

# Next Generation Cloud Computing Tools & Technologies

A SISTER INSTITUTION OF ST. XAVIER'S COLLEGE

DATE: 11/07/2022 - 16/07/2022

### **Details of Resource Person: Raikumar** Pawar Asst. Professor at Gharda Institute of Technology, Lavel. Aaron Johns Event Coordinator(s) Lecturer at St. Xavier's College. Yati Gharat 1.Prof. Tejal Deshpande Chief Technology Officer at Litmus Information Systems LLP Prof. Panil Jain Prof. Kunal Meher Asst. Professor at Xavier Institute of Engineering Dr Bhushan Jadhav Time & Place: an Assistant Professor at Thadomal Shahani Engineering College, Mumbai, in the 10:00 am to 4:00 pm Department of Artificial Intelligence & Data Science. **Description of EVENT: Online Zoom Meeting** A 6 day workshop on the topic "Cloud Computing" was started on 11th of July, 2022 for the students of EXTC branch. The students were briefly introduced to the concept of Cloud Computing which is an Information Technology paradigm that enables ubiquitous access to shared pools of configurable system resources and higher level services that Department: can be rapidly provisioned with minimal management effort, often over the internet. The speaker also discussed the building blocks of Cloud which are: Virtualization EXTC Network Storage and Web Services Virtualization is running multiple Operating Systems simultaneously on a single system. o of participants: Cloud Networking is a term describing the access of networking resources from a 55 centralized third party provider using Wide Area Networking (WAN) or internet based technologies. Cloud Storage is a model of data storage in which the digital data is stored in the logical pools, the physical storage spans multiple servers and physical environment is typically owned and managed by a hosting company. Web Services is a service offered by an electronic device to another electronic device, communicating with each other via the World Wide Web. He also spoke about the challenges faced in this field about Data Security and privacy, Legal and regulatory compliance, Control and responsiveness, Lack of benchmarking or leading practice experience, Ambiguity over how best to quantify, track and communicate the benefits of Cloud Computing, Threat of potential over reliance on a

single-source IT provider, Lack of interoperability, Resistance from datacenter IT personnel. Further on he explained that Serverless Computing is a Cloud Computing execution model in which the Cloud provider allocates machine resources on demand, taking care of the servers on behalf of their customers. He also shared his experience about using Linux and Ubuntu as an OS and also explained the process to download the Ubuntu OS. The speaker also highlighted some of the most popular Cloud Computing platforms like AWS, Microsoft Azure, Google Cloud platform, Oracle, IBM.

Talking about AWS (Amazon Web Services) he said it is a platform that allows application providers, ISVs and vendors to quickly and securely host applications over the cloud. It offers various services like a combination of infrastructure and software services along with computing power, scalability, reliability, and secure database storage. AWS is User-Friendly, Flexible, Secure, Cost-effective, Reliable, Scalable and Elastic and Highly Performant. It includes a mixture of Infrastructure as a Service (IAAS), Platform as a Service (PAAS) and Packaged software as a Service (SAAS) offerings. Some of the services provided by AWS are AWS Lambda, Amazon S3, etc.

He described Microsoft's Azure as a platform for hosting databases in the cloud. Azure is a public cloud computing with solutions including Infrastructure as a Service (IAAS), Platform as a Service (PAAS), Software as a service (SAAS) that can be used for services such as analytics, virtual, computing, storage, networking and much more. Microsoft offers serverless relational databases such as AzureSQL and non-relational databases such as NoSQL. Microsoft Azure is Flexible, Open, Reliable, Global, Economical.

While talking about many Cloud Computing platforms he also mentioned about Git which is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. It is a software for tracking changes in any set of files, usually used for coordinating work among programmers collaboratively developing source code during software development. Its goals include speed, data integrity and support for distributed non-linear workflows. He also mentioned GitHub a for-profit company offering a cloud based Git repository that helps developers store, manage, track and control changes to their code. The Version feature of GitHub helps developers to track and manage changes to a software project code. As a software project grows, version control becomes essential. One special mention that the speaker made was about GitLab which is same as Github but the key difference is that GitLab has Continuous Integration/Continuous Delivery (CI/CD) and DevOps workflows built-in. The speaker also shared a few words on the topic DevOps where he stated that DevOps is a combination of the terms development and operations, meant to represent a collaborative or shared approach to the tasks performed by a company's application development and IT operations teams. There was a quiz conducted on Google Forms in the end to assess how much the students understood and how they applied their knowledge.

#### **Conclusion of the Session:**

All the participants learnt about various technologies in Cloud Computing like Hypervisor, Virtualization, Hosting, Network, Storage, Web Services, Git, GitHub, and Operating Systems like Linux and Ubuntu, they also learnt about the process of configuring Azure, AWS. The students also learned the importance of Cloud Computing in today's industry and how to proceed further if they also wanted to create something similar in future.

## Participants:

Sr. No.	Name
1	NITIN SALE
2	JYOTIRMAY UMESH PATIL
3	MEGHA M. KOLHEKAR
4	PRACHEE BHOWMICK
5	DR. SHARADA VIKRAM CHOUGULE
6	ARTI ROHAN SAWANT
7	FRASON FRANCIS
8	KRISHNA ANISH GARG
9	RAHUL RAVI VIJAN
10	ADWAIT SHEKHAR JOSHI
11	VINEET PRASHANT DABHOLKAR
12	DICHWALKAR MIHIR MAHESH
13	RIDDHI VRUSHALI PARAG WAKDE
14	ADITYA SUNIL WAICHOL
15	ROLAND NORBERT DSOUZA
16	CHINTAKINDI AKASH PRAKASH
17	SAHIL VIJAY PAWAR
18	SUDESH KISHOR MANJREKAR
19	JONATHAN CARDOZ

20AISHWARYA R. SHENVI21SUDEEP DILIP VISHWAKARMA22HARSHDA BHATU KHAIRNAR23PRAJAKTA DAGADE24SHRIPAD K GAIKWAD25NITISH BHATTACHARJEE26DIVYA SUNIL KARGUTKAR27PIYUSH KHATPE28VINAY RAJARAM PARAB29ROHIT SHEMBEKAR30CHIRAC PARMAR31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE41SHAILAJA UDTEWAR		
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23PRAJAKTA DAGADE23PRAJAKTA DAGADE24SHRIPAD K GAIKWAD25NITISH BHATTACHARJEE26DIVYA SUNIL KARGUTKAR27PIYUSH KHATPE28VINAY RAJARAM PARAB29ROHIT SHEMBEKAR30CHIRAC PARMAR31MOHAMIMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	21	SUDEEP DILIP VISHWAKARMA
24SHRIPAD K GAIKWAD25NITISH BHATTACHARJEE26DIVYA SUNIL KARGUTKAR27PIYUSH KHATPE28VINAY RAJARAM PARAB29ROHIT SHEMBEKAR30CHIRAC PARMAR31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	22	HARSHDA BHATU KHAIRNAR
25NITISH BHATTACHARJEE26DIVYA SUNIL KARGUTKAR27PIYUSH KHATPE28VINAY RAJARAM PARAB29ROHIT SHEMBEKAR30CHIRAC PARMAR31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	23	PRAJAKTA DAGADE
26DIVYA SUNIL KARGUTKAR27PIYUSH KHATPE28VINAY RAJARAM PARAB29ROHIT SHEMBEKAR30CHIRAC PARMAR31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	24	SHRIPAD K GAIKWAD
27PIYUSH KHATPE28VINAY RAJARAM PARAB29ROHIT SHEMBEKAR30CHIRAC PARMAR31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	25	NITISH BHATTACHARJEE
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29ROHIT SHEMBEKAR30CHIRAC PARMAR31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	27	PIYUSH KHATPE
30CHIRAC PARMAR31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	28	VINAY RAJARAM PARAB
31MOHAMMAD QASIM32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	29	ROHIT SHEMBEKAR
32TANMAY GOKARN33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	30	CHIRAC PARMAR
33ELVIS DSILVA34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	31	MOHAMMAD QASIM
34SIDDHESH MARUTI ZAGADE35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	32	TANMAY GOKARN
35AFFAN SUHAIB INAMDAR36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	33	ELVIS DSILVA
36AHSAAS SRIVASTAVA37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	34	SIDDHESH MARUTI ZAGADE
37CHETAN CHAVAN38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	35	AFFAN SUHAIB INAMDAR
38RISHABH JAIPRAKASH TIWARI39DR VIDYA SARODE40PREETA BHORE	36	AHSAAS SRIVASTAVA
39   DR VIDYA SARODE     40   PREETA BHORE	37	CHETAN CHAVAN
40 PREETA BHORE	38	RISHABH JAIPRAKASH TIWARI
	39	DR VIDYA SARODE
41 SHAILAJA UDTEWAR	40	PREETA BHORE
	41	SHAILAJA UDTEWAR

42	JOSHUA RAJ ANANDA SELVARAJ	
43	PRITHVI HARISCHANDRA GAWADE	
44	MADHURA SHIRODKAR	
45	ABHIJEET AMAR PHALKE	
46	SONAL AMIT PATIL	
47	HARSH SHASHIKANT SAWANT	
48	NIRAJ CHALKE	
49	JADHAV KUNAL NANDKUMAR	
50	ABHISHEK ARUN PATIL	
51	ANIKET PRAMOD MESHRAM	
52	RISHIK KHOBRAGADE	
53	DR. ROHINI TEMKAR	
54	MANDAR SANJU BAVDANE	
55	NITIN AHIRE	

(Rejal (Tejal Deshpande) ABB+ Prof psjam Parnil Jaim ABB+ Prof.

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Photographs:







## Questions:

1. What can trigger a Lambda function execution? *	2/
O a table definition	
O queue Isolation	,
An SNS topic	$\checkmark$
○ STS write	^
2. Storage classes available with Amazon s3 are*	2/2
Amazon S3 standard	
Amazon 53 standard-infrequent Access	
Amazon Glacler	
All of the above	~
3. How can you integrate IAM with data centers security? *	2/2
<ul> <li>3. How can you integrate IAM with data centers security? *</li> <li>SAML</li> <li>AWS VPN</li> <li>AWS Direct Connect</li> <li>None of the above</li> </ul>	2/2
SAML AWS VPN AWS Direct Connect None of the above	<b>v</b>
SAML AWS VPN AWS Direct Connect None of the above  STB	<b>v</b>
SAML AWS VPN AWS Direct Connect None of the above	2/2

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1	5	What	Service.	the	11565	of	Amazon	Glac	14977	

0	Auto Scaling and Load and Balancing	
۲	Access infrequent data and archive data	1
0	Store frequently access data	
	Fast Computing	

	<ul> <li>which dues is a chand for in Amazon S 31.</li> </ul>	2/2
0	Storage Simple Service	
0	Single Storage Service	
۲	Simple Storage Service	1
0	Super Storage Service	

7 Choose the below statements are true of false for AWS. \*2/2 Choose the below statements are true of false for AWS. \*2/2 Choose the contraction of the second statements of the contraction of the second statements of the contraction of the second statements permissions of an existing IAM user, which automatically makes the new user a member of the same groups and attaches all the same policies

1. True, 2. True	$\checkmark$
1. True, 2. False	
1. False, 2. True	
🔘 1. False, 2. False	

\*2/2 account through the sailed. O Main user () IAM user  $\checkmark$  Root user Super user

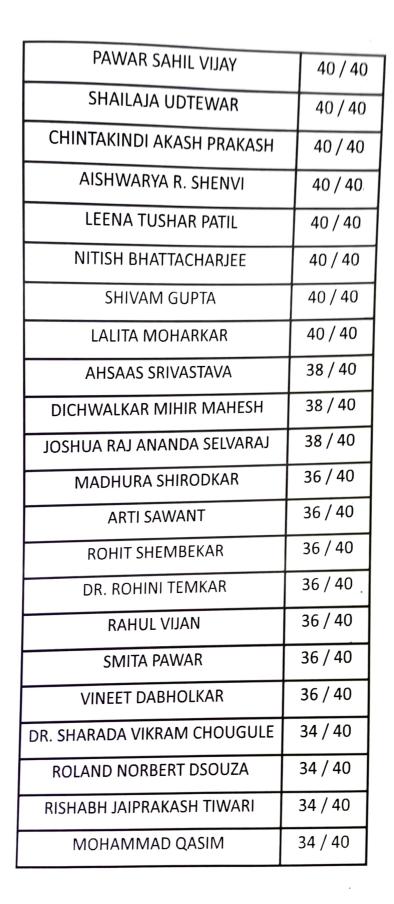
1

	$\sim$ total action is needed before you can test a Lambda $^{2}$ *	2/2
	Deploy the Lambda	
0	Export the function	
0	None of the these answers	
۲	Configure a test event	~
~	10. How is the cost associated with Lambda function calculated?	*2/2
~	calculated?	*2/2
~ 0		*2/2
<ul> <li></li> &lt;</ul>	calculated?	*2/2
0	calculated? Number of function calls	*2/2

<ul> <li>11 is a billing and account management service</li> </ul>	°2/2
Amazon Mechanical turk     Amazon Elastic MapReduce	
Amazon DevPay      Multi Factor Authentication	<i>_</i>
V 10 Amazon Web Services falls into which of the following cloud-computing category?	*2/2
Platform as a Service     Software as a Service	
Infrastructure as a Service     Back-end as a Service	1
a 	2/2
<ul> <li>100 buckets</li> <li>200 buckets</li> </ul>	1
110buckets     125 buckets	
14. A typically provides an object-oriented web-based interface to a database server	*2/2
hosting service     mail service	
web service	$\checkmark$

<sub>gesul</sub>ts:

Name	Marks
PARAB VINAY RAJARAM	40 / 40
CHETAN CHAVAN	40 / 40
MOHIT PATIL	40 / 40
HARSH SHASHIKANT SAWANT	40 / 40
CHIRAC PARMAR	40 / 40
TEJAL DESHPANDE	40 / 40
JONATHAN CARDOZ	40 / 40
DAGADE PRAJAKTA RAMESH	40 / 40
SHRIPAD GAIKWAD	40 / 40
NITIN AHIRE	40 / 40
GOKARN TANMAY	40 / 40
MANDAR SANJU BAVDANE	40 / 40
ELVIS DSILVA	40 / 40
DIVYA SUNIL KARGUTKAR	40 / 40
SUDESH KISHOR MANJREKAR	40 / 40
HARSHDA BHATU KHAIRNAR	40 / 40
NIRAJ CHALKE	40 / 40
PIYUSH SUNIL KHATPE	40 / 40
JYOTIRMAY PATIL	40 / 40
DR VIDYA SARODE	40 / 40



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RIDDHI WAKDE	32 / 40
ADWAIT SHEKHAR JOSHI	32 / 40
SONAL PATIL	32 / 40
ANIKET MESHRAM	30 / 40
MEGHA KOLHEKAR	28 / 40
RISHIK KHOBRAGADE	28 / 40
KRISHNA GARG	26 / 40
PRITHVI GAWADE	26 / 40
PRACHEE BHOWMICK	26 / 40

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