

Kamil's Meeting Notes

Mon, Jul 22, 2024 12:14PM • 42:01

SUMMARY KEYWORDS

project, metrics, security, software, quality, implementing, prioritize, ensured, automated, stakeholders, financial industry, testing, standards, team, quality metrics, measure, regulations, measurements, tests, gather

SPEAKERS

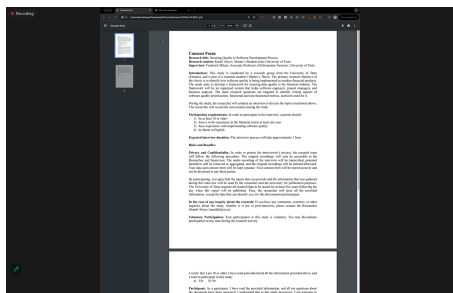
Kamil Aliyev, Speaker 1, P5

P5 00:00

In Progress. The

Kamil Aliyev 00:08

transcript, your



P5 00:13

Trend recording. Casey recorded. Oh yeah,

Kamil Aliyev 00:22

man, captured a record Holiday. Recorded

P5 00:41

your hearts of mom. Have Okay, so, yeah, sorry, okay, I let that Cat Lady shut us the Brazil issue better.

01:31

You know,

P5 02:00

okay. Just the

Kamil Aliyev 02:20

problem, ladies,

P5 02:22

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Kamil Aliyev 03:35

visa.

P5 03:39

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Kamil Aliyev 04:12

so

P5 04:16

Remember that

Kamil Aliyev 05:00

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P5 05:38

Expect Aliyev color you

Kamil Aliyev 05:43

that much more of them a serverless.

P5 06:12

All of them are also the math is

Kamil Aliyev 06:22

not buchalota.

P5 06:24

It, then you do based on those, also Brazil, part Doctor Poland is still Holland. They actually Press visa. Professor, a Yeah,

Kamil Aliyev 07:22

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P5 07:55

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Kamil Aliyev 08:00

I smell Aliyev. Aliyev told Vishnu

P5 08:10

for Aliyev, hashimli academia, Aliyev, Aliyev, design Aliyev, Aliyev, Singh from there was to thank our lives. PhD, initially, Aliyev hashimli asked word machine Chatham special, I'm I feel if them,

Kamil Aliyev 09:09

again,

P5 09:14

method. long. Absolutely yes

Kamil Aliyev 09:37

digits.

P5 09:45

International Washington. Shake Aliyev.

Kamil Aliyev 10:04

Aliyev on the internal nation type LH study it Should do nobody for my children. Know, I feel

P5 10:43

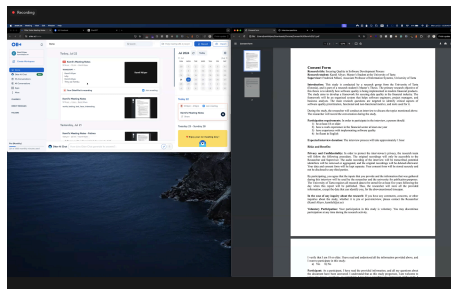
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Kamil Aliyev 10:52

No, indeed, But maybe, Nigeria. ran all the server today and necessary damages on the DB metals. Just

P5 11:49

All of it again. Recordings, you have mercy. ivity. okay,



Kamil Aliyev 12:14

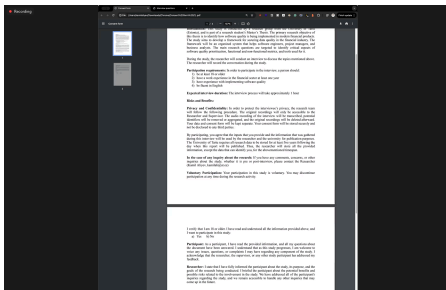
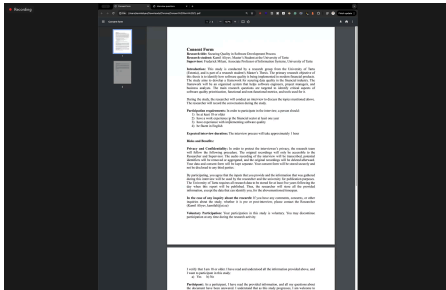
the consent form.

P5 12:16

Just Aliyev Sena process, standard consent form, the sorry can be called some

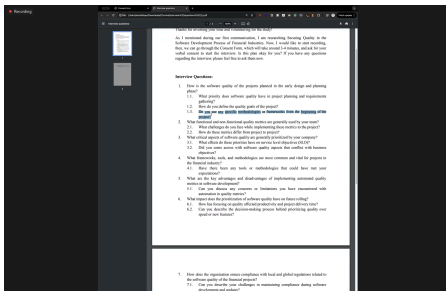
Kamil Aliyev 12:27

Aliyev, Boy Valiant, here comes acquisition, also Interested ability, yes, but I don't around the hearts ambition. So there's the transcription associated, hey,



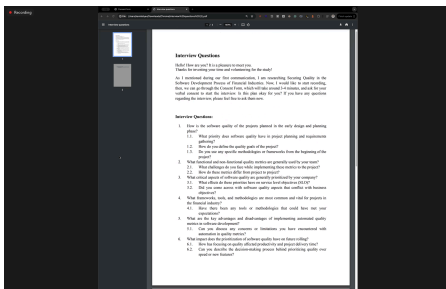
P5 13:18

sorry, sure, specific methodologies or frameworks, or should Aliyev taste?



Kamil Aliyev 13:40

Aliyev, shader, management. management, TV dish that the Jenkins is that the day answer on the ambassador, I'm recording a hello. How are you doing?



P5 14:13

I'm good about you.

Kamil Aliyev 14:17

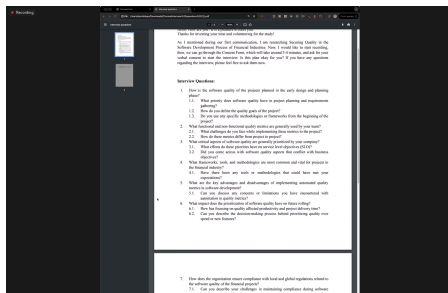
You good as well. Thank you for asking. It's a pleasure to meet you. Thanks for investing time and volunteering for this study. Let me inform you about this study first. As I mentioned during our first communication, I'm basically a master's student in University of Tartu. I got my master's degree. I'm getting my master's degree in software engineering, and I'm researching securing quality in the software development processes of financial industries, financial products. Now I would like to talk about like, what, what we're going to record? We will record only the interview questions and their answers, and we will remove all the identifiers. I sent you the consent form already, so you know about them. Are you okay? Is recording? Yep,

P5 15:12

that's fine.

Kamil Aliyev 15:14

Thank you. Then let's go through the interview questions. So the first question is, how software quality of the projects planned in early design or planning phase in your experience. So



P5 15:29

Well, actual software quality is a priority when you start in your project. It should be integrated the project's objectives, and you should fit this requirements to the system requirements. System standards. Alongside we are also defining functional requirements that where we will share them with stakeholders, and we will add those software quality standards along the functional requirements, so also stakeholders can see and understand the importance of those software quality standards or requirements and, yeah, okay, about the priority you already told but when you start basically you mentioned that the in the project specifications, like in requirements gathering or how it's implemented in generally, when you start project, when we first start thinking about software quality standards, then we talk to different stakeholders. We usually gather with development teams, and usually we have called management plan document where we write outline all the procedures, problems, responsibilities, or, for example, tools that we are using. And, yeah, we are gathering all this kind of things with our teams, people, stakeholders. And there we include, for example, performance benchmarks, I don't know, security requirements, or, for example, in financial industries, we also add

compliance with financial regulations, because we have some regulations with government or different financial stuff that we should take care of, yeah, we also add them.

Kamil Aliyev 18:02

Okay, got it. Do you use any specific methodologies or frameworks from the beginning of the project, or it comes more when the implementation starts? So

P5 18:14

we usually use Azure, specifically framework for our Cantonese integration or testing and delivery. Here, we also add those quality requirements, and we usually maintain those requirements with CICD and testing parts. We also do DevOps part, which makes it easier when we create anything, add new functionality or something, we automate all this process, and we do, as I said, this kind of testings and so on, which measure the quality of the software. So we know every time we build a new thing, we know that everything goes with the plan that we have created in the beginning.

Kamil Aliyev 19:15

Okay, got it. What about the quality metrics? What functional and non functional quality metrics are generally used by your team.

P5 19:26

So usually in our team, we use functional metrics and non functional which is, I can give you several examples about functional metrics, like defect density or code coverage, which is related mainly the project we are working on. And also we have non functional metrics, which is performance metrics. For example, here we measure the response time. For example, we have security metrics or usability metrics in the security metrics we have, for example, security incidents we have during the project we are using, or some of the projects, we have usability measurements, which also we have a project that get feedback from user, how satisfied those users we have, for example, satisfaction scores to measure those things.

Kamil Aliyev 20:34

Okay, what challenges did you face while implementing these metrics to the project.

P5 20:43

Usually the main problem when we define those metrics is how we will measure those metrics. But usually, we are maintaining those things with our past experiences. We are trying to balance those metric tracking with project time clients, and sometimes it happens, your resource constraints can be also difficult to make it fit to your project, but usually the main challenge that we face is measuring them. We should think about how to measure them and try to fit those measurements. And for example, we took some limits or minimum maximum criteria for for those metrics, for example, and the security part, we define how many security incidents we can have. It's kind of goal. You cannot say that, okay, we will have exactly this number of metrics. Sometimes it happens like 1000s of problems can appear, but usually defining those things can be challenging, or in the beginning you put some response time measurement, but at the end, your project can go bigger and bigger, and all things can change during

the time, so you should think about those things carefully before defining those measurements or metrics.

Kamil Aliyev 22:38

Yeah, completely agree. What about like, how different is this metrics from project to project? I know that there are some general metrics that we can use in all projects, but for about like, some specific ones,

P5 22:55

uh, especially in the financial industry, uh, projects can be very different from each other. So every project has its own priorities. Some has some should have more. I mean, it should give you quick answers, or it should react a bit fast. Or we have some project that is not time cons, they are time consuming. But in those things, we need some security measurements. We should also take care of security which is which we can have in the for example, online banking, we should take care of security standards, or we have performance benchmarks for some projects that we are Caring but those things sometimes has have less security standards than others, where we need performance rather than security. Therefore, we talk to virtual our stakeholders, and we get information about from them, and depending on this project's goals, we prioritize different aspects. For example, one can be security, one performance or other things I mentioned before, those different metrics so stakeholders usually with the project.

Kamil Aliyev 24:45

So it more depends on the like type of the project that you are implementing. Yes, exactly got it. What about the like? What critical aspects of software, software quality are generally prioritized by the company.

P5 25:04

As I said before, we usually prioritize security, because it's financial industry, we should really take care of customer security, privacy. But other than that, we have other critical aspects, like performance liability and so on. So, as I said, and the financial industry, storing sensitive financial data is very important. We should take care of them. But other than that, we also perform, we should perform efficient response time under high lots, because in the financial industry, for example, some companies make salary payments and you have 1000s of requests transactions the same time, and you should have minimal downtime on those situations, so you should also take care of those.

Kamil Aliyev 26:10

Got it What? What effects do these priorities have on the service level objectives or SLOs? So

P5 26:18

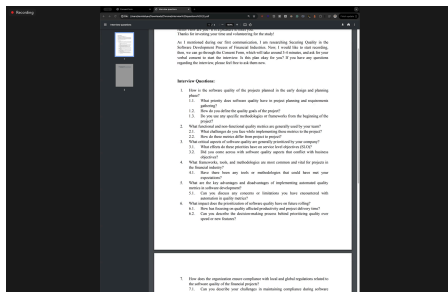
usually, it leads to stricter, best lows. And there we have, for example, as I said, we should have higher uptime guarantees or faster response time. Those things create strict service level objectives, which you should take care of, and we also prioritize security vulnerabilities, which will say very important for us, but meeting this SLOs requires testing or continuous monitoring, or we have teams for rapid incident responses, so they deal with those incidents They try to fix them as quick as possible.

Kamil Aliyev 27:22

Did you come across with software quality aspects that conflict with the business objectives? I know that it's common case. Can you tell about one of them? Well,

P5 27:33

sometimes you need a future. Your stakeholders want them rapidly they wanted right now that it should be implemented, but most of the time we prioritize security, because we should be ensured that the future that we will implement or deploy should comply with the security standards we have. So balancing this quality security requirements with those kind of features can sometimes create tension and those things requires careful prioritization and risk management. We usually do risk management or those things and assess them. Got it.



Kamil Aliyev 28:34

What about the technical side? What frameworks, tools, methodologies, are most common or vital for the project in the financial industry, as we talk about,

P5 28:46

I mentioned before, we are using Azra and DevOps, things we have, for example, JIRA for project management. We are listing all the important incidents and prioritize them and solve them. Or we have Jenkins for CICD. We are doing automated test, automated builds, so we we know those things are automatically tested, and we can measure the quality of our project, and also, when we have any issues with the product that is deployed, we can solve them easily. If you solve it, we can publish them as soon as possible. Or, for example, they have SonarQube that we are using for code analysis. It also provides you some code coverages and so that test has those kind of tools

Kamil Aliyev 30:06

got it. What are the key advantages and disadvantages of implementing automated quality metrics, automated quality tests and software development? What do you think about it.

P5 30:21

So the main advantage of using those tools for measuring quality metrics are for increasing accuracy consistency, and we also improve the speed of collecting and analyzing those quality metrics. When you automate them, you can get, for example, charts. You can get different kind of visuals so you can see how those metrics are works and also automating the automation reduce the manual errors so it

has less human interaction, so it allows you continuously monitor and get quick feedbacks. You get email, you get notification or something as soon as the error appears.

Kamil Aliyev 31:22

I Can you discuss any concerns or limitations you encountered while automating tests and metrics?

P5 31:34

Actually, the main drawback of this kind of automation as maintenance costs, and sometimes the automated reports or the tools that the measuring can give you false positives or sometimes give you false information about how the project works or about those metrics. And also you need, you need to have some people personal that can work this kind of tools very efficiently, and they have to create the best environment for those kind of things. So finding those people is sometimes art,

Kamil Aliyev 32:40

quite hard, and also it's like a technical that issue, if people don't know, you need to teach them as well. Yes, exactly what impacts does prioritization of software quality have on future rolling it's like a pain point, one of the pain points for the projects, because it can take some time,

P5 33:10

yes, especially in the financial industry, and the short term, You see that it takes time focusing on quality often leads you your work get slowed down, and you should take care of delivery process due to This testing and quality assurance activities you should take care of them, and it may have lots of it can take much time than expected, but in the long term, actually, it's vice versa case. Over the time you tell that, how much time does it take to deliver those products, and because you are doing testings and so on, you know your system is more stable if you don't, if you skip those kind of software quality measurements, then you can have your product a bit rapid, but then you can find some issues or some security problems that also delay the release of your project. So in the long term, I guess it's better to do those testing measurements.

Kamil Aliyev 34:48

I agree. How has focusing on quality affected productivity and project delivery time in your experience?

P5 34:59

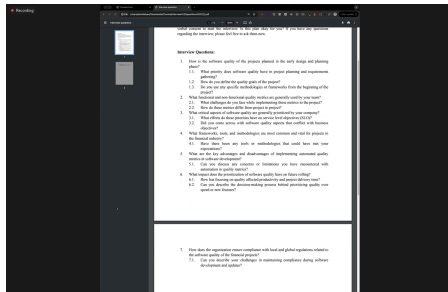
So as I said, sometimes it delays the delivery time, mainly, but if you have more predictable or manageable project timelines, and if you have good teamwork inside the team, you can increase the team productivity and fourth and so you can have less time to spend doing this rework and fighting those issues so you don't need to deal with them if you have all this predictable, manageable project timelines.

Kamil Aliyev 35:52

Have you ever experienced that team basically needs to push deadlines just because that there is some issues with software quality ever

P5 36:02

so if you define your software quality measures, metrics, your software quality goals, then it's easier to find problems in the beginning of the project, but sometimes you just skip, or you just don't see the some problems that is that appears somewhere at the end of project. But in these times also, also project managers or team leads should take care of so they have to try to decrease the affecting time of those problems. So they are doing very great work of decreasing those problems. But sometimes it happens, it delays the project.

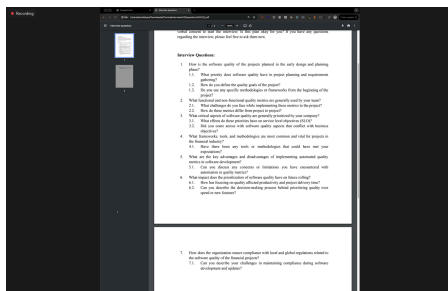


Kamil Aliyev 37:07

Got it. What about like, can you describe the decision making process behind it, like when you are prioritizing quality over the speed or new features?

P5 37:21

So this decision making process usually involves elevating potential risks and also impacts the releasing the software that we build and it also we should also take care of what benefits we will get from these features, and should we need to get them fast or not. So we involve stakeholders, I don't know, business analysts, developers, developer teams, and also we have quality assurance teams that also, we collaborate with them on those factors. So if we have risk management strategies documents. We gather customer feedbacks that we are using in our that people use, our tools, projects, and also we have some regularity compliance, which is related to government so on, which plays crucial role in this process? We gathered directly we prioritize security or performance measurements. Yeah,



Kamil Aliyev 38:58

it's great that you mentioned this regulations. My next question is that, how does the organization ensure compliance with local or global regulations related to the software that you are developing?

P5 39:14

So we do have GDPR, our compliance is ensured by standards like GDPR. This has some kind of recolor outlets. We have documentations all the work we are doing. We document every process of our

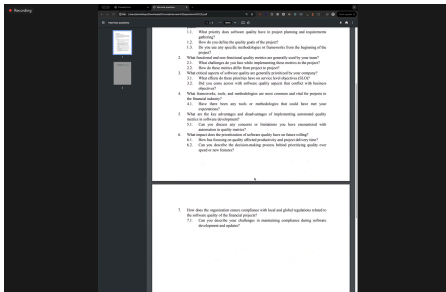
project and we know which steps we done something, or at the end, if we have any issues, we can take a look and find where is the problem. Other than that, we are implementing best practices for data protection and security. It's very important in financial industry.

Kamil Aliyev 40:11

Can you describe the challenges in maintaining compliance during the software development and updates?

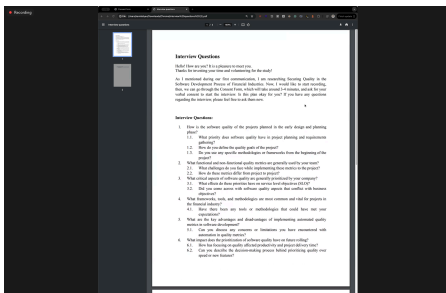
P5 40:21

So sometimes those regulations are a bit hard to understand, and they are we should keep ourselves updated with the changing regulations. We should be ensuring about all team members are aware of those standards and they follow these protocols, and we try to make sure we are integrating those compliance checks in our development workflow and yeah, maintaining this compliance during develop. Continuous development requires monitoring and agile adaptation, so you do tests



Kamil Aliyev 41:23

Yeah, got it to be honest. I don't have any other questions. I just need to thank you for attendance and helping us to do the research. Thanks for it



P5 41:37

was very interesting interview.

Speaker 1 41:39

Thank you And I stay nice, too.

