DevOps topics covered in the assignment

- 1. GitHub (Task-1 and Task-2)
- 2. Gradle
- 3. Java
- 4. Linux
- 5. Maven
- 6. Spring Boot
- 7. Jenkins
- 8. AWS SQS and Lambda (Task-1 and Task-2)

1. 1) GitHub (Task-1)

- 1. Install IntelliJ
- Generate the token using below path https://github.com/ -->settings-->Developer settings -->Personal access tokens -->Generate new token--> select all the scopes --> Generate token.
- 3. Open the project in IntelliJ, Clone the git repository (<u>https://github.com/columbuskvmk/git-practise-for-all.git</u>) and create a new branch

 Create New Branch New branch name: RohithaDummy Checkout branch Overwrite existing branch 		
New branch name: RohithaDummy Checkout branch Overwrite existing brance	Create New Branch	×
RohithaDummy Checkout branch Checkout branch Checkout branch	New branch name:	
Checkout branch Overwrite existing branch	RohithaDummy	
	<u>Checkout branch</u> Overwrite exis	ting branch

4. Add the new file as below:



5. Commit and push the changes to master as below:

git-practise-for-all) 🚦 File-Robittia	🎩 🔨 Current File 💌 🕨 📴 🕼 🗏 Git. 🗹 🗸 🗡 🏷 🗘	1.0
E Commit to main	Annappenne - 10 (televine -	
S D 孝 린 쇼. 백 역 조 중 ✓ ✔ Changes Tille Ø # Trackards Cilleger Tell Uppersonerte et normale brands	1 This is sample test file. 2 Created test document for assignment purpose. 3	
S > Universioned Files & files		
C Amend O		
Commit Message		
.a Commit Commut and Euch	Activate Windows	

Commit to main	🗢 — 🔏 wonispacexm) > 📑 lije-Lohr	11 ×	E
3 5 # 目 🕹 共 🥺 王 ÷	This is sample test	file.	
Changes The addition	Posti Comminis to gli-practise-for-all		
Fie-Rohma CABerADEDAdeatro	main - Oppin ; main	2 a, 2.1 □	
10 Concernances Lines - Superson Programming-	This is sample file created by Rokitha	🗢 📲 git-practise-for-all fale CAuser/ADELUIdeaProjectMg	
Amenat 🕸 🕓			
his is sample file created by <u>Ro</u>			
		Push: •	
1 file committed: This is sample file created by R			Activate Windows
St ill TODO O Problems 🖪 Terminal	O Services A Build		

6. In Git Hub, we can see as below:

C1 base: master ▼	
5	
There isn't anything to compare	
There isn't anything to compare.	
master and RohithaDummy are entirely different commit histories.	
mere isn t anything to compare. master and RohitheDummy are entirely different commit histories.	
Inere isn t any triing to compare. master and RohithaDummy are entirely different commit histories.	Split Uterited
Showing 1 changed file with 2 additions and 0 deletions. C 2 ••• File-Rohitha @	Spilit Unified
Showing 1 changed file with 2 additions and 0 deletions. Showing 1 changed file with 2 additions and 0 deletions. Showing 1 changed file with 2 additions and 0 deletions. Showing 1 changed file with 2 additions and 0 deletions. Showing 1 changed file with 2 additions and 0 deletions.	Spilit Unified

- 1. 2)GitHub (Task-2)
- 1. Create a new release branch from master as below:

영 수 후 🖬 🗄 🗰 👽 호 중	This is sample test file.
Changes	Created test document for assignment purpose.
	📴 Create New Branch 🛛 🗙
	New branch name:
	RohithaRelease
	Create
A <u>m</u> end 🐺 🕓	

2. Make a change to the file in the Rohitha Release branch. Commit and push the above changes.



	2	public class Add {			
xa	Push Commits to maven-example				
ar	RohithaRelease → <u>origin</u> : <u>RohithaRelease</u>	New	🔹 🎩 🔟 📃	Ξ	*
ar	Dummy program created by Rohitha to	push to release branch	✓ ➡ gs-maven 1 file C:\Users\DELL\maven-example		
n			 src\test\java\hello 1 file Add.java 		
Į					
æ					
	? Push tags: All		<u>P</u> ush ▼	Cancel	

3. Create a pull request from Rohitha release branch to Rohitha Dummy branch from the GitHub repository.

columbuskvmk / git-practise-fo	r-all Public ⊙ Actions ⊞ Projects Ⅲ Wiki ⑦ Security	⊵ Insights		⊙ Watch 6 +	γ ² Fork 6 + Ω Star 0 +
P RohithaDummy had reco	nt pushes 25 minutes ago		Compare & pull request	About This is a sample repo ជំ 0 stors	sitory for all
P RohithaRelease had rece P RohithaDummy + 1	P 55 branches 📎 0 tags	Go to file	Add file • <> Code •	 Seatching Seport repository 	
This branch is 1 commit above test. This is sample file of	ed, 135 commits behind master.	#84c111 2	רן Contribute + 9 minutes ago ייס t consmit	Releases No refease published Crede a new release	
 File-Rohitha Help people interested in thi 	This is sample file created by Rolitha s repository understand your project by adding a README.		29 minutes ago Add a README	Packages No packages published Publish your first package	Activate Windows
				Contributors 17	Gn-tis Settings to walvate Wintows

4. Once pull request is created, Click on Commit merge and then click on Merge pull request and Confirm merge.

2. Gradle :

1. Create Gradle project in IntelliJ and click on File->New project as shown below:

🔛 New Project			
New Project	Name:	RohithaNamburi	
Empty Project	Location:	C:\Users\DELL	
Generators			
m Maven Archetype		Create Git repository	
📭 JavaFX	Language:	Java Kotlin Groovy HTMI	
Kotlin Multiplatform			
Compose Multiplatform	Build system:	IntelliJ Maven Gradle	
IDE Plugin	יוחו	10 Oracle OpenIDK version 19.0 1	
🞽 Android	JUK.		
	Gradle DSL:	Groovy Kotlin	
	🗹 Add sample o	code	
	> Advanced Sett	tinas	
?		Create	

2. Gradle project will be created and shown as below:



3. Run the jar as shown below and output is executed.

Rure _	🔐 RohithaNambun 🕜		
	RohithaNamburi: successful Ar 4/6/2023 10:09 PM	To see a list of command-line options, run gradlehelp	
۶			
HE.		For more detail on using Gradle, see <u>https://docs.gradle.org/7.4/userguide/command_lioe_interface.bim</u> l	
ø,		For troubleshooting, visit <u>https://help.orgdle.org</u>	
=			
		BUILD SUCCESSFUL IN IS	
*		1 actionable task: 1 executed	
		10:89:38 PM: Execution finished.	
		Activate Window	S

3. Java:

- 1) Task-1 Run a simple java application that prints the below statement Hello "your-name " !
- 2) Identify the Byte code for the same class and capture it.

🔊 buld.gradie (Rchitha) 🐘 🥝 Mainjava 🐇	
1 package org.example;	
<pre>J > public class Main { public static void main(String[] args) { public static void main(String[] args) { } } </pre>	
<pre>> System.out.printin("Hello Hohitma"); > } > } </pre>	
Deprecated Gradle features were used in this build, making it incompatible with Gradle 8.8. You can use 'warning-mode all' to show the individual deprecation warnings and determine if they See <u>https://docs.gradle.org/7.4/usarguide/command_line_interface.html#sec.command_line_warnings</u> BUILD SUCCESSFUL in 306ms 2 actionable tasks: 1 executed, 1 up-to-date	
	<pre> * budagsade (Kohta)</pre>

3) In IntelliJ, click on the class name and from the View menu click on Show bytecode which generates as below:

0			S X P X
67 mil	Ele Edit View	Dass File Nay Be Duri of Date	unant – O X
$\epsilon \rightarrow$	Robitha SIC main		🕹 - 🔨 🗐 Man - 🕨 🛛 🕵 🗉 🔍 🗶 😭 🗄
M Gmail	명 I Fitsgect ·		
	2 · Rehitha CU		9. XU 8.
1000	🖿 主 🖿 Igradie		
	-d - lides		
	a antigen	ALOUD 6	args) (
(994)	Secondaria	TNVDRESPECTAL tava/laca/Object_cloit> ()V	11111 111 111 111 111 111 111 111 111
	h goade	DETION	
Mail	- miner		
100000110	Works	LUCALVARIABLE this Long/example/Main: L0 L1 0	
Chat	🤉 🖿 gradiz		
35	× Desc		
恣	👻 🔤 main		
Spaces	y 🔤 jav	public static main([Ljava/lang/String;))V	
0	B it res		
Meet	v 🕷 test		
11.181.8			
	Pet no.		1
	num - roomma i		₹ -
	Rohithi		were used in this build, making it incompatible with Gradle 8.0. 😨
			all' to show the individual deprecation warnings and determine if they cone f
		LOCALVARIABLE args [Ljava/lang/String] LO L2 0	
			Zześćniesznyków/company.line_ister/age.linizwertcommann.line.nendini
		MAXLOCALS = 1	
	월 전 👘 👘		
			ted, 1 up-to-date
	12		hed ':Main.main()'.
			Activate Windows
	P Varsien Control		Go to Settings to acovate Windows
	La Tests passed 0 (3 m		
94*6	 More 		5.00 THE INC. THE INC.
- Cear		Q Search 🧏 💭 🌘	C 🔟 😳 🤤 🚘 🦉 🧮 🐈 🔨 💦 🖓 🖓 🚺

4) **Linux:**

Log 1:

We need to run a command to get filter the log where ever we get an exception and line for the same and so that we can fix them.

1. Copy the application.log to a location on your drive, then use the command as shown in the screenshot to get all the errors that has the text "Exception"

<pre>\$ cat Application.log grep "Exception"</pre>
Exception occured connection time out(Connectivity.java line 53,121)
Exception occured illegal sql grammer-(NotificationRepo.java insertNotification
method .insert into table Notification line 23.54)
Exception occured connection time out(Connectivity.java line 53.121)
Exception occured illegal sol grammer-(NotificationRepo.java insertNotification
method .insert into table Notification line 23.54)
Exception occured connection time out(Connectivity.java line 53.121)
Exception occured illegal sql grammer-(NotificationRepo.java insertNotification
method .insert into table Notification line 23.54)
Exception occured connection time out(Connectivity.java line 53,121)
Exception occured illegal sol grammer-(NotificationRepo.java insertNotification
method ,insert into table Notification line 23,54)
Exception occured connection time out(Connectivity.java line 53,121)
Exception occured illegal sgl grammer-(NotificationRepo.java insertNotification
method ,insert into table Notification line 23,54)
Exception occured connection time out(Connectivity.java line 53,121)
Exception occured illegal sql grammer-(NotificationRepo.java insertNotification
method , insert into table Notification line 23,54)
Exception occured connection time out(Connectivity.java line 53,121)
Exception occured illegal sql grammer-(NotificationRepo.java insertNotification
method ,insert into table Notification line 23,54)
Exception occured connection time out(Connectivity.java line 53,121)
Exception occured illegal sql grammer-(NotificationRepo.java insertNotification
method .insert into table Notification line 23.54)

5. Maven

1. Create a Maven project as below:

Assignment project					*	Current File *	B G B Q
👷 🖿 Project Files 👻 🕘 🗵							
C:\Users\DELL\Assignment project	Nev Pojen						
🎯 Main							
	Empty Project						
	Kotin Multiplatform						
	Compose Multiplatform						
			18 Olade OpenICK vehicin (10.1 💌				
	Android						
Illu Libraries Module Dependencies							
		 Advanced S 					
				Greate			

2. To build the artifact from IntelliJ UI, open View->Tool Windows->Maven and you will see a menu like this: Click on package and hit the Run icon after expanding as below:

Rohitha Namburi III pomami		Current File 🔻	► # G	= 0	Q 🗿 🖡
5 📰 Project 👻 😳 포 🌩 —	m pom.xmi (RohithaNaniburi) 👘 🥑 Malajava 🖉				1.4
Pojeti * O 3 2 2 4	<pre>mponxem (FiohUmaNambud) % @ Maingama > 1 pathage erg.example; * public class Main { public static void main(String[] args) { System.sut.println("Hello world!"); } </pre>				т нолиалин Смани
a Strattre					
21 miles 11			17 (A. 1994)		

3. The artifact will be created under target folder as below:



6 Spring Boot Application:

Task-1: Run the springBoot in the repo provided

1. Clone the repo <u>https://github.com/jntu-devops/SpringBootmicroservices</u> locally and open the project in Intellij. It will download all the dependencies. Now run the DemoArtifactApplication, it will start the service as shown in the screenshot below:

Elle East View Navigate Code Befactor Build Run Tools Git V	Indow Belp dama artifact - DemoArtifactApplicat.	onjava (demo-antifact.main)		5	σ	×
SpringBootmicroservices src main java com teja demoartifaca 🦁		🚜 🗕 🐴 👘 DemoAntRactAppicatio			b a (
Project → ③ 로 ÷ ¢ -	<pre>mArthetApplicationTestgaw # #RADMLind >> package com.test.demoartifact; import /mage _d.comentuments @SpringBootApplication public_class DemoArtifactApplication _d.comentuments _public_static_void_main(String[] -} }</pre>	C DemoAnfactAppleanonjans ft Elbind Server (args) (SpringApplication.run(DemoArtifactAppli				tite at a second a
v 3: SpringBostmicroscevices (: DemoAntifactApplication main()): flag v v: completive u	ti e.coro.StandardEngine : Sta inc.Trans. .[localhost].[/] : Ini rverApIIsationContext : Res secat.TastaWaServer : Tom AppLication : Sta .[localhost].[/] : Ini spatcherServlet : Ini spatcherServlet : Com	ming and the framery arting Sarule engine: [Apache Tomcat/9.5.69] itializing Spring enbudded WobApplicationCostex to WobApplicationContext: initialization comple acat started on port(3): 8082 (http) with conte ereid DemoArtifactApplication in 3.558 seconds itializing Spring DispatcherSorViet 'dispatcher itializing Servlet 'dispatcherSorViet' spleted initialization in 4 ms	ad in 1988 ms it path '' JVM running for 4.818) arvist'			10 III



ttp://localhost:8082/Employee/getAllEmployees	🗋 Save 🗸 🌔	¢
GET v http://localhost:8082/Employee/getAllEmployees	Send 🗸	Ŷ
arams Authorization Headers (8) Body Pre-request Script Tests Settings	Cookies	
none 🔍 form-data 🌒 x-www-form-urlencoded 🧶 raw 🔍 binary 🔘 GraphQL 🛛 Text 🗸		
1		
1		(
1		(
1 dy Cookies (1) Headers (5) Test Results	Size: 674 B Save Response V	(

Task-3 : Run any test-cases and capture the results

関 tile Edit View Navigate Code Sefactor Build	Fun Tools Git Window Help Demo antifact - DemoArtifactAp	policationTests Java (blown: antifaction)	- σ ×
SpringBootmicroservices we test java com test		🔉 - 🔨 📄 DemoAtBlac5Application	ntess 🔹 🕨 🧔 🕼 🔳 Gr. 🖌 🗸 🗇 🗇 🕤 🔍 🥥 🜘
T Project * 🙂 🗄 王 🗧	🏚 🗕 🌀 DemoArt list Application Testujawa 🖉 🙆 Employee J	ere 💰 READMEnid 🔹 🥑 DemoArtilistApplication java 🔹 🕕	EmployeeOperations jevs 🔹 😝 failed end controlled ava 👘 🗸 👔
Construction Construction	package con.test.demoartifact; import import (SpringBoolTest (SpringBoolTest a multiplane (Test vald contextLoads() ()		y
G SerareTest			
Run 🥔 SpringBootmicroservices (DemoArtifectApplice	lion.main() - DemoAntifectApplicationTents		
· · · · · · · · · · · · · · · · · · ·			
2 2 Test Neulis Addres			· ● ● ■
k. Souther Theological	2022-12-28 11:15:54.837 INFO 119204 [1022-12-28 11:15:54.837 INFO 119204 [2022-12-28 11:15:54.778 INFO 119204 [2022-12-28 11:15:54.778 INFO 119204 [801LD SUCCESSFUL in 13s 4 sectoneble tasks: 8 xecuted, 1 up-to-data 11:15:57 AM: Execution Finished ' testtests	Test worken] c.t.d.DemoArtifactApplicationTests Test worken] c.t.d.DemoArtifactApplicationTests Test worken] c.t.d.DemoArtifactApplicationTests "com.test.demoartifact.DemoArtifactApplicationTe	: Starting DemoartifactApplicationTests u : The following 1 profile is active: "dev : Started DemoartifactApplicationTests in sts".
₽ on P, nor 18 topic O topicant I8 terrinal □ Tests passed 1 (moments ago)	O Samuel 🔨 Iniki 😂 Dependencies		77 CHLI LIFS Tabr 🖢 matter 🐿

7. Jenkins

Task-1 : In Jenkins create 3 free style projects

- free-style-1
- free-style-2
- free-style-3

once free-style-1 is build then free-style-2 should be build free-style-3

1. Create three free style projects as below:

Dashboard >								
+ New Item								Add description
29 People		All	+					
Build History								
Manage Jenkins		5	w	Name 1	Last Success	Last Failure	Last Duration	
My Views		\odot	*	free-style-1	1 min 6 sec #1	N/A	61 ms	
Build Quese	~	\odot	-0-	free-style-2	2 min 59 sec #3	N/A	6 1 ms	
No builds in the queue		\odot	*	free-style-3	19 sec #1	N/A	53 ms	⊳
Build Executor Status	~	loon S	м	1	iron legend	Atom food for all Atom	m food for failures	n faced free just latest huidels
1 idle		- HOUL			inter in organization	- 11 Main 1997 199 199		r den res junt manen manen
2 Idle								

2. Open FreeStyle-project2 project and configure it as below so it will be triggered once FreeStyleproject1 is built:

Configure	Advanced	
🚱 General	Source Code Management	
 Source Code Management Build Triggers 	None	
 Build Steps Post-build Actions 	Build Triggers Trigger builds remotely (e.g., from scripts)	
	Build after other projects are built Projects to watch free-style-2,	
	Trigger only if build is stable Trigger even if the build is unstable	
	Trigger even if the build fails	Activate Windows Go to Settings to activate Windows.

- 3. Similarly open FreeStyle-project3 and configure it as below so it will be triggered once FreeStyle-project2 is built.
- 4. Now view the build details of the first project as below, it indicates that a new build is triggered for second project: Similarly for all the projects it gives the console output.

Dashboard > free-style-1 > #2	
 Status Changes 	Console Output
 Console Output View as plain text Edit Build Information 	Started by user admin Running as SYSTEM Building in workspace C:\Users\DELL\.jenkins\workspace\free-style-1 Triggering a new build of free-style-1 Finished: SUCCESS
Delete build '#2'	
← Previous Build	
→ Next Build	

5. View the build details of the second project, it indicates that the build is triggered by the first project and a new build is triggered for third project.

Dashboard > free-style-2 > #1	
Status Changes	Console Output
Console Output	Started by user admin Running as SYSTEM Building in workspace C:\Users\DELL\.jenkins\workspace\free.style-2
🗹 Edit Build Information	Finished: SUCCESS
Delete build '#1'	
→ Next Build	

Task-2:

- Create a new repo
- Create a new Gradle / maven project and push into the newly create git repo
- Then configure in Jenkins the newly created project

• Whenever a new commit happens on the branch configure in Jenkins a new build should trigger.

1. Login to Git hub and create a new repo.

```
G rohivijjugithub / Rohitha Public
< Code 💿 Issues 🏗 Pull requests 💿 Actions 🖽 Projects 🎞 Wiki 💿 Security 🗠 Insights 🕲 Settings
                   Quick setup - if you've done this kind of thing before
                    🛱 Set up in Desktop or HTTPS SSH https://github.com/rohivijjugithub/Rohitha.git
                   Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.
$ git add . && git commit -m "initial commit
 warning: LF will be replaced by CRLF in gradle/wrapper/gradle-wrapper.properties
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in gradlew.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/main/java/org/example/Main.java.
The file will have its original line endings in your working directory
[master (root-commit) 68df5e0] initial commit
  34 files changed, 427 insertions(+)
 create mode 100644 .gradle/7.4/checksums/checksums.lock
create mode 100644 .gradle/7.4/checksums/md5-checksums.bin
 create mode 100644 .gradle/7.4/checksums/shal-checksums.bin
create mode 100644 .gradle/7.4/dependencies-accessors/dependencies-accessors.lo
ck
create mode 100644 .gradle/7.4/dependencies-accessors/gc.properties
create mode 100644 .gradle/7.4/executionHistory/executionHistory.bin
create mode 100644 .gradle/7.4/executionHistory/executionHistory.lock
create mode 100644 .gradle/7.4/fileChanges/last-build.bin
create mode 100644 .gradle/7.4/fileHashes/fileHashes.bin
create mode 100644 .gradle/7.4/fileHashes/fileHashes.lock
create mode 100644 .gradle/7.4/fileHashes/fileHashes.lock
create mode 100644 .gradle/7.4/fileHashes/resourceHashesCache.bin
create mode 100644 .gradle/7.4/gc.properties
create mode 100644 .gradle/buildOutputCleanup/buildOutputCleanup.lock
create mode 100644 .gradle/buildOutputCleanup/buildOutputCleanup.lock
create mode 100644 .gradle/buildOutputCleanup/outputFiles.bin
create mode 100644 .gradle/buildOutputCleanup/outputFiles.bin
 create mode 100644 .gradle/file-system.probe
create mode 100644 .gradle/vcs-1/gc.properties
create mode 100644 .idea/.gitignore
 create mode 100644 .idea/compiler.xml
create mode 100644 .idea/gradle.xml
  create mode 100644 .idea/jarRepositories.xml
  create mode 100644 .idea/misc.xml
 create mode 100644 .idea/vcs.xml
 create mode 100644 build.gradle
create mode 100644 build/classes/java/main/org/example/Main.class
create mode 100644 build/libs/cvsnmurthyg-1.0-SNAPSHOT.jar
 create mode 100644 build/tmp/compileJava/previous-compilation-data.bin
create mode 100644 build/tmp/jar/MANIFEST.MF
  create mode 100644 gradle/wrapper/gradle-wrapper.jar
  create mode 100644 gradle/wrapper/gradle-wrapper.properties
  create mode 100644 gradlew
  create mode 100644 gradlew.bat
 create mode 100644 settings.gradle
create mode 100644 src/main/java/org/example/Main.java
```

2. Add the URL for the remote repository that is copied from git hub as below:

```
DELL@DESKTOP-IHTBG5V MINGW64 ~
$ git init
Initialized empty Git repository in C:/Users/DELL/.git/
DELL@DESKTOP-IHTBG5V MINGW64 ~ (master)
$ git add
Nothing specified, nothing added.
hint: Maybe you wanted to say 'git add .'?
hint: Turn this message off by running
hint: "git config advice.addEmptyPathspec false"
DELL@DESKTOP-IHTBG5V MINGW64 ~ (master)
$ git add new
fatal: pathspec 'new' did not match any files
DELL@DESKTOP-IHTBG5V MINGW64 ~ (master)
$ git remote add origin https://github.com/rohivijjugithub/Rohitha.git
DELL@DESKTOP-IHTBG5V MINGW64 ~ (master)
$ git remote add origin https://github.com/rohivijjugithub/Rohitha.git
```

3. Push the project to remote repository.

```
$ git push -u origin main
Enumerating objects: 54, done.
Counting objects: 100% (54/54), done.
Delta compression using up to 12 threads
Compressing objects: 100% (32/32), done.
Writing objects: 100% (54/54), 64.04 KiB | 5.82 MiB/s, done.
Total 54 (delta 4), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (4/4), done.
```

4. Now go to GitHub remote repository in the browser and notice that the files are all added there as below:

	gradle	initial commit	10 hours ago
	Jdea	initial commit	10 hours ago
b i	build	initial commit	10 hours ago
-	gradle/wrapper	initial commit	10 hours ago
	src/main/java/org/example	initial commit	10 hours ago
0	build.gradie	initial commit	10 hours ago
D	gradlew	initial commit	10 hours ago
۵	gradlew.bat	initial commit	10 hours ago
۵	settings.gradle	initial commit	10 hours ago

- 5. Download the executable for windows from https://ngrok.com/download
- 6. Execute "ngrok http 8080"
- 7. It will return a URL to use in the webhook in github as below:

¢14.	C:\WINDOWS\system32\cmd.exe - ngrok.exe	http 8080	
------	---	-----------	--

ngrok						
Add DAuth and webhook						
Session Status	onlin					
Session Expires	1 hou	r, 59 mi	nutes			
Terms of Service	https	://ngrok	.com/tos			
Version	3.2.2					
Region	India	(in)				
Latency						
Web Interface	http:	//127.0.	0.1:4040			
Forwarding	https	://3bda-	103-204-9	6-66.in.	ngrok.io	<pre>> http://localhost:8080</pre>
Connections	ttl	opn	rt1	rt5	p50	p90

- 8. Click on Settings on the repository on github and add a webhook for Jenkins as below: (You need to give the url from above, localhost will not work.
- 9. Create a free style project in Jenkins and configure GIT configuration.

		-
Dashboard	SandyaGithubProject	Configura

Configure	Build Triggers
 General Source Code Management Build Triggers Build Environment Build Steps Post-build Actions 	 Trigger builds remotely (e.g., from scripts) ? Build after other projects are built ? Build periodically ? Github hook trigger for GITSem polling ? Poll SCM ? Schedule ? H/5****
	Would last have run at Thursday. March 30, 2023 at 9:09:13 PM India Standard Time: would next run at Thursday, March 30, 2023 Standard Time. Ignore post-commit hooks 2

10. Now make a change to code in the Gradle project, commit and push the changes:



11. Now monitor Jenkins build and check the logs.



8. AWS SQS and Lambda:

1. AWS Lambda:

Create a lambda function that prints sample as below:

AWS Lambda X	Resources for Asia Pacific (Sin	gapore)				Create fund	tion
Dashboard Applications Functions Additional resources	Lambda function(s)	Code storag 310 (0% of 75.0	.0 byte	Full account co	incumency	Unreserved account concurrenc	у
Code signing configurations ayers Replicas Related AWS resources	Account-level metrics The tharts below show metrics across all your	Lambda function	s in this AWS Region.		1h 3h	12h 1d 3d 1w Custom @ 0	•
Step Functions state machines	Error count and success rate (% No unit 1 Try adjusting the droboord time ra	o) I No unit 100 mge.	Throttles No unit 1 Try adjusting th	ata available ii danbboard filme rangi	-	Invocations No unit 1 Try adjusting the dealboard time range.	1

	Enter a name that describes the purpose of your function.						0
	Sample						•
	Use only letters, numbers, hyphens, or underscores with no spaces.						
	Runtime Info						
	Choose the language to use to write your function. Note that the co	insole code editor supports only Node.js, Python,	and Ruby.				
	Node.js 18.x			•			
	Architecture Info Choose the instruction set architecture you want for your function	rode. :					- 1
	O x86_64						
	◯ arm64						
	Permissions inte						- 1
	by default, Lamoda wit chase an execution role with permacione to upload togs to	Amazon Cabadwatch Logi, You can curtomize this defuelt role	raps, were reppide in publication				
	Change default execution role						
	 Advanceo settings 						
116							
				Cancel	C Create function		
	was excepted exception						
loudsh	NI Feedback Language		© 2025, Amazon V	Web Services India Private Limited or its affiliates.	ACHINACY VIETAS OV Cookie p	preferen	nces
Postm	an-win64-Seexe				s	ihow all	×
@ s	uccessfully created the function Sample. You can now chang	e its code and configuration. To invoke yo	ur function with a test event, choose	"Test".		×	٢
ļ	ambda 🔰 Functions 🖒 Sample						
				· · · · · · · · · · · · · · · · · · ·			
	Sample			Throttie 🗇 Co	py ARN Actions ¥		
	▼ Function overview Info						
				Description			
	Sar	nple		-			
	S Lave	rs (0)					
	~ ~			Last modified			
	+ Add trigger		+ Add destination	5 seconds ago			
				Function ARN			
				🗇 armaws:lambda:ap-southeast-1:40	2818443708:function:Sa		
				mple			
				Function URL Info			
				Contraction of the second			

2. Create Lambda application as below:

Create a Lambda application

An AWS Lambda application is a combination of Lambda functions, triggers, and other resources that work together to perform tasks. You can create an application with a continuous integration and continuous delivery (CI/CD) pipeline or from a serverless application in the AWS Serverless Application Repository.

From scratch Create a repository and pij	beline to use with your own applicati	ion.	
Runtime: Node.js 14.x, Node.js 16.x,	Node.js 18.x	Uses: Lambda	
Serverless API backe A RESTful web API that us	nd es DynamoDB to manage state:		
Runtime: Node.js 14.x		Uses: API Gateway, DynamoDB, Lambda	
		2022	Go to Settings to activate vuino
Services Q Search	Creating application resources. This t	{Alt+5}	Co to Suttings to activate Van Sh Co Co Singapore * Ro
S Lambda X board ications impleapplication	 Creating application resources. This to Step 2 of 4 - Greating pipeline Lambda > Applications > sample sampleapplication 	[Alc+5] takes a few minutes. application	Co to Suttings to activate Value Sh Singapore + Ro X
Services Q Search S Lambda X board cations impleapplication trans tions tionsl resources signing configurations rs	Creating application resources. This to Step 2 of 4 - Creating pipeline Lambda > Applications > sample sampleapplication Overview Code Deploy Getting started	[Alc+5] takes a few minutes. sapplication yments Monitoring	Co to Settings to activate wind St Singapore • Ro X

Postman-win64-Se...exe

Show all

Services Q Search	Latita)	2	4	Ø	Singapore 💌	Rohith	4 M.
AWS Lambda ×	Application created					×	٩
Dashboard	Lambda > Applications > sampleapplication						
Applications sampleapplication	sampleapplication						
Functions	Ourney Fods Deployments Monitoring						- 5
 Additional resources 	Courses Some Separations evolutioning						
Code signing configurations	· Cotting started						
Layers	♥ Getting started						
Replicas		9		12.000			
 Related AWS resources 	😻 Serverless Applications, Automated Deployments, and the AWS Lambda Console	0			Ō		
Step Functions state machines		~/ ~/ •		107-536	Copy link		

3. Capture the logs in cloud watch logs as below:

Code Test Monitor Configuration	Aliases Versions					
Metrics Logs Traces	View CloudWatch logs [View X-Ray	traces 🖾 🛛 View	Lambda Insights 🛛	View Co	odeGuru profile	es 🗹
CloudWatch metrics Info				Filte	r by Function	o ¥
					002002.02	
ambda sends runtime metrics for your functions to Arnazon hoose Filter by . To view metrics for a specific function versi	n CloudWatch. The metrics shown are an aggregate view of all func- ion or alias, choose Aliases or Versions, select the alias or version, a	tion runtime activity. To nd then choose Monitor	view metrics for the u	inqualified or \$1	LATEST resource.	18 C
ambda sends runtime metrics for your functions to Amazon choose Filter by. To view metrics for a specific function versi	n CloudWatch. The metrics shown are an aggregate view of all func ion or alias, choose Aliases or Versions, select the alias or version, a	tion runtime activity. To nd then choose Monitor 7h 3h	view metrics for the u	Inqualified or \$1	a 🗉 🖸 🗸	•
ambda sends runtime metrics for your functions to Amazon hoose Filter by. To view metrics for a specific function versi Invocations	n CloudWatch. The metrics shown are an aggregate view of all func- ion or alias, choose Aliases or Versions, select the alias or version, a Upration	tion runtime activity. To nd then choose Monitor 1h 3h I Error	view metrics for the u 12h 1d 3d count and succes	nqualified or \$1 1w Custon s rate (%)	LATEST resource.	v •
ambda sends runtime metrics for your functions to Amazon hoose Filter by. To view metrics for a specific function versi Invocations No unit	n CloudWatch. The metrics shown are an aggregate view of all func- ion or alias, choose Aliases or Versions, select the alias or version, a	tion runtime activity. To nd then choose Monitor Th 3h I Error o No unit	view metrics for the u	nqualified or \$1 1w Custon s rate (%)	n 🗐 🖸 No	v V I Lunit
ambda sends runtime metrics for your functions to Amazon hoose Filter by . To view metrics for a specific function versi Invocations No unit	n CloudWatch. The metrics shown are an aggregate view of all func- ion or alias, choose Aliases or Versions, select the alias or version, a	tion runtime activity. To and then choose Monitor the 3h I Error of No unit 1	view metrics for the u 12h 1d 3d	nqualified or \$1 1w Custan s rate (%)	n 🖭 🕜 No	v I unit ico
ambda sends runtime metrics for your functions to Amazon hoose Filter by. To view metrics for a specific function versi Invocations No unit 1 Try adjusting the data available Try adjusting the databased dime range.	n CloudWatch. The metrics shown are an aggregate view of all func- ion or alias, choose Aliases or Versions, select the alias or version, a Unration No unit: 1 Unration No unit: 1 Unration Try odjusting the Sankoord time range.	tion runtime activity. To and then choose Monitor 1h 3h I Error No unit	view metrics for the u 12h 1d 3d count and succes Try adjusting th	1w Custon s rate (%)	n 🗐 📿 No na na n	v I 100
ambda sends runtime metrics for your functions to Amazon hoose Filter by. To view metrics for a specific function versi Invocations No unit 1 Try adjusting the dailboard time range. 95	n CloudWatch. The metrics shown are an aggregate view of all func- ion or alias, choose Aliases or Versions, select the alias or version, a Uuration No unit: 1 100 risks appliating Try adjusting the dashoord time range. 0.5	tion runtime activity. To and then choose Monitor 2h 3h I Error (No unit 1 05	view metrics for the u 12h 1d 3d count and succes Try adjusting th	Inqualified or \$1 Iw Custom s rate (%) ate available clashboard time	n E C No	T unit 100
ambda sends runtime metrics for your functions to Amazon hoose Filter by. To view metrics for a specific function versi Invocations No unit 1 Try adjusting the dailibeard time range. 95	n CloudWatch. The metrics shown are an aggregate view of all func- ion or alias, choose Aliases or Versions, select the alias or version, a Duration No unit Try adjusting the dashboard time range. 0.5	tion runtime activity. To and then choose Monitor 2 h 3 h I Error (No unit 1 2.5	view metrics for the u 12h 1d 3d count and succes Try adjusting th	Iw Custon Iw Custon s rate (%) ats available dashboard time	n C Ne	v I I I I I I I I I I I I I I I I I I I

- 2. AWS SQS:
- 1. Create a SQS as below:

Type Choose the queue type for your application or cloud infrastructure. Image: Standard info At-least-once delivery, message ordering isn't preserved • Seat-effort ordering Image: Standard info • Seat-effort ordering Image: Standard ordering Image: Standard info Image: Standard info Image: Standard ordering Image: Standard info Image: Standard info	
 Standard info At-least-once delivery, message ordering isn't preserved At-least-once delivery Best-effort ordering FIFO Info First-in-first-out delivery, message ordering is preserved First-in-first-out delivery Exactly-once processing You can't change the queue type after you create a queue. Name Rohitha A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters. hyphens [-], and underscores []). 	
Vou can't change the queue type after you create a queue. Name Rohitha A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters. hyphens [-], and underscores [_]. Configuration	
Name Rohitha A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters. hyphens (-), and underscores (). Configuration	
Rohitha A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters. hyphens [-], and underscores [_]. Configuration	
A queue name is case-sensitive and can have up to 80 characters. You can use alphanumeric characters, hyphens (-), and underscores (). Configuration	
Configuration	
Configuration	
Connguration	Activate Window
terre Debiling excepted exceptediate	Go to Settings to active
u can now send and receive messages.	×
nazon SQS 🗦 Queues 👌 Rohitha	
Chitha Edit Delete Purge Send	and receive messages Start DLQ redrive
Details into	
Name Type ARN	
Distancia 29990	
	ap-southeast-1:402818445708:Ronitha
Economica (10) Dead-letter nu	ap-soutneast-1:402818445708:Ronitha
Encryption URL Dead-letter qui Amazon 5Q5 key (SSE-5Q5) @https://sqs.ap-southeast	ap-southeast-1saU28188457083konitha
Encryption URL Dead-letter que Amazon SQS key (SSE-SQS) @https://sqs.ap-southeast 1.amazonaws.com/402818443708/Rohitha	ap-southease- 1942/2018443708/kontma
Encryption URL Dead-letter qui Amazon SQS key (SSE-SQS) Dhttps://sqs.ap-southeast- 1.amazonaws.com/402818443708/Rohitha	ap-southease- 1942/2018443708rkontma

2. Create Lambda function as below:

Successfully created the function Sample. Ve	ou can now change its code and configuration. To invoke	your function with a test event, choose	Test >	(
Lambda > Functions > Sample				
Sample			Throttle Copy ARN Actions ¥	
▼ Function overview Info				
+ Add trigger	Sample	+ Add destination	Description - Last modified 5 seconds ago Function ARN	

3. Add subscription of the SQS to the lambda.

igger AWS Lambda function				
rgger Aws Lambaa raneaon in				
Lambda function				
jet incoming messages to trigger a Lambda function.				
ap-southeast-1				
ap-southeast-1 Specify an AWS Lambda function available for this queue.				
ap-southeast-1 Specify an AWS Lambda function available for this queue. Choose a function Q Search AWS Lambda function.	A			
ap-southeast-1 Specify an AWS Lambda function available for this queue. Choose a function Q. Search AWS Lambda function. Enter AWS Lambda function ARN				
ap-southeast-1 Specify an AWS Lambda function available for this queue. Choose a function Q Search AWS Lambda function. Enter AWS Lambda function ARN Use existing resource		Cancel	Save	
ap-southeast-1 Specify an AWS Lambda function available for this queue. Choose a function Q Search AWS Lambda function. Enter AWS Lambda function ARN Use existing resource	A	Cancel	Save	