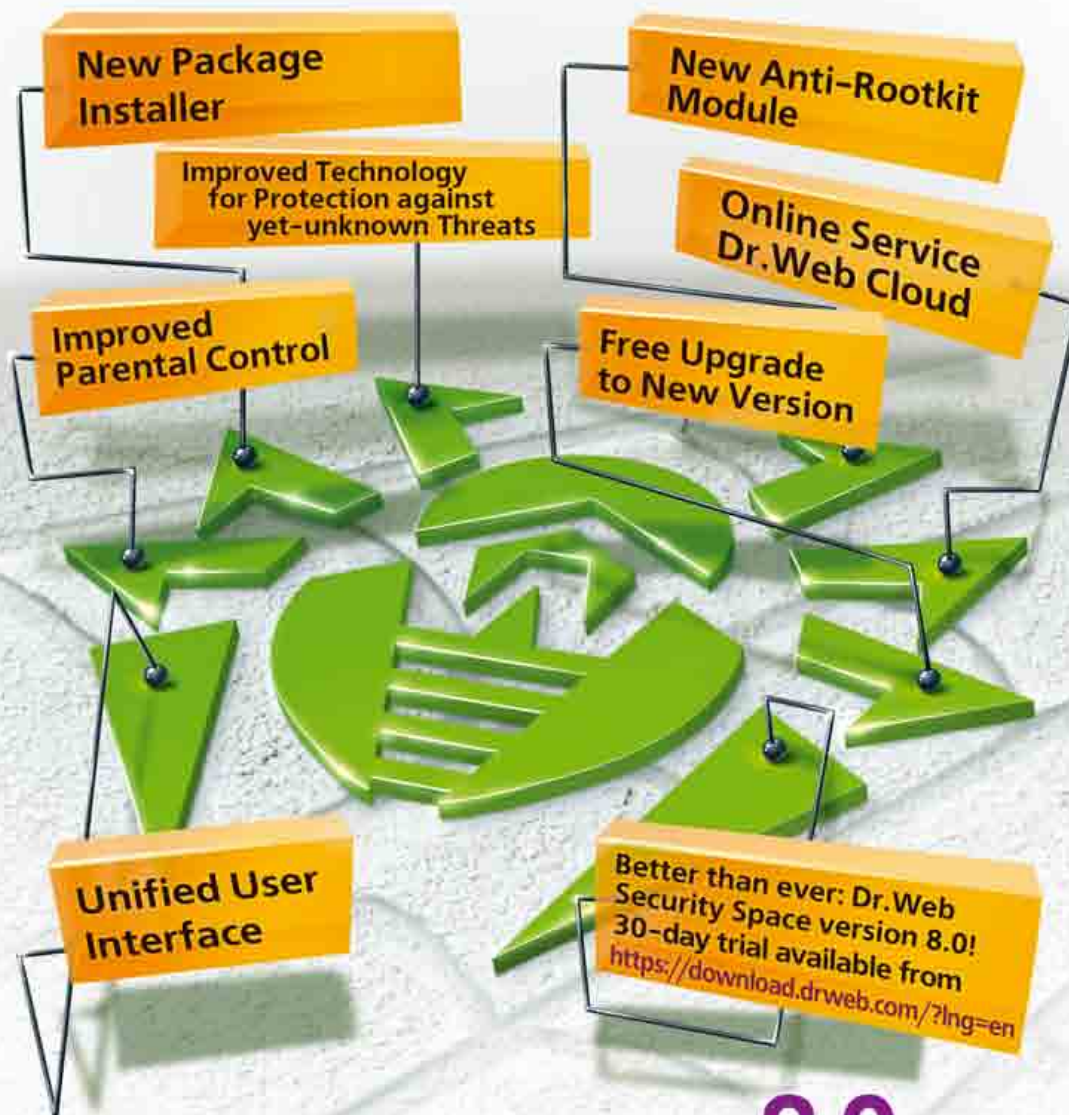
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