

DevOps - Module 6: SonarQube For DevOps

DevOps

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Video: Static Code Analysis

Code analysis.

Okay, let's see. What is it actually
is what we are trying in static code analysis.

We say it's a process of analyzing the source code
without executing it.

We are not running the application. Okay?

We are just going to analyze
what the code was written so far.

Now why we are analyzing simple.

This is what the outcome of analyzing the code is.

It examines the code for issues, vulnerabilities,
coding standards, best practices.

Are you clear everyone? So every language you learn, right?

Don't you think they already teach you inax best practices?

What pitfalls to avoid.

These are all part of coding standards.

You learn if you are learning a
programming language technique.

Now these things, how do we recognize means these tools,
like generally we call them as static analysis tools.

These tools already know the coding
standards, okay?

It's like what? When you're defining a database
connection, it should be closed.

If you're defining a variable,

it should be initialized, okay?

It has all those rules, uh, those rules,
whatever is already pre-written in the system,
your code is going to be compared with it standards
and then it'll give you all the list of possible issues
that might be coming inside your coach.

Clear every, what I'm trying to say, I'll show you also
how those things will actually look once we have a usable
system in our parts.

You see, literally this is what our goal is right now.

What? Right now you see you have your code
analyze by using some sort of tools
and the third step is list all those particular defect
and then what report back to developers.

Yeah. That's what exactly we want to do, right?

Clear, good what I'm trying to say.

Okay, so generally if I say this part,
like going and checking the list of defects.

Now, now what can be those list of defects means?

Just give me one thing.

This is what we just read and see.

These are all the things generally referred to
where programming, correct?

So those issues will be analyzed by this things.

Now the thing is, if you don't analyze also still your
project will work, but there can
be possible issues in the future.

So instead of going further ahead then
and there itself, we are trying to fix the issues.

So that what, from the initial part
of the development itself, we are going
to have some quality code with you.

That's the main reason for going in
and, uh, sorry, uh,

implementing this practice called static code analysis, right?

Okay.

So simply end of the day, the goal is this.

This will promote code quality
and also there will be consistency
and reliability across all your software projects.

So how do I get it done? Now is the question.

That's where we get a tool.

This is what we are using, okay?

It says it's an open source platform developed
by a company called Sonar Source for
continuous inspection of code.

Call it. It's work is only one. You gimme the code.

I'll analyze it, I'll tell you
what are the issues in your codes, okay?

Uh, now I'll also show you some
maybe dashboards, how it actually looks.

You know,
you can see here from official Wiki, uh, as you can see,
it's for continuous inspection of code quality
with review process, uh, which can detect bugs
and smells onward.

29 plus programming languages.

So once it detects, it'll show you a
dashboard like this.

What language, what are the issues?

If there are issues, it'll show you here like this.

We'll get the dashboard from sonar very clear.

Once you analyze the code,
once you analyze the coordinate will show you like
how many issues are there,
what are those issues and everything.

We can go ahead and start checking out from this particular

software, right?

And we are going to do the same.

Video: SonarQube Setup

Then do the analysis for the project.

So now if you want to set up the sonar queue, this,
there's some particular requirement to go with.

Let me show you what that is.

Like I said, not terminate the web servers you created in
the last session because these are not going to be useful
for us both in Azure or AWS.

Whatever the servers you created so far, get rid of them.

Sonar cube requires something called ST two medium.

So now onwards our small machines T two micro
will not be sufficient.

From here we need bigger capacity machines.

T two medium, which is four GB ram
and two virtual CPUs with around eight GB of storage
sufficient as we used in Azure.

We call the same Mr Mass B two s.

B one s was one CPO one gigabyte of Ram

B two s is again same four GB two CPU almost for both.

Either you go with T two medium or B two s.

The charges, four roofs per heart,
not so very cost you do it then get rid of it.

One R is sufficient. You just get built
for, am I clear everyone?

Right? And this software called Sonar Cube, it's going
to work on which Port 9,000.

Okay, so make sure you add Port 9,000 as the part
of security grouper, network security group,
either AWS or Azure.

I'll show you how we are going
to add it both in those particular missions
and then we'll continue with first let me set up the machine
and then we'll go ahead and start doing it.

Uh, same thing guys. If you want to do it in Azure,
same our AWS.

Like I said now there is not much drastic differences.

I'll show you same way how I can do it here.

I'm gonna say launch an
instance here.

I'm gonna say this thing as
sonar queue and there is no difference going to 22 version.

Now I'm not gonna prefer T two micro.

I'll change the capacity to what T two maybe,
which is basically going with two CPUs
and four gigabytes of wrap.

Same key pairwise. There is no difference.

Whatever you have, you go ahead with it.

Uh, now here I need to add 9,000.

It, it'll not be available.

Make sure you click on edit
and then you update the things by default.
SSH is there. Now I'm gonna say add one more
and this is first nar.

It goes with port number. What like this you need to add.

So in the future, any custom ports, if you want
to add this is the approach feature, like a lot
of tools are going to be coming up, right?

So they work on different different port numbers like
how STTP web server is working on port 80,
same way SSH was working on 22 Sonar Q1 one Port
Nex is on one port.

Jenkins on one port, right?

Kubernetes on one port, Docker on one port like

that there will be different ports based upon the applications.

We need to go ahead and add the relevance.

Okay, so now I added port number 9,000 and as usual storage is a GB.

There is nothing to change. Simple.

Now the only difference is what type I changed port number.

I changed remaining. Everything is same. I'll say launch.

No, I did not specify the address from where it should be allowed.

I'm just saying 0 0 0 slash zero launch.

Then let's go into this particular mission and then we'll start working.

Same thing for Azure. Uh, Azure also what Azure just go ahead and create.

There is no difference. Just do SSH create version machine.

These is all things you know know already here.

One to 22. You see what I selected?

B twos. Generally what?

When I say see all sizes, this is the one we selected initially.

Sorry, B one s, right? This one.

Now what I'm selecting B, B twos, which is going with two CP and 4G grams.

Same configuration and that's it. You're done.

There is nothing else to change.

Just go ahead, select your keys and all of that and say Rev and create by default here also only S, S, H and HTT P will be there but not 9,000 or dollars.

Go ahead, create the server.

Once the server will be created, then you'll see this particular screen.

Agree or not your server is ready.

Azure select your server as usual.

See there is networking network settings.

Do you understand the point is launch the server
after we are adding it, click on network settings.

You see here what it is showing me.

Network security group

rules are here.

Launch a system, select the system, go
to networking under networking network settings.

Then you'll see what network security group rules here.

Click on create portal

and say inbound port incoming traffic.

Click on that button here. The port number will be added.

Add port 9,000.

Add, that's it.

Understood the differences.

People who are practicing in Azure, everything is same.

Accept how to add a portal, launch a server, keep it ready.

Then go to the network, network settings
and what you do add portal, then say inbound portal
and what was the port I added nine close in the future.

Also when I say add other ports, now do exactly same.

Good, clear everyone.

Okay, done this. Now I have the system running.

I will go ahead and connect with this system.

Now in this system,

how do I know if Port 9,000 is used or not?

I can go with the command called pseudo
SS iPhone

and only 22 because it's a brand new machine, right?

We did not set up anything.

Now here Port 9,000 should be used by whom?

Who will sonar queue?

Our app called sonar cube needs to be set up.

Now I'll give you the guide on
how to set up the sonar queue.

Let's see.

So, so far clear. Everyone tell what we did right now.

So I want to start setting up the sonar queue.

So I'll give you the guide. It's already there in
some of the GitHub accounts i's open this link, how
to install sonar cube one, open two.

And you see a lot of things they want you to update,
install Java, some database configurations.

Quite a big setup.

If I go through all this, I,
I'm not doing anything installation.

If I want to install Sonar Cube, this is one
of the guide which I followed up.

If I go ahead and set up the sonar cube in this vari,
it'll take at least 45 minutes
only for installation.

Not using, I'm just saying for installation it'll take
around 40, 45 minutes.

Does it make sense to waste that much amount of time?

Are you getting the point? No. Right?

Why should I waste 45 minutes of my time
to just install something?

Uh, now you'll actually think like a DevOps
build, test, deploy,
create any software and more reliable.

Do you remember how do I get fastness?

I said we use one concept called as containerization
where there is a software called Docker,
which will make the things faster here.

What I'm saying, I'm not teaching you Docker,
but I'm telling you how Docker can change the way you work.
Am I getting the point is like now you are seeing right?

Uh, chart GPS

and all these things, generative tools, they're helping you
to get a lot of time saved by going through multiple places,
checking the documentation and all of it, isn't it?

Exactly. I assume the same thing. Now everyone is using it.
I think most of you guys, instead of going with Google,
I'm pretty much sure you might be going
and searching for solutions in the generative
tools, correct?

Exactly. Same way, instead of going
and wasting my time, like 40, 45 minutes
to install the same thing, I'm gonna use Docker,
which can hardly get the same thing done
within two to three minutes.

I clear what I'm trying to say.

That's the purpose of Docker.

Actually I'm not telling, I'm teaching you Docker,
I'm telling you how we use Docker to optimize
In the future you'll learn anyway.

We have a separate like almost 10 session, like two weeks
of sessions only on Docker.

You'll know that. But as of now we are using it.

So the idea is

You have a complex setup process, which is this,
I want to simplify it by using
what Docker.

So Docker is a tool which can help
me make the things faster.

So using Docker, I'll set up.

So not really get the point is,
so actually it'll take 45 minutes generally if I go,
but if I use Docker within two
to three minutes I'll be getting the same terms.

So almost lot of time was saved

and end of the day you've got the software unit.

I'm not interested in how to install it.

I'm interested in how to use it. Clear.

Everyone got the point. So right now I'll just give some commands, run it.

You don't know what they're but in the future you'll eventually understand.

Those are basically Docker commands.

Technically here everyone. Okay, let's see. Right now I'll show you as well.

In terms of the system, this is my system.

Docker command is not found simple. What I'm going to do, just a second, I will give you the process.

We are installing Docker.

You see guys, in the last session we have written one shell script to deploy login application, isn't it or not?

Same way they have given one script.

I'm using double gate command downloading that script from this link.

Same like in the last class Binge shell.

You see Curl command, downloading, installing, they're going through this.

Uh, exactly same thing I'm going to do here.

See, right now there's no script file, nothing.

I just said list. You see I'm downloading and installing that.

Shares script are clear.

What I'm trying to say, there's a script given for a Docker installation.

I'm using double gate command downloading that script, installing the script.

Good, clear, simple.

I just copy paste this link.

That's it. I didn't do anything like literally I copied a command, I paste it, document is ready.

I clear what I did. I just installed some software called Docker.

Now using this Docker software, I am gonna install Sonar.

I already showed, you know Sodo, ssen, TPL I we don't have anything that is running on 9,000.

Simple copy this command.

I said now you don't know what that is. Don't care.

Also just copy paste.

Now Sonar

is what I'm trying to say.

Now I didn't waste a lot of time to go ahead and install the things in matter of minutes.

I got the same thing now.

Yes, sonar Cube is running on port number 9,000.

Now I'll go ahead and give the request.

That's my IP address.

If you don't give anything, it is by default port 80.

But where we are sending the request 9,000, right?

Say colon, then give the port number.

Now we are sending the request to this server on port 9,000.

Click on continue.

That's it. Now you got Sonar software up and running within like matter of less than five minutes.

Now I want to use this particular software.

It's asking the credentials, right?

I updated everything in the documentation.

You can clearly check. So verify sonar queue with your browser using Port 9,000.

The default credentials sir,
username is admin, password is reset.
What? These are my default credentials.

Once you log in it'll change.
Ask you to change the credentials.
Once again, we'll see how it can be done.
It's asking you to go ahead with the old password,
update the pass and follow the password policy.
I will charact one upper
case, lower case number.
I'll say update. Welcome to,
so you see it's showing like this is how we are going
to show you the things, what issues and everything.
I'll say later, I'm not interested in it.

Video: Project Setup SonarQube

It is asking where do you want to create the project?
Obviously local right now in the server,
I want to go ahead and set it up.
Project name alums
and obviously all the development code written
where it'll be there initially.
In GitHub. In GitHub, in which branch? Not main branch.
Dev branch. Main branch is production code.
You'll not directly put the code in the production.
First you take the things from Dev, analyze,
then we'll pass the review.
Instead, developer went and verified.
Now generally instead of it,
I'll say put all the code in Dev.
So I'm saying analyze the dev branch. Next clear.
Everyone got the point? I'll say next.
Just use global settings over here
and say create the project.
Now you see it is asking how do you want to do the analysis?

Same locally only in my server itself.

I want to perform the analysis.

Uh, it is asking you to generate some token.

This is like your personal access token.

In the last session for GitHub about we have a token persona cube.

Also there will be a token generate.

Now there's a token. I'll say continue. It says no.

When you start doing the analysis,
then it'll request you the token.

If you don't pass this token, it'll fail.

I'm gonna say continue. Now it is asking,
run the analysis on your project and what is your project?
I should have the project, right? Which project?

The original LMS project. Don't worry.

Now I'll give you the link of the project link in a sense.

GitHub link. Simple.

It's coming from GitHub
Learning Management System.

I said no, I have a three entire application,
a dynamic application database, APIs, everything.

This is a code technical, which is like
almost close to two years.

The that was developed.

It has all the code you see, commits environments,
branches

clear is what I'm trying to say.

This a link of your application code base
and you can see now what languages it was built on.

TypeScript, JavaScript.

It was clearly, hey Java based
or JavaScript based application.

Now. Now what it was asking you,
what is your project type?

Now others, right?

JavaScript, TypeScript, go Python, PHP and others.

I'll select it. Which os we are using right now?

Linux. I selected that part.

Now it says download and unzip the scanner for Linx
and execute the scanner by using the following approach.

Now I'll tell you what they're trying, it might be confusing
because you never use this software.

Now you have Sonar Cube. That is one software.

Sonar Scanner is another software.

Clear Sonar Cube is one.

Software Scanner is another software.

It says not straightforward.

Running analysis is straightforward.

You need to execute the following commands in
your project folder.

So what they're saying is,
or if not, I have already created one
image, but the same purpose.

You Have the code.

This is how it works.

You have a software called Sonar Scanner.

It will scan the
code, okay?

After scanning, it'll get the result.

Now that result will be loaded in sonar queue.

Sonar Cube is like what A dashboard,
sonar Scanner is like IT software,
which is basically like this.

I can also, uh, differentiate if you want
to understand this way,
that's it.

In this way you can understand.

So that's why from Sonar Scanner, if I want

to perform the analysis, I need what Token?

You saw the token and where Sonar Cube is running,
are it clear?

That's the same information which was
presented in the screen.

Actually now if I go back to that screen

To do the sonar scanner, it requires a project name,
location where the code is there, documents current folder
in which URL the sonar cube is running
and what is the token
understood the point.

It has all the details which are required
to perform the analysis.

Good. What I'm trying to say, ah, now what I need to do,
this activity rate, meaning I need to analyze the code,
meaning I need to run solar scanner.

Now technically where in the project code,
but the code is there in GitHub.

So now I need to go ahead and get the code
and do all the operations.

Now can I do it? Do I know how to work with GitHub?

Of course, right? You know, you know GI clone, GI check out,
know all those activities, agree or not.

I'm going to do the same thing.

Now. I'll send it you some new features. I.

Video: Forking Projects

I said no.

Things will keep on coming up with our tools moving forward.

So GitHub again, I'm getting back to GitHub.

What it is saying. Fork forking.

A repository is a new thing. Like how you cloned.

There is also something called forking. Forking.
A repository means creating a copy of the repository.
What you guys did in the last session, you clone,
you got the project
where, where you clone.
If you clone it in the server, it'll come into the server.
If you clone it in your laptop, it comes into your laptop.
Agree or not. Forking on the other hand, we
copy this repository into other accounts.
I have one GitHub account. You have one GitHub account.
Where is LMS project? Is it there in your account? No.
Where is it? In my account.
So if you fork, my entire code will come into your account.
Forking is applicable for open source projects,
technically public projects.
You see my repository, which I showed you.
Is it public or not?
Hmm? You see here it says fork.
So 740 people already copied this project into their records
while doing the practice
and understood the point is what I'm trying to say.
Uh, exactly. Same way.
Who needs to fork you people
Because you want to practice next.
You want to take the LMS app
and you want to figure out all the things, right?
So you will fork it into your account.
I'm gonna show you, we have the developer account now in
that there is no LMS project.
Now we'll go ahead and fork it.
Let me show you how simple it is.
Can you see any LMS project here? No. Right.
What I want to do, copy that.
URL go to your account,

open that URL
you can see
and I'll say this button called fork.
When I click on fork, you see what it is saying?
It's a copy of repository, it
experiment without affecting the original project obviously.
Right? I can't go ahead
and make my code accessible by to you guys.
Maybe you might mess it up.
So I'm saying what original copy there in my account secured
you people make copies of it.
Miss it if it's not working later on delete
and one second fork.
Original code base will be always in this account.
And you see when you're forking what it is, forking only
main branch uncheck this
because there are other branches, right?
Copy those branches. Also, are you ClearCase everyone?
So while forking, make sure you uncheck this particular
option because if you check it, it'll only copy main branch.
But my repository has other branches as well. Dev branch.
So I want you to take it because in dev branch I made
mistakes ly so that I can show you this issues.
I'll say create fork.
Now you see what happens when I click on create fork.
It's not mine. Now it's yours. So move.
Make sure every one of you fork
and keep this code in your record
for practicing moving forward.
This is must for all sessions.
Docker, Kubernetes, Jenkins, everything.
Don't use mine, use yours. Then you'll get familiar.
Uh, now if I go back to my
dashboard, I'll see three projects.

It is owned by him only. You see it's not by me.
So now I can take this particular code
and I can start working with the things.
Are you clear everyone what I'm trying to say?
So make sure you fork it.
Uh, so now you go with the part why forking is required.
So you fork. Now you can go ahead and start.
And I'll also write one note so
that you guys will not get confused.
I kept the link. Just what I repeated right now.
Just go ahead and do it. Uh,
no from here I'll start going in working with the things.

Video: Project Code Analysis

I took this code, I'm going back to my server.
Do I have any code right now? Here? No.
Right now I'll get that.
What should I do in order to get that code?
How should I get the code here?
Clone. That's it. No.
Is that what you learned in the last session in the C link?
Clone?
Did get the code?
Is it the same thing? Web app, SAPI
web app, API.
The same thing is there. What
it, what I'm trying to say in the last session it did is,
uh, by default what branch I'll get,
uh, where it should do the analysis, how to go there.
It should good. Which branch?
In the dev branch. How I can verify
Now you see how you'll actually use in the realtime GI

and all these concepts.

I understood it. Why we are using CS
for this purpose in the server.

We'll do most of our work.

So at that point of time you need to understand how to work
with command line.

Okay? Goodness. So far here everyone. Uh, next word.

I need to go ahead
and start doing the analysis because code is here.

If I say list, I can see all the bunch of code over here.

Uh, the same thing. Now in this I have multiple directories.

You see there is something called us web app.

That is my web application code cd.

You're seeing all the code now you see this is all my
web application code.

The LMS web application code is this.

Now this code, I want to do analysis.

Makes sense everyone. What I'm trying to do, uh,
to do this word I need sonar scanner.

Agree or not. I just kept the command for you guys.

One second.

Same thing. This thing,
whatever you're seeing in your parts, I sent cd,
LMS web app and you see what I did.

See what I'm using here. One more additional option called
hyphen B, meaning
branch by default.

Get the branch one. You replace your names.

Here you for no, don't use this one. Use what?

Your GitHub I Are you good?

What I'm trying to say? Because you four you'll have your
URL clone with it.

Uh, then what? This is what exactly you need.

Do the things that you're seeing in elate.

These are the details of your sonar cube unit update.

Project name is LMS.

If you change change token, do we have the token
where there's a
token copying it?

You type it in notepad and keep it right.

I'm just updating the document itself.

Update the token. Then

UL you have it.

That's a guess. Now all I need
to do is execute that part here.

It'll show me all the analysis of the projects.

Are you good? Okay, so just let me go over here.

I'm gonna take all this thing out here.

This I'm copy pasting with what my values is.

Each one of you update your values
because your server will have different ip.

Your token will be different.

Understood what I'm trying to say here.

You see it saying loading, analyzing,
see finally says what execution is.

Success analysis report was generated.

Analysis was successful. You can see the results in where?

Sonar cube dashboard. That's why we
needed token and the address of sonar.

Are you clear what I'm saying? Now let's go.

Let's get back earlier in the screen.

This is how it we saw and now you see what you're seeing.

LMS project dev branch,

it's showing me the problems that I have in this project.

It worked, it passed because there are not major issues.

Uh, where I can check. You click on the button
called issues.

It's telling where, where the issues are in this file.

There are issues in this file, there are issues
in this file, there are issues.

All of it are here.

What I did now as a DevOps engineer,
I'm not responsible for fixing this.

Who is responsible developers?

I said no, it just analyzes.

It'll give you the list of defect, isn't it?

Once get back to where we had this discussion initially.

That's giving you the list of defect, right?

These are supposed to be fixed by developers.

Once they fix, again, repeat the process.

Okay? What I did wanted, I did this.

I'll say, uh, I said no, this all rules
and everything will be already there.

You see here, rules. Scroll down.

All programming languages, Java rules,
your code will be compared across this.

Now you see there was some issue it,

I will just duplicate this tab once.

Let's go back to our project. These are project.

Now when I click on issues, uh, what's the first issue?

You see what it is saying? Yes.

Replace as with uppercase format as where
LY made the decision so that you can understand.

Now it is coming the issue with the docker.

I'll go to my rules.

Here you see Docker
and if you see somewhere here,
there is a rule already written.

So that's why your file was compared across this route.

Am I clear what I'm trying to say?

Uh, I'll show you the actual code. What was the file?

Docker file.

GitHub. Sorry, my project. LMS project.

Which branch?

Web app. Which file?

Is that what it is saying? Check the error
or if you want to see more precise, click on it.

See it is also showing you where that error is in your code.

So it says this should be replaced with what?

As now I will write what an issue

to my developer three replace.

Now I understood how all the things are connecting
in the last class, I created issues for the developer.

Right? Now I can create an issue.

Make sense everyone? I'm not doing that but I can do it.

So simply what I can go with that particular part again,
I can go ahead and again start writing the issues
and all of it as we used to do earlier.

Uh, but now fine. I know already how this thing works out.

It's a dev branch rate.

So I'm directly going to make the changes generally
where I can do from the visual studio code.

But no, it's a simple change. Not directly.

I'm editing here only, but I assume all the process
happened, staging, committing and all of it
fixed the issue.

That's what I did. I'll say commit.

Where directly to dev branch
updated as per the given instructions
And earlier Ana in terms of issues,
we have this thing still.

That's my code. Uh, now you know it. Cat docker file.

See the same thing? Uh, now how to get this change here.

Clone. Should I clone?

If I clone, I'll get the whole project,
but do I need whole project?

Only the update? How do I get updates?

Pull. See,

push means from local to GitHub.

From GitHub to local pull.

I'll say GI pull.

Updated what? File.

Check the docker file.

This is what you do. You clone, you pull the changes,
you perform the actions.

Now it's new code. Now again, what I need to do, reanalyze,
that's it.

New code, new analysis

again.

Done. I'll go back to my sonar queue.

See, this was done like four minutes ago.

Something, sorry, not four minutes ago.

Okay, one, let me refresh once again. Projects.

You see just 40 seconds ago analysis was done.

I'll go back to my project, I'll click on issues.

Do you see that issue now

because you fixed,

now you've got an idea how this software actually works
and it's a continuous thing, right?

That's the reason why it's called as continuous inspection.

Every now and then new requirements,

new issues will keep on coming up.

They go ahead and start fixing them

and for all of that new code comes

and for all of this re-analyzing is

required now isn't it?

Repetitive action for 1.1 I need to do

for 2.1 like cash on delivery or what is it?

Uh, UPI payment, net banking payment for all this new code.

I need to keep on repeating this stuff.

So that's where you need to understand as a DevOps.

There are activities that will be done again and again
and again multiple
times, right?

And you can see right now, yes, if I just go back
to my overview, you see it
is showing me at 1235, there were 57 issues
because when issues reduced,
I hope you understand if new issues are
introduced, right, it'll fail.

See 57, 56. Now new issues come up, right?

It says that this is failure
because something got incorrect way.
Basically, if you want, again,
what I can do, I'll reintroduce the problem.

LA 56, I'll try to make it 57 again,
you'll see the things got failed.

That's how it works. Direct.

I'll do it here only again, I don't want to pull, you know,
already the concept rate
Directly updated the code.

Again, I'm re-analyzing.

Done. I'll, I'll go back.

Project

Done.

Oh, you see here, They changed
the statistics actually earlier.

This red color thing used to come up on the top,
but from time to time there will be new updates coming up.

So in this update word that it was, they made it small,
actually it will be like visible on the red line like that.

New issues got added, new issues got decreased.

But you can see it clearly
how the things are basically going and working.

So like this, from time to time
our developers will keep on going and updating the new code
and this new things will be visible over here
and everything will be fixed like
as we go ahead and start doing it again.

This issue, this issue, nothing.

But it'll tell you where the code is, what's the issue?

And we need to fix all these
particular things as developers.

And that's why I said in our
image also when I was discussing about the development
partner,

it's a recurring cycle.

If things fail, we'll report the bug back to the developer.

They fixed it again. Update it to GitHub again.

Do analysis again, issue again analysis.

It just goes in that particular form.

Now clear everyone. So this is called
as static code analysis.