SRI VENKATESWARA COLLEGE OF ENGINEERING

(Autonomous, Affiliated to Anna University)

Pennalur, Sriperumbudur-602117

DEPARTMENT OF INFORMATION TECHNOLOGY

A

REPORT

Five Day Online Workshop
On

"Quantum Computing and its Applications"

Date: 19/09/2022-23/09/2022
Time: 6 pm to 7pm

Submitted to the principal

To: HOD-INT
26
2/12.
Noted; Good.

2 Copies
1/12/22

To: HOD-INT
pl include feedback from participants

OBJECTIVE OF WORKSHOP

Quantum computing is a rapidly-emerging technology that harnesses the laws of quantum mechanics to solve complex problems with quantum computers. Quantum computing with the help of machine learning can help in developing various techniques to combat cybersecurity threats.

The objective of this workshop is to inspire participants to further explore the topic on their own, or to illustrate and promote actual processes.

ADVISORY COMMITTEE

Dr. M. Sivanandham
Secretary,Sri Venkateswara Educational & Health Trust

Dr. S. Ganesh Vaidyanathan
Principal, Sri Venkateswara College of Engineering

Dr. V. Vidhya
Professor & Head,
Department of Information Technology

COORDINATORS

Dr. G. Sumathi
Professor, Department of Information Technology

Mr. V. Praveenkumar
Assistant Professor, Department of Information Technology

Ms. S. Kavishree
Assistant Professor, Department of Information Technology

RESOURCE PERSONS

Mr. Shan Latheef
Chief Innovation Officer, Infosys Ltd, New Jersey, USA

Mr. Uma Shankar Vatsa
Principal Consultant, Infosys Ltd, New Jersey, USA

Dr. G. Sumathi
Professor, Department of Information Technology
Sri Venkateswara College of Engineering

TOPICS TO BE COVERED

- Quantum Fundamentals
- Evolution of Quantum Computing and Predominant Technologies
- Applications of Quantum-I (Cybersecurity)
- Applications of Quantum-II (Quantum Chemistry and Optimization)
- IBM Q - Hands on Session

ELIGIBILITY

- All the Faculty Members and Students of Sri Venkateswara College of Engineering.
- Attendance is required for the issue of Certificates.

ABOUT THE COLLEGE

Sri Venkateswara College of Engineering (Autonomous), a premier self-financing engineering college was established in the year 1985 and is managed by Sri Venkateswara Educational and Health Trust. The college offers 11 B.E/B.Tech Degree Courses and 10 PG Courses in Engineering/ Technology. The courses are approved by AICTE and affiliated to Anna University, Chennai, The College attained autonomous status in the year 2016. The college is accredited by National Assessment and Accreditation Council (NAAC). The National Board of Accreditation has accredited many of the eligible programmes. The college is an ISO 9001:2008 certified institution. The college is situated in serene environment about 37 Kms from Chennai and situated on the way of Chennai – Bangalore National Highway (NH4) at Pennalur, Sriperumbudur, in Kanchipuram district.

ABOUT THE DEPARTMENT

Sri Venkateswara College of Engineering Pioneered the introduction of B.Tech Information Technology degree programme in 1996. The Department of Information Technology has well qualified faculty members and is offering undergraduate course in Information Technology and a postgraduate course M.Tech in Cyber Forensics and Information Security. Also, the Department is recognized as Research Centre by Anna University and many scholars are pursuing their research under the same.

B.Tech (IT) course is accredited by NBA for six years. SVCE is accredited as National Resource Centre by National Cyber Safety and Security Standards and managed by the Department of Information Technology.

SVCE | Sri Venkateswara College of Engineering

Sri Venkateswara College of Engineering

Sriperumbudur

Department of Information Technology

Five Day Online Workshop
on

" Quantum Computing and its Applications"

19th to 23rd September 2022
TIME: 6:00 PM to 7:00 PM

ORGANISED BY

Department of Information Technology
Sri Venkateswara College of Engineering
(An Autonomous Institution)
Sriperumbudur, Kancheepuram – 602 117

REGISTRATION DETAILS

- No Registration Fee
- Last date for Registration: 12/09/2022
- E-Certificates will be issued to all registered participants.

REGISTRATION LINK

https://forms.gle/F1gu5ySWCDSKi5dHA

SRI VENKATESWARA COLLEGE OF ENGINEERING

Pennalur, Sriperumbudur Taluk - 602117

DEPARTMENT OF INFORMATION TECHNOLOGY

Solicit your esteemed presence for the

Inauguration

Of

Five Day Online Workshop
on
"Quantum Computing and its Applications"

DATE : 19.09.2022

TIME : 05.50 PM

VENUE : Online Mode (meet.google.com/txt-zcyr-fuc)

SRI VENKATESWARA COLLEGE OF ENGINEERING

Pennalur, Sriperumbudur Taluk - 602117

AGENDA

DATE : 19.09.2022

TIME : 05.50 PM

VENUE : Online Mode (meet.google.com/txt-zcyr-fuc **)**

- Prayer Song
- Welcome address
- Inaugural address by HoD/INT
- Introduction to Chief Guests
- Technical Lecture on Quantum Fundamentals by
  Mr. Uma Shankar Vatsa, Principal Consultant, Infosys Ltd, New Jersey, USA
- Vote of Thanks

Coordinators

Dr. G. Sumathi, Professor / INT
Mr. V. Praveenkumar, Assistant Professor / INT
Ms. S. Kavishree, Assistant Professor / INT

SRI VENKATESWARA COLLEGE OF ENGINEERING

Pennalur, Sriperumbudur Taluk – 602117

DEPARTMENT OF INFORMATION TECHNOLOGY

Workshop on "Quantum Computing and its Applications"

Schedule

S. No	Date	Time	Topics	Speaker Name
1	19/09/2022	6.00 – 7.00PM	Quantum Fundamentals	Mr. UMA SHANKAR VATSA, Principal Consultant, Infosys Ltd, New Jersey, USA
2	20/09/2022	6.00 – 7.00PM	Evolution of Quantum Computing and Predominant Technologies	Mr. SHAN LATHEEF, Chief Innovation Officer, Infosys Ltd, New Jersey, USA
3	21/09/2022	6.00 – 7.00PM	Applications of Quantum– I (Cybersecurity)	Dr. G. Sumathi, Professor / INT, SVCE
4	22/09/2022	6.00 – 7.00PM	Applications of Quantum– II (Quantum Chemistry and Optimization)	Mr. SHAN LATHEEF, Chief Innovation Officer, Infosys Ltd, New Jersey, USA
5	23/09/2022	6.00 – 7.00PM	IBM Q – Hands on Session	Mr. UMA SHANKAR VATSA, Principal Consultant, Infosys Ltd, New Jersey, USA

SRI VENKATESWARA COLLEGE OF ENGINEERING (SVCE)
PENNALUR, SRIPERUMBUDUR-602117

	DEPARTMENT OF INFORMATION TECHNOLOGY	INSTITUTION'S INNOVATION COUNCIL (Ministry of HRD Initiative)	ISO 9001:2015 Certified by IRQS MGMT. SYS. RvA C 071

REPORT ON QUANTUM COMPUTING AND ITS APPLICATIONS

Date: 19/09/2022-23/09/2022 Time: 6 pm – 7 pm

Objectives:

- Understand the Basic of Quantum computing
- The adoption of quantum computing, coupled with the integration of artificial intelligence and machine learning technology
- Discuss how quantum computing is used in various fields.
- Acquire the knowledge of quantum world
- Demonstrate real-time applications.

About the programme:

The Department of Information Technology of SVCE organised a workshop on "Quantum Computing and its Application" from 19.09.2022 to 23.09 2022. **Dr. G. Sumathi,** Professor / INT welcomed the Chief Guest and all the participants.

The workshop began on 19.09.2022 with a prayer song. **Dr. V. Vidhya**, HOD/INT delivered the inaugural address. She encouraged the participants to attend the workshop effectively. Mr.V.Praveenkumar, Assistant Professor / INT introduced the Chief Guest **Mr. UMA SHANKAR VATSA**, he is working with Infosys as a

Principal in Data Science and Advanced Analytics area. He has more than fifteen years of experience applying advanced technologies to solve business problems across industries like finance, insurance, logistics, transportation and telecom. He also contributes to the society at grass root level by engaging with different NGOs and start ups. Mr. Uma Shankar Vatsa delivered the brief introduction of quantum computing in the day1 session. .

In the day2 session **Mr. Shan Latheef**, Chief Innovation Officer, Infosys Ltd, New Jersey,USA has delivered talk on Evolution of Quantum Computing and Predominant Technologies and he also included the concepts of Qbits, different types of Quantum computer based on Q bits, Superposition and Entanglement.

In the day 3 session **Dr. G. Sumathi,** Professor / INT highlighted important concepts of quantum computing with real time examples and she also elaborated the application of Quantum Computing related to cyber security.

In the day4 session, **Mr. Shan Latheef**, has explained the Optimization technique using Quantum Computing.

In the day5 session **Mr.Uma Shankar Vatsa** handled the hands on session. The participants had an exposure to **IBM Q.**

The session moved towards the end of the workshop. The valedictory address was given by **Mr.Uma Shankar Vatsa.**He stated the importance of Quantum Computing in this fast growing world and insisted the importance in organizing those programs. **Dr. G. Sumathi,** Professor / INT appreciated the speaker **Mr.Uma Shankar Vatsa** and **Mr. Shan Latheef** for their immense support throughout the program and she motivated the participants to proceed research in Quantum Computing.

Mr.V.Praveenkumar Assistant Professor / INT summarized the 5 days Programme and thanked all the participants who attended all the sessions and made the programme a grand success. A few participants shared their thoughts about the workshop. Most of them talked about their enriching experience at the workshop. All the sessions were very interesting and the participants were very eager to learn the importance and future of Quantum Computing. Finally, the programme ended with a Vote of Thanks by Dr. G. Sumathi, Professor / INT. Feedback was received from the participants at the end of session. The E-certificates were sent through the mail to all the participants. On the whole the program was well appreciated by the participants. Totally **58** participants attended among which **12** from faculty members of ECE, CSE, INT departments and **46** UG students from six different departments of SVCE.

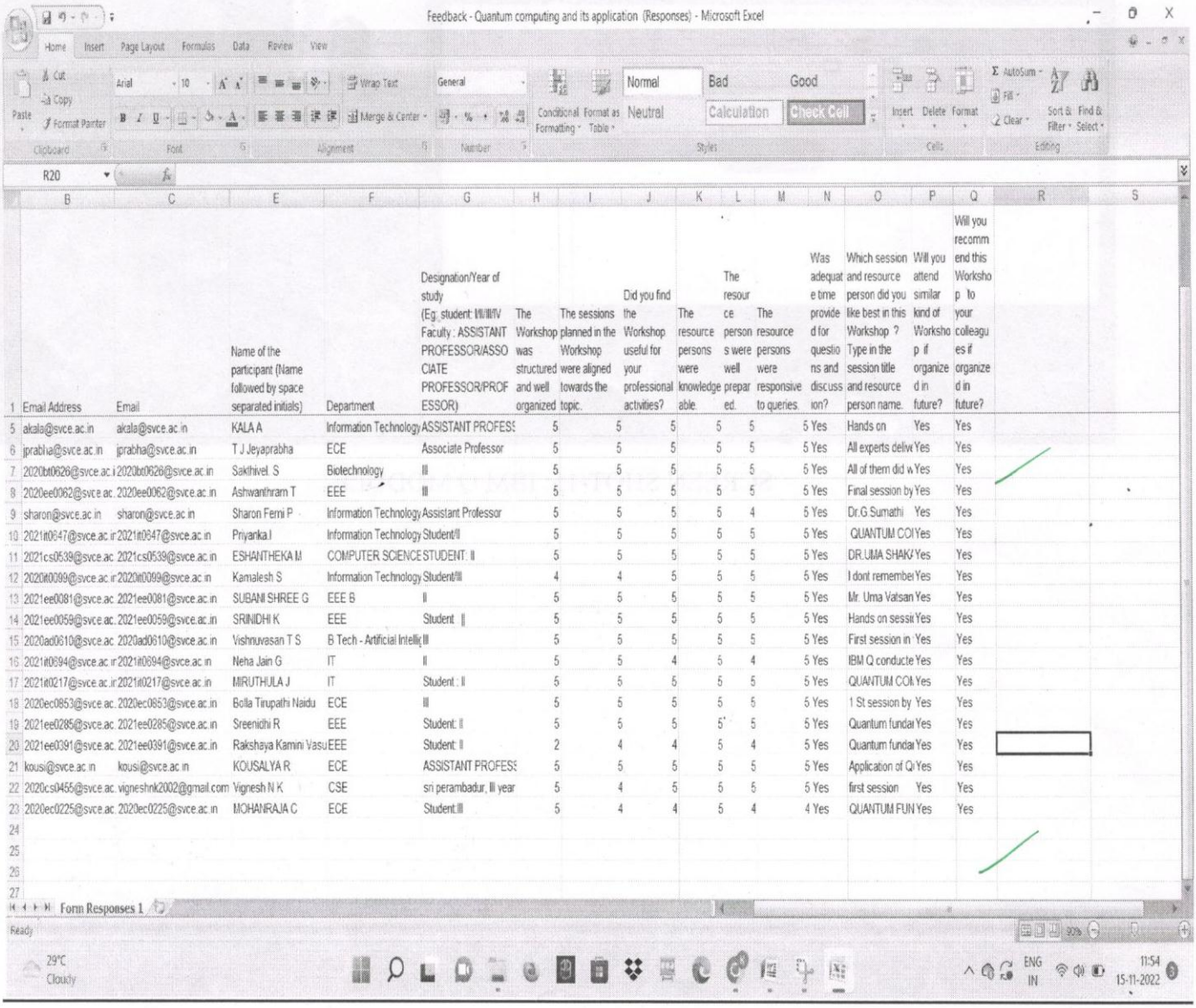
OUTCOMES:

- Knowledge on quantum computing .
- Understanding application of quantum computing on the aspects of cyber security along with the optimization.
- Exposure to **IBM Q** .

Prepared by Faculty Name, Designation & Dept.

Dr. G. Sumathi Professor,Department of Information Technology
Mr. V.Praveenkumar,Assistant Professor, Department of Information Technology
Ms.S.Kavishree ,Assistant Professor, Department of Information Technology

FEEDBACK



	B	C	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Email Address	Email	Name of the participant (Name followed by space separated initials)	Department	Designation/Year of study (Eg: student: I/II/III/IV Faculty : ASSISTANT PROFESSOR/ASSOCIATE PROFESSOR/PROFESSOR)	The Workshop was structured and well organized	The sessions planned in the Workshop were aligned towards the topic.	Did you find the Workshop useful for your professional activities?	The resource persons were knowledgeable.	The resource persons were well prepared.	The resource persons were responsive to queries.	Was adequate time provided for questions and discussion?	Which session and resource person did you like best in this Workshop ? Type in the session title and resource person name.	Will you attend similar kind of Workshop if organized in future?	Will you recommend this Workshop to your colleagues if organized in future?		
5	akala@svce.ac.in	akala@svce.ac.in	KALA A	Information Technology	ASSISTANT PROFESS	5	5	5	5	5	5	Yes	Hands on	Yes	Yes		
6	jprabha@svce.ac.in	jprabha@svce.ac.in	T J Jeyaprabha	ECE	Associate Professor	5	5	5	5	5	5	Yes	All experts delive	Yes	Yes		
7	2020bt0626@svce.ac.i	2020bt0626@svce.ac.in	Sakthivel S	Biotechnology	III	5	5	5	5	5	5	Yes	All of them did w	Yes	Yes		
8	2020ee0062@svce.ac.	2020ee0062@svce.ac.in	Ashwanthram T	EEE	III	5	5	5	5	5	5	Yes	Final session by	Yes	Yes		
9	sharon@svce.ac.in	sharon@svce.ac.in	Sharon Ferni P	Information Technology	Assistant Professor	5	5	5	5	4	5	Yes	Dr.G Sumathi	Yes	Yes		
10	2021it0647@svce.ac.ir	2021it0647@svce.ac.in	Priyanka.I	Information Technology	Student/II	5	5	5	5	5	5	Yes	QUANTUM COI	Yes	Yes		
11	2021cs0539@svce.ac.	2021cs0539@svce.ac.in	ESHANTHEKA M	COMPUTER SCIENCE	STUDENT: II	5	5	5	5	5	5	Yes	DR.UMA SHAK/	Yes	Yes		
12	2020it0099@svce.ac.ir	2020it0099@svce.ac.in	Kamalesh S	Information Technology	Student/III	4	4	5	5	5	5	Yes	I dont remember	Yes	Yes		
13	2021ee0081@svce.ac.	2021ee0081@svce.ac.in	SUBANI SHREE G	EEE B	II	5	5	5	5	5	5	Yes	Mr. Uma Vatsan	Yes	Yes		
14	2021ee0059@svce.ac.	2021ee0059@svce.ac.in	SRINIDHI K	EEE	Student II	5	5	5	5	5	5	Yes	Hands on sessi	Yes	Yes		
15	2020ad0610@svce.ac	2020ad0610@svce.ac.in	Vishnuvasan T S	B Tech - Artificial Intelli	III	5	5	5	5	5	5	Yes	First session in	Yes	Yes		
16	2021it0694@svce.ac.ir	2021it0694@svce.ac.in	Neha Jain G	IT	II	5	5	4	5	4	5	Yes	IBM Q conducte	Yes	Yes		
17	2021it0217@svce.ac.ir	2021it0217@svce.ac.in	MIRUTHULA J	IT	Student : II	5	5	5	5	5	5	Yes	QUANTUM COI	Yes	Yes		
18	2020ec0853@svce.ac.	2020ec0853@svce.ac.in	Bolla Tirupathi Naidu	ECE	III	5	5	5	5	5	5	Yes	1 St session by	Yes	Yes		
19	2021ee0285@svce.ac.	2021ee0285@svce.ac.in	Sreenidhi R	EEE	Student: II	5	5	5	5'	5	5	Yes	Quantum fundar	Yes	Yes		
20	2021ee0391@svce.ac.	2021ee0391@svce.ac.in	Rakshaya Kamini Vasu	EEE	Student: II	2	4	4	5	4	5	Yes	Quantum fundar	Yes	Yes		
21	kousi@svce.ac.in	kousi@svce.ac.in	KOUSALYA R	ECE	ASSISTANT PROFESS	5	5	5	5	5	5	Yes	Application of Q	Yes	Yes		
22	2020cs0455@svce.ac.	vigneshnk2002@gmail.com	Vignesh N K	CSE	sri perambadur, III year	5	4	5	5	5	5	Yes	first session	Yes	Yes		
23	2020ec0225@svce.ac.	2020ec0225@svce.ac.in	MOHANRAJA C	ECE	Student.III	5	4	4	5	4	4	Yes	QUANTUM FUN	Yes	Yes		
24																	
25																	
26																	
27																	

ATTENDANCE REPORT ON QUANTUM COMPUTING				
DAY-01	**DAY-02**	**DAY-03**	**DAY-04**	**DAY-05**
005 ARUN.S EE	005 ARUN.S EE	031 HIRTHIC KUMAR S EE	040 KAMALESH S IT	005 ARUN.S EE
011 BALAKRISHNAN S EE	012 BALASURIYA M EE	040 KAMALESH S IT	047 RAKSHAYA KAMINI VASUTHA K EEE	012 BALASURIYA M EE
012 BALASURIYA M EE	019 CHANDRASEKAR V IT	047 RAKSHAYA KAMINI VASUTHA K EEE	053 SANTHOSHKUMAR S EEE	019 CHANDRASEKAR V IT
031 HIRTHIC KUMAR S EE	031 HIRTHIC KUMAR S EE	053 SANTHOSHKUMAR S EEE	063 SREENIDHI R EEE	031 HIRTHIC KUMAR S EE
040 KAMALESH S IT	047 RAKSHAYA KAMINI VASUTHA K EEE	063 SREENIDHI R EEE	064 SRINIDHI K EEE	047 RAKSHAYA KAMINI VASUTHA K EEE
047 RAKSHAYA KAMINI VASUTHA K EEE	049 LEKHASHREE RAJESH IT	064 SRINIDHI K EEE	146 VIKASHKRISHNA M ECE	049 LEKHASHREE RAJESH IT
063 SREENIDHI R EEE	053 SANTHOSHKUMAR S EEE	069 SUBANI SHREE G EEE	37 SAKTHIVEL S BT	053 SANTHOSHKUMAR S EEE
064 SRINIDHI K EEE	056 MYTHRA M IT	074 SANDHYA S IT	ARAVIND K EC	056 MYTHRA M IT
069 SUBANI SHREE G EEE	063 SREENIDHI R EEE	080 SARANYA S IT	ASHWANTHRAM T EE	063 SREENIDHI R EEE
146 VIKASHKRISHNA M ECE	064 SRINIDHI K EEE	301 DEVA M IT	BALA SESHANTH R EC	064 SRINIDHI K EEE
301 DEVA M IT	069 SUBANI SHREE G EEE	ADHITHIYARAM RAMAKRISHNAN	BOLLA TIRUPATHI NAIDU EC	069 SUBANI SHREE G EEE
37 SAKTHIVEL S BT	073 SAHANA S IT	ASHWANTHRAM T EE	DHANUSH PRIYAN	073 SAHANA S IT
ADHITHIYARAM RAMAKRISHNAN	074 SANDHYA S IT	BALA SESHANTH R EC	INDUMATHI A	074 SANDHYA S IT
AJAY S CS	080 SARANYA S IT	DHANUSH PRIYAN	JAYANTHI D IT	080 SARANYA S IT
ARAVIND K EC	092 SWETHA S IT	ESHANTHEKA M CSE	JAYSURIYA N	092 SWETHA S IT
ASHWANTHRAM T EE	301 DEVA M IT	INDUMATHI A	JEYA PRABHA T J ECE	301 DEVA M IT
DHAANYAAKUMAAR G S EE	304 JYOTHI PRABHA S S IT	JAYANTHI D IT	KALA A IT	304 JYOTHI PRABHA S S IT
ESHANTHEKA M CSE	37 SAKTHIVEL S BT	JAYSURIYA N	KATHIRESH GOPALAKRISHNAN	37 SAKTHIVEL S BT
INDUMATHI A	51 VISHNUVASAN T S AD	JEYA PRABHA T J ECE	KAVISHREE S INT	51 VISHNUVASAN T S AD
JAYANTHI D IT	AISWARYA S IT	KALA A IT	KOUSALYA R ECE	AISWARYA S IT

SRI VENKATESWARA COLLEGE OF ENGINEERING
DEPARTMENT OF INFORMATION TECHNOLOGY

Ref.: SVCE/IT/Workshop/Aug'22 26/08/2022

Submitted to the Principal:

Subject: Workshop on "Quantum Computing and its Applications"

It is proposed to conduct an Online Workshop on "Quantum Computing and its Applications" by the Department of Information Technology for interested students and faculty from 19-09-2022 to 23-09-2022 one hour per day from 6 PM to 7 PM.

Objective:

The Objective of the workshop will provide an opportunity for the students and staff to learn about following topics: -

- Quantum Fundamentals
- Evolution of Quantum Computing and Predominant Technologies
- Applications of Quantum-I (Cybersecurity)
- Applications of Quantum-II (Quantum Chemistry and Optimization)
- IBM Q – Hands on Session

Coordinators:

The workshop will be coordinated by Dr. G. Sumathi, Prof/IT, Mr.V. Praveenkumar, AP/IT and Ms.S. Kavishree, AP/IT.

Venue: Online Platform through Google Meet

Resource persons:

Mr.Shan Latheef, Chief Innovation Officer, Infosys Ltd, New Jersey
Mr.Uma Shankar Vatsa, Principal Consultant, Infosys Ltd, New Jersey
Dr.G.Sumathi, Prof/IT.

Financial Commitment: NIL

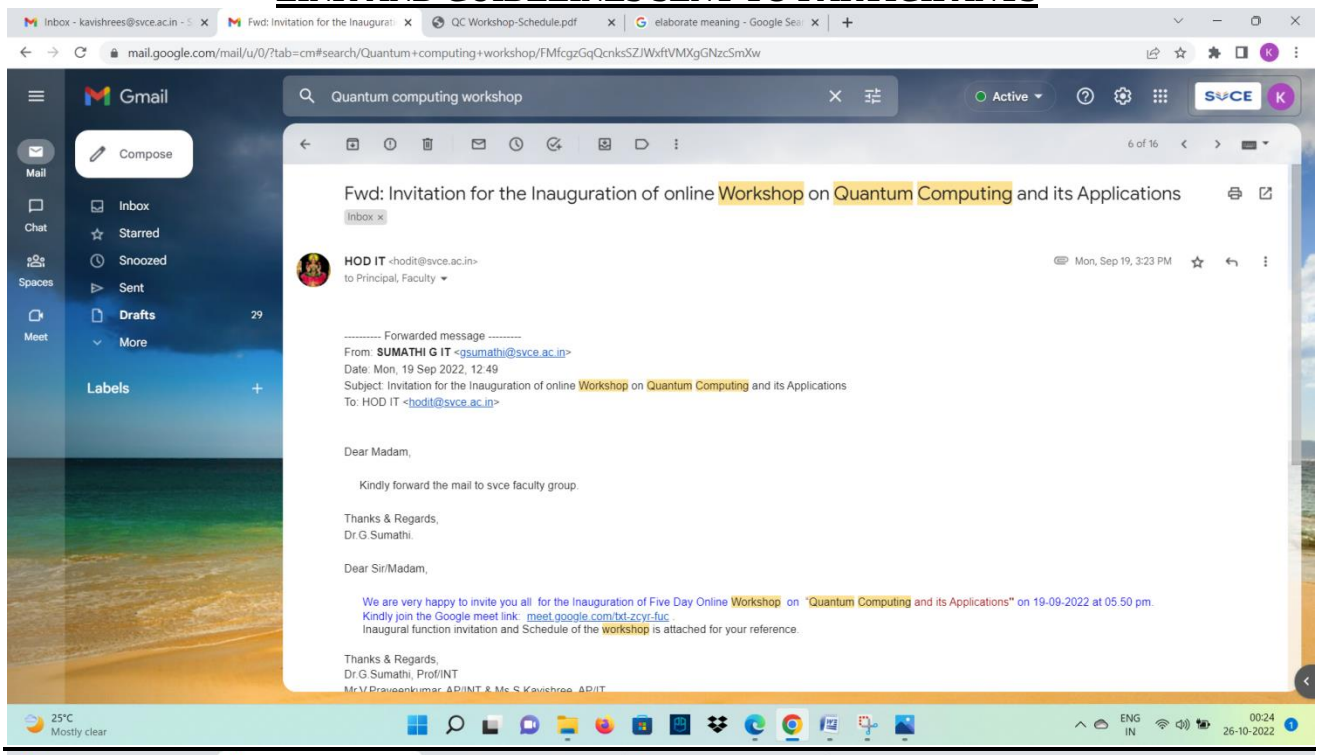
Recommendation: It is requested that approval for the above proposal be accorded.

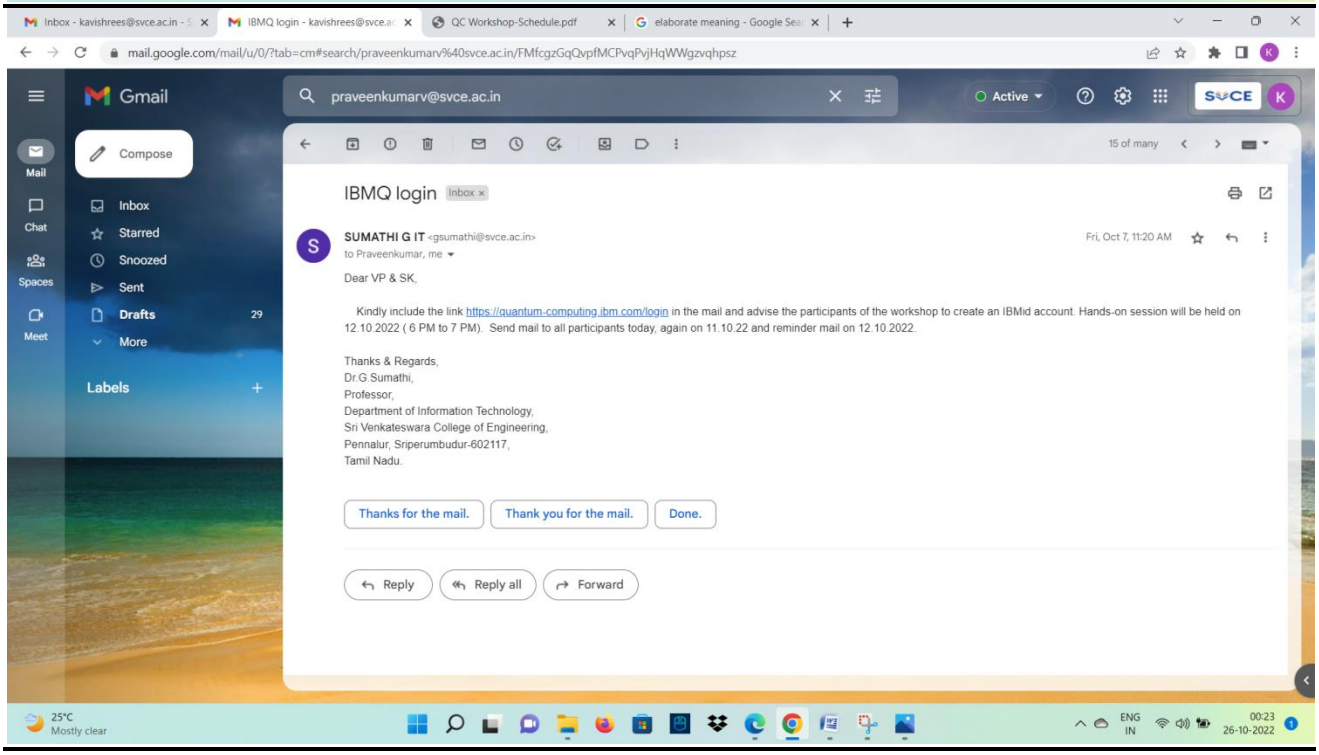
26/8/22
Dr.G. Sumathi
Prof/IT

26/8/22
HOD/IT

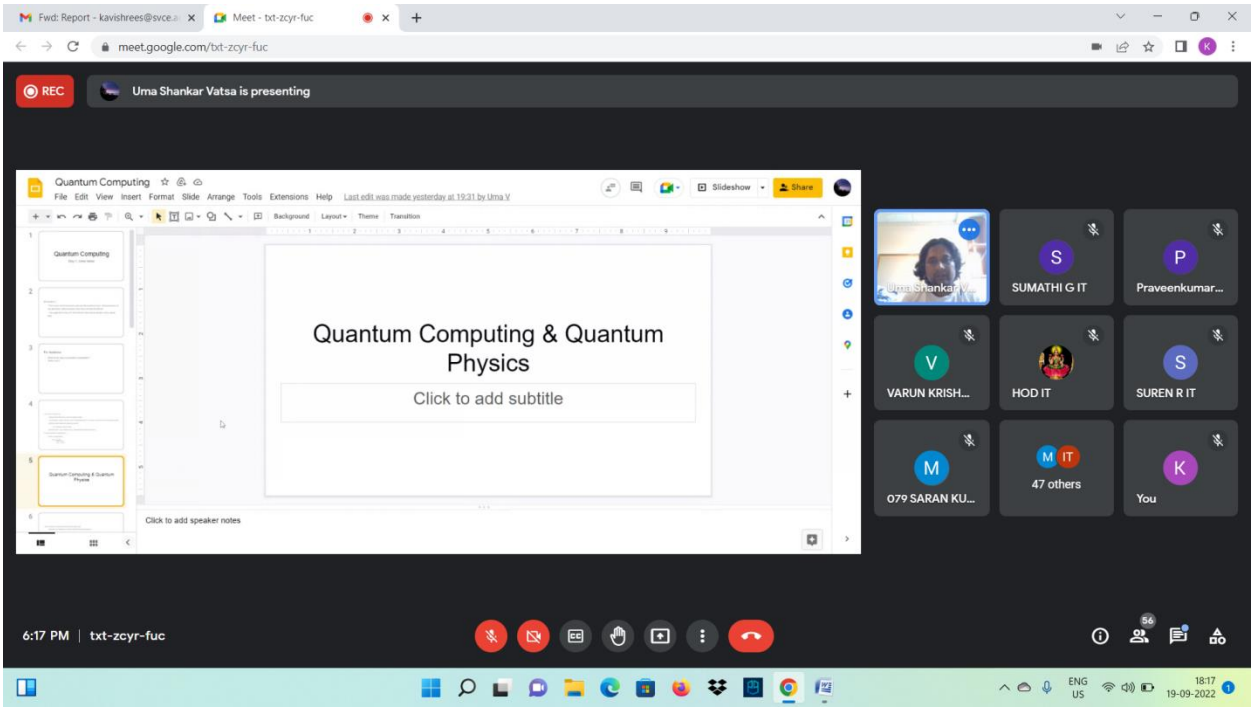
To. HoD-INT
Approved
26
26/8

LINK AND GUIDELINES SENT TO PARTICIPANTS





DAY 01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Meet - txt-zcyr-fuc
meet.google.com/txt-zcyr-fuc
REC
Uma Shankar Vatsa is presenting
Quantum Computing
Quantum Computing & Quantum Physics
Click to add subtitle
Click to add speaker notes
SUMATHI G IT
Praveenkumar...
VARUN KRISH...
HOD IT
SUREN R IT
079 SARAN KU...
47 others
You
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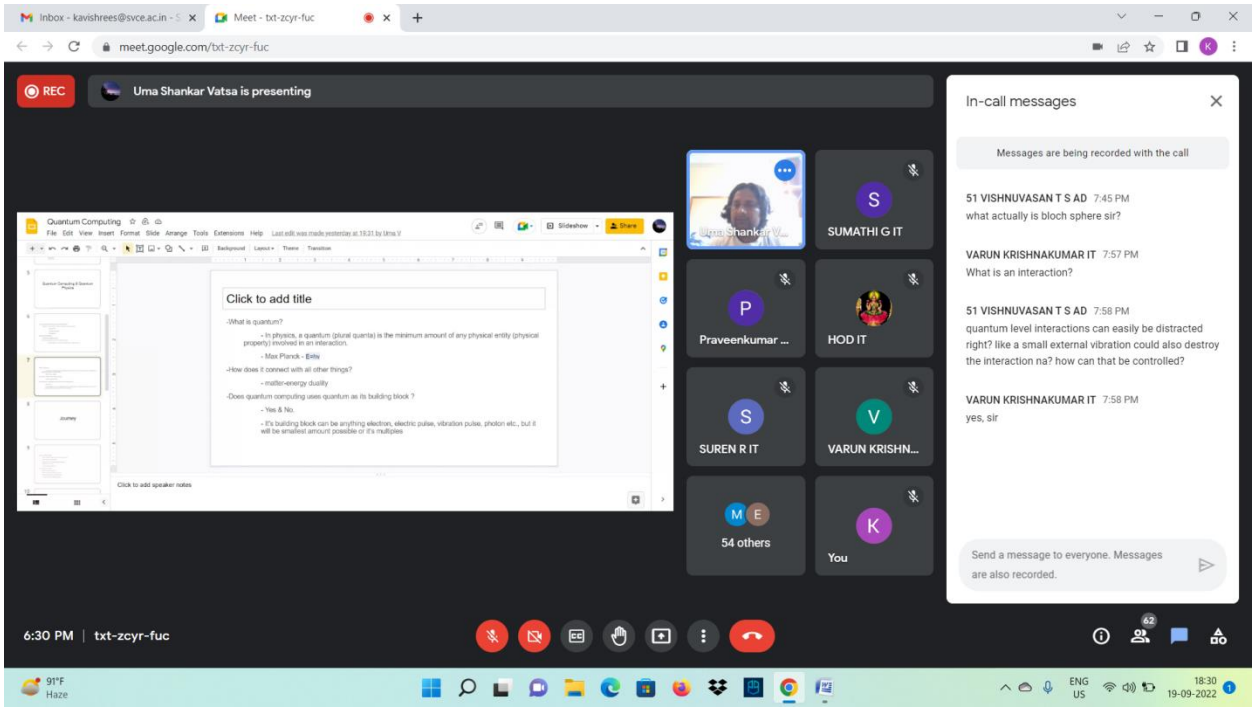
ENG US
18:17
19-09-2022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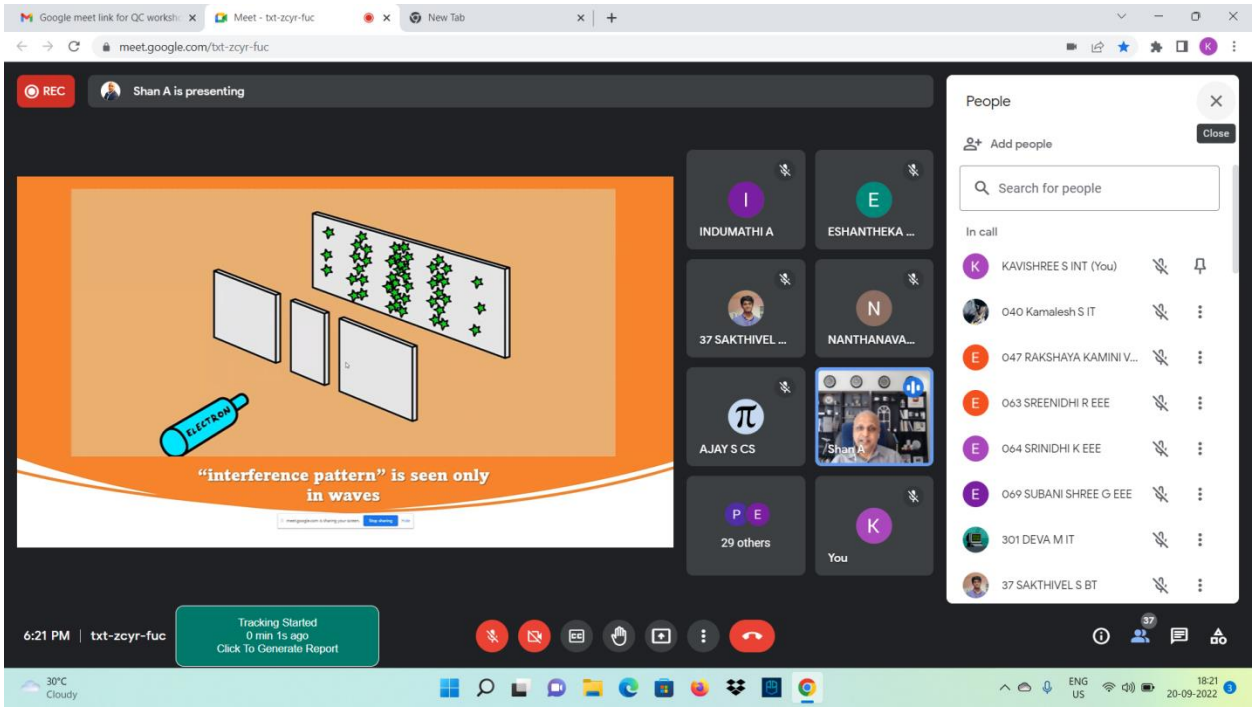
Meet - txt-zcyr-fuc
meet.google.com/txt-zcyr-fuc
REC
Uma Shankar Vatsa is presenting
Quantum Computing
Click to add title
-What is quantum?
-How does it connect with all other things?
-Does quantum computing uses quantum as its building block ?
Click to add speaker notes
SUMATHI G IT
Praveenkumar ...
HOD IT
SUREN R IT
VARUN KRISHN...
54 others
You
In-call messages
Messages are being recorded with the call
51 VISHNUVASAN T S AD 7:45 PM
what actually is bloch sphere sir?
VARUN KRISHNAKUMAR IT 7:57 PM
What is an interaction?
51 VISHNUVASAN T S AD 7:58 PM
quantum level interactions can easily be distracted right? like a small external vibration could also destroy the interaction na? how can that be controlled?
VARUN KRISHNAKUMAR IT 7:58 PM
yes, sir
Send a message to everyone. Messages are also recorded.
6:30 PM | txt-zcyr-fuc
91°F
Haze
ENG US
18:30
19-09-2022

DAY 02


meet.google.com/txt-zcyr-fuc
REC
Shan A is presenting
ELECTRON
"interference pattern" is seen only in waves
INDUMATHI A
ESHANTHEKA ...
37 SAKTHIVEL ...
NANTHANAVA...
AJAY S CS
Shan A
29 others
You
People
Add people
Close
Search for people
In call
KAVISHREE S INT (You)
040 Kamalesh S IT
047 RAKSHAYA KAMINI V...
063 SREENIDHI R EEE
064 SRINIDHI K EEE
069 SUBANI SHREE G EEE
301 DEVA M IT
37 SAKTHIVEL S BT
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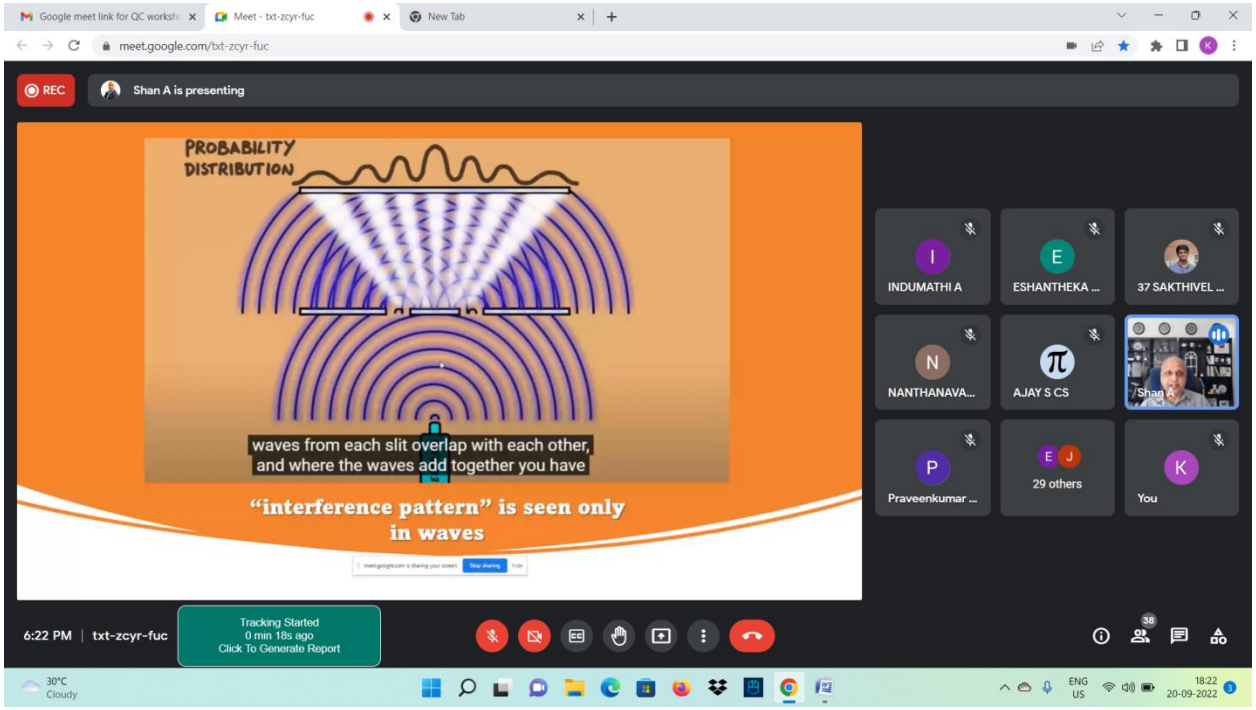
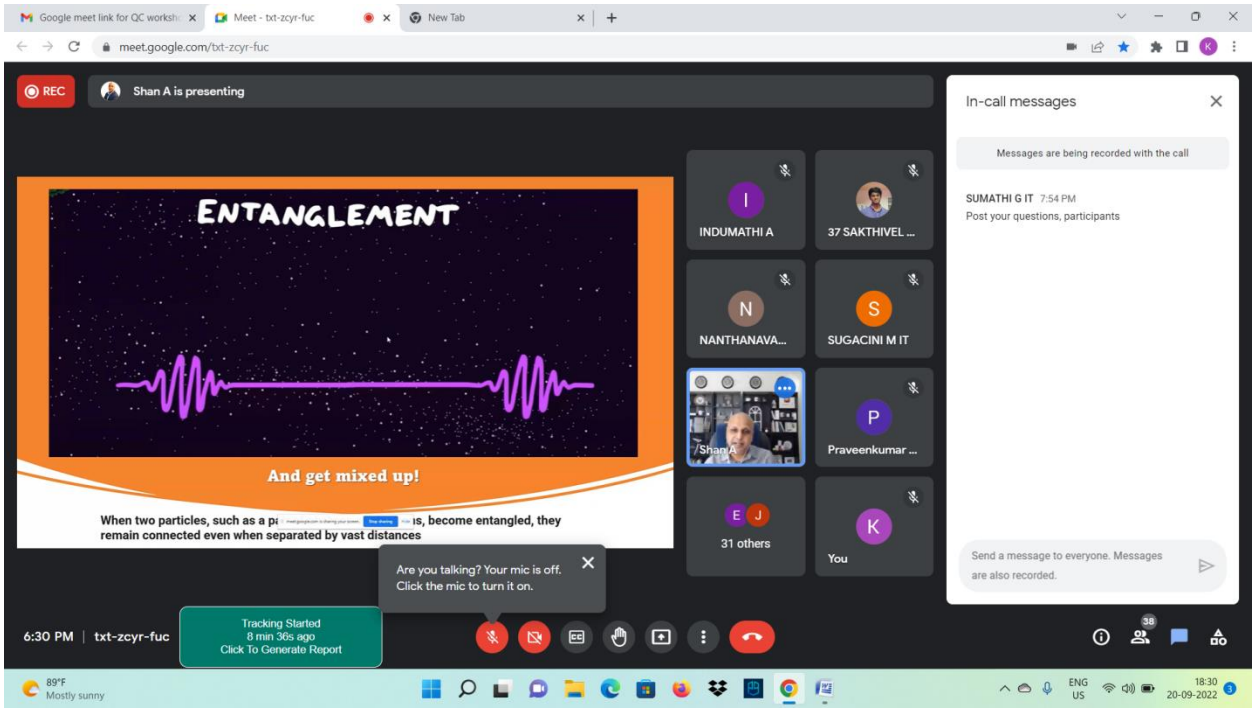
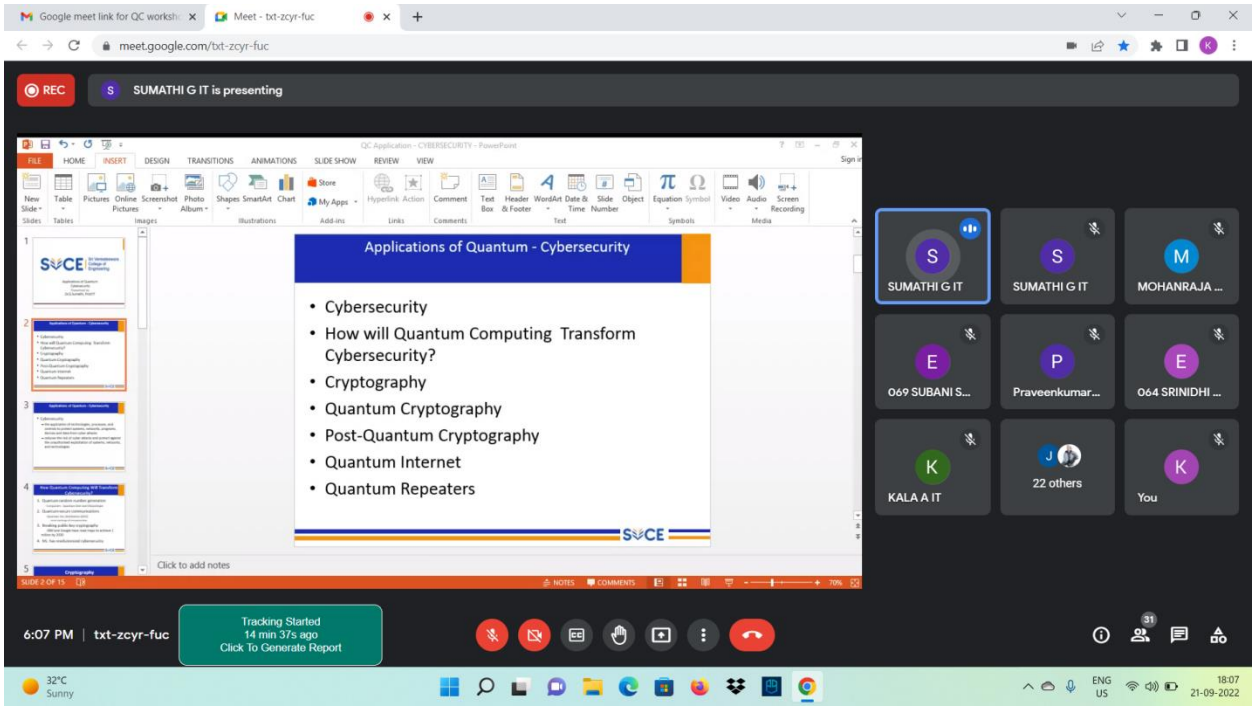
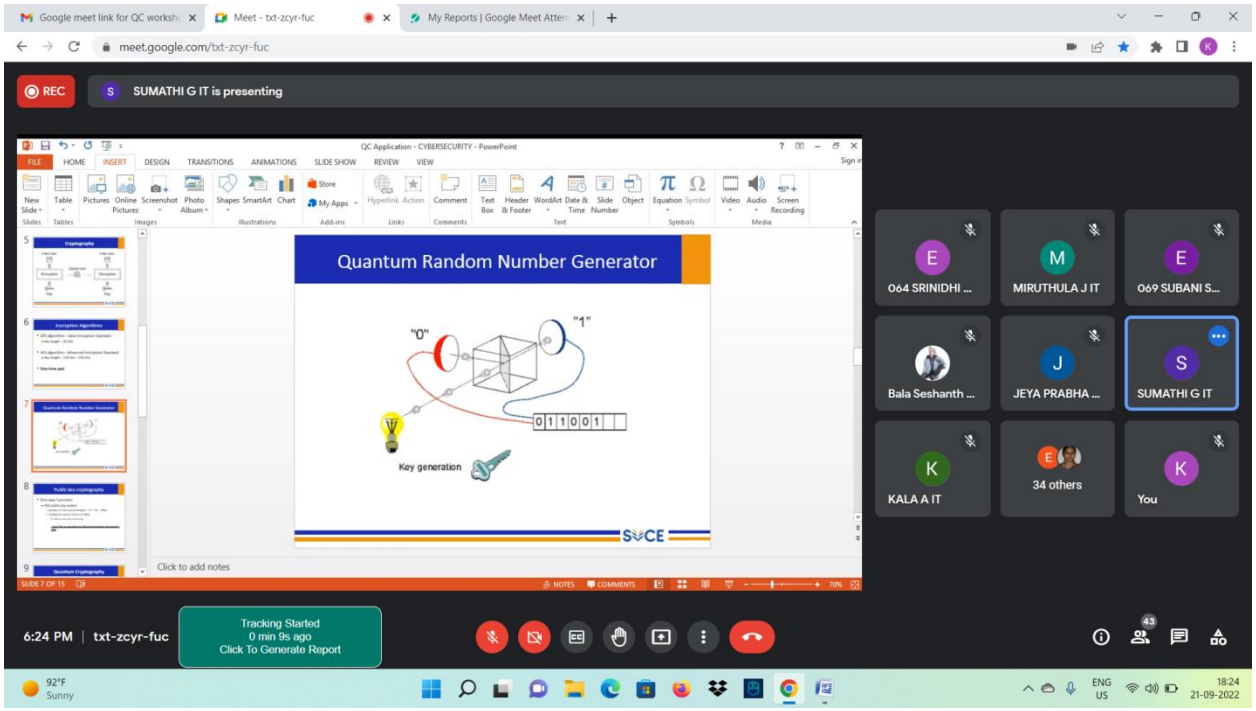
0 min 1s ago
Click To Generate Report
30°C
Cloudy
ENG
US
18:21
20-09-2022

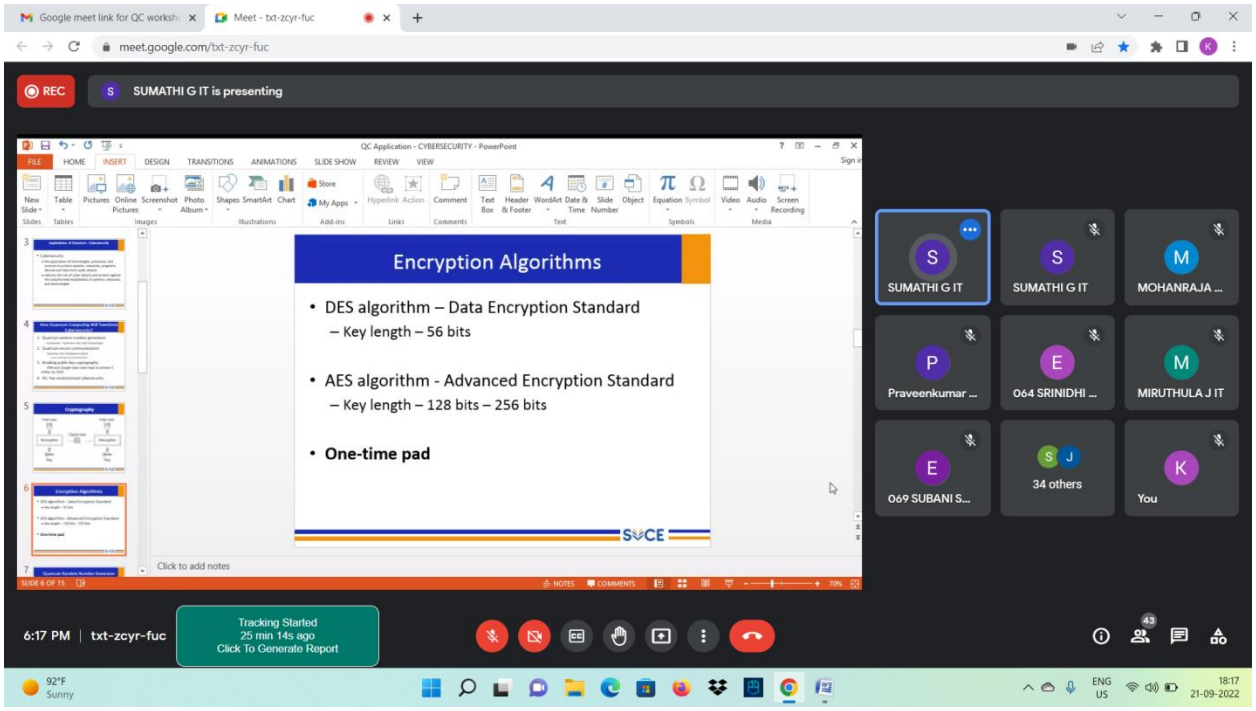

meet.google.com/txt-zcyr-fuc
REC
Shan A is presenting
PROBABILITY DISTRIBUTION
waves from each slit overlap with each other, and where the waves add together you have
"interference pattern" is seen only in waves
INDUMATHI A
ESHANTHEKA ...
37 SAKTHIVEL ...
NANTHANAVA...
AJAY S CS
Shan A
Praveenkumar ...
29 others
You
6:22 PM | txt-zcyr-fuc
Tracking Started
0 min 18s ago
Click To Generate Report
30°C
Cloudy
ENG
US
18:22
20-09-2022


Google meet link for QC worksh
Meet - txt-zcyr-fuc
New Tab
meet.google.com/txt-zcyr-fuc
REC
Shan A is presenting
ENTANGLEMENT
And get mixed up!
When two particles, such as a pi
is, become entangled, they
remain connected even when separated by vast distances
In-call messages
Messages are being recorded with the call
SUMATHI G IT 7:54 PM
Post your questions, participants
Send a message to everyone. Messages are also recorded.
INDUMATHI A
37 SAKTHIVEL ...
NANTHANAVA...
SUGACINI M IT
Shan A
Praveenkumar ...
31 others
You
Are you talking? Your mic is off.
Click the mic to turn it on.
6:30 PM | txt-zcyr-fuc
Tracking Started
8 min 36s ago
Click To Generate Report
89°F
Mostly sunny
ENG
US
18:30
20-09-2022

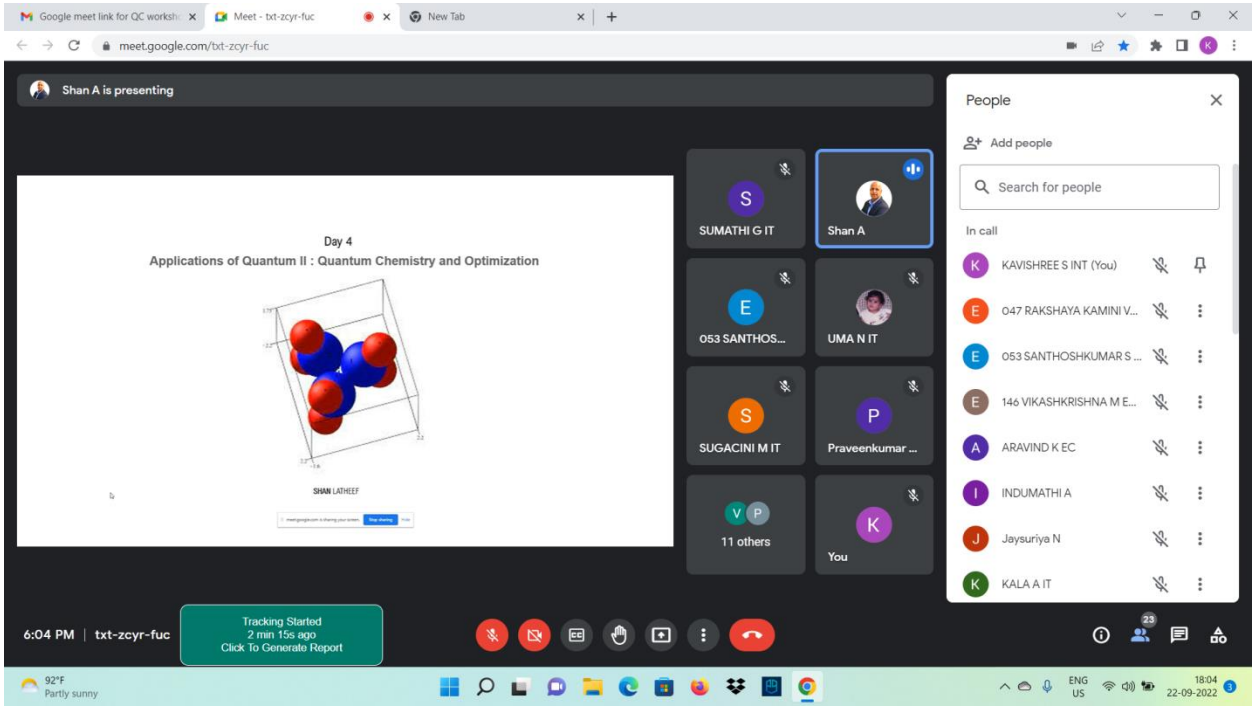
DAY 03


Google meet link for QC worksh
Meet - txt-zcyr-fuc
meet.google.com/txt-zcyr-fuc
REC
SUMATHI G IT is presenting
Applications of Quantum - Cybersecurity
• Cybersecurity
• How will Quantum Computing Transform Cybersecurity?
• Cryptography
• Quantum Cryptography
• Post-Quantum Cryptography
• Quantum Internet
• Quantum Repeaters
SVCE
Click to add notes
SUMATHI G IT
SUMATHI G IT
MOHANRAJA ...
069 SUBANI S...
Praveenkumar...
064 SRINIDHI ...
KALA A IT
22 others
You
6:07 PM | txt-zcyr-fuc
Tracking Started
14 min 37s ago
Click To Generate Report
32°C
Sunny
ENG
US
18:07
21-09-2022


Google meet link for QC worksh
Meet - txt-zcyr-fuc
My Reports | Google Meet Atten
meet.google.com/txt-zcyr-fuc
REC
SUMATHI G IT is presenting
QC Application - CYBERSECURITY - PowerPoint
Quantum Random Number Generator
"0"
"1"
0 1 1 0 0 1
Key generation
SVCE
Click to add notes
064 SRINIDHI ...
MIRUTHULA J IT
069 SUBANI S...
Bala Seshanth ...
JEYA PRABHA ...
SUMATHI G IT
KALA A IT
34 others
You
6:24 PM | txt-zcyr-fuc
Tracking Started
0 min 9s ago
Click To Generate Report
92°F
Sunny
ENG
US
18:24
21-09-2022


Google meet link for QC worksh
Meet - txt-zcyr-fuc
meet.google.com/txt-zcyr-fuc
REC
SUMATHI G IT is presenting
QC Application - CYBERSECURITY - PowerPoint
Encryption Algorithms
• DES algorithm – Data Encryption Standard
– Key length – 56 bits
• AES algorithm - Advanced Encryption Standard
– Key length – 128 bits – 256 bits
• One-time pad
SVCE
Click to add notes
SUMATHI G IT
SUMATHI G IT
MOHANRAJA ...
Praveenkumar ...
064 SRINIDHI ...
MIRUTHULA J IT
069 SUBANI S...
34 others
You
6:17 PM | txt-zcyr-fuc
Tracking Started
25 min 14s ago
Click To Generate Report
92°F
Sunny
ENG
US
18:17
21-09-2022

DAY 04


Shan A is presenting
Day 4
Applications of Quantum II : Quantum Chemistry and Optimization
SHAN LATHEEF
People
Add people
Search for people
In call
KAVISHREE S INT (You)
047 RAKSHAYA KAMINI V...
053 SANTHOSHKUMAR S ...
146 VIKASHKRISHNA M E...
ARAVIND K EC
INDUMATHI A
Jaysuriya N
KALA A IT
SUMATHI G IT
Shan A
053 SANTHOS...
UMA N IT
SUGACINI M IT
Praveenkumar ...
11 others
You
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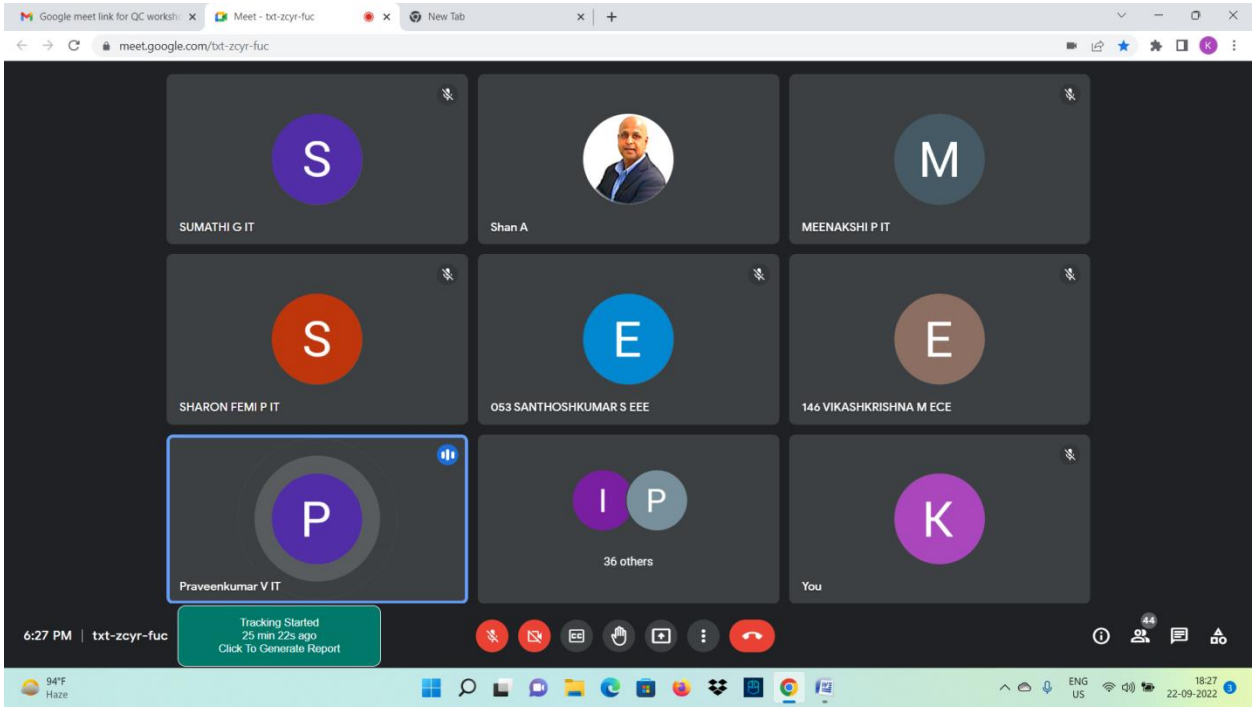
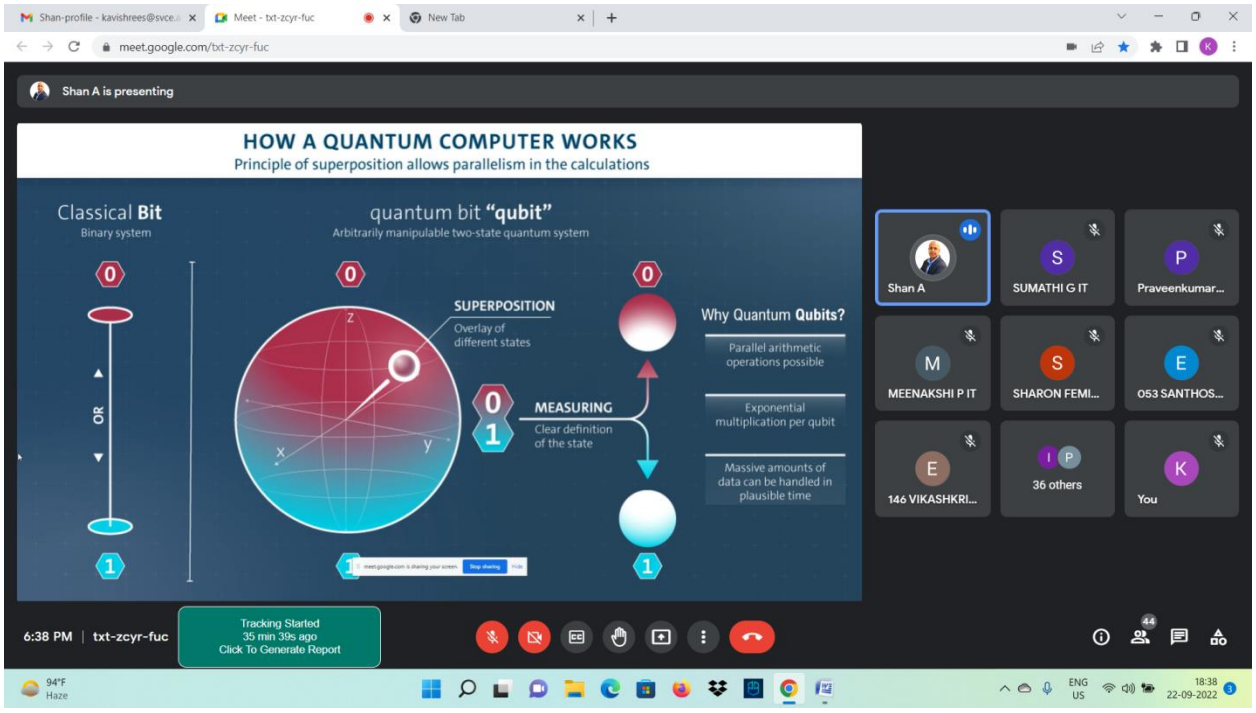
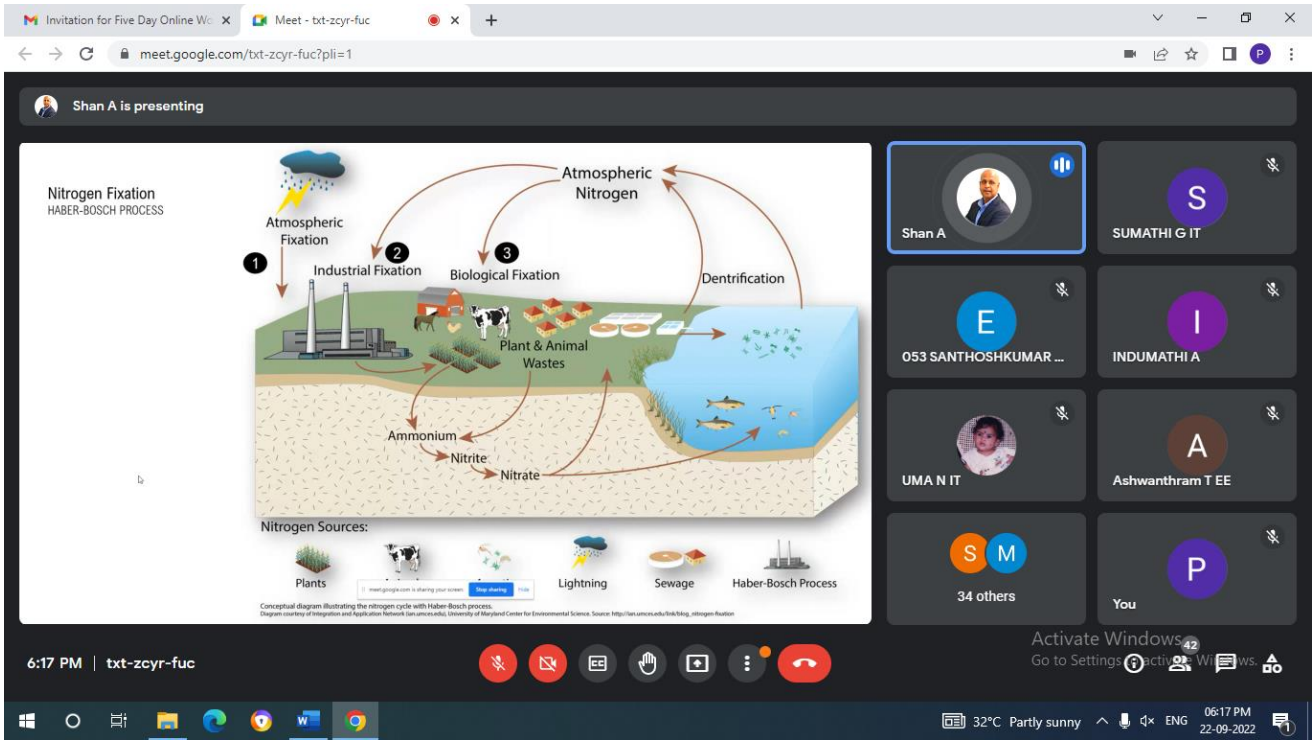
Tracking Started
2 min 15s ago
Click To Generate Report

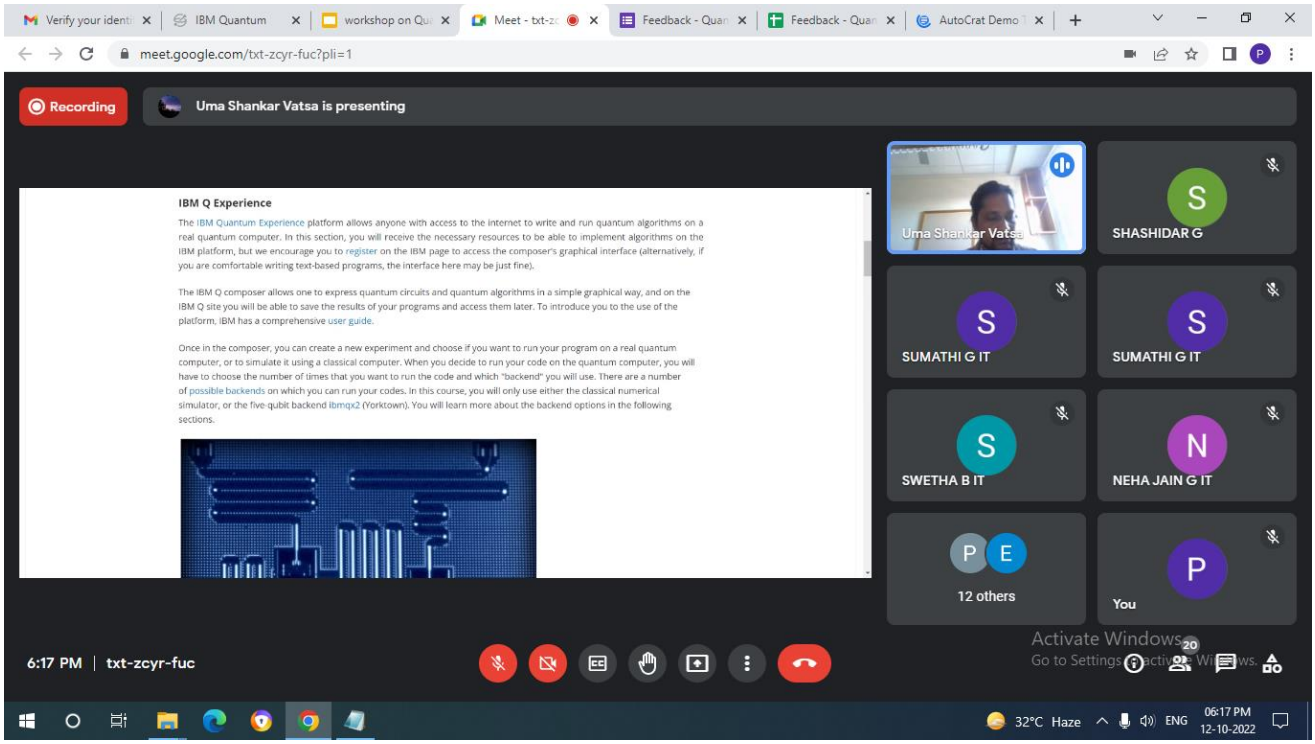

SUMATHI G IT
Shan A
MEENAKSHI P IT
SHARON FEMI P IT
053 SANTHOSHKUMAR S EEE
146 VIKASHKRISHNA M ECE
Praveenkumar V IT
36 others
You
6:27 PM | txt-zcyr-fuc
Tracking Started
25 min 22s ago
Click To Generate Report

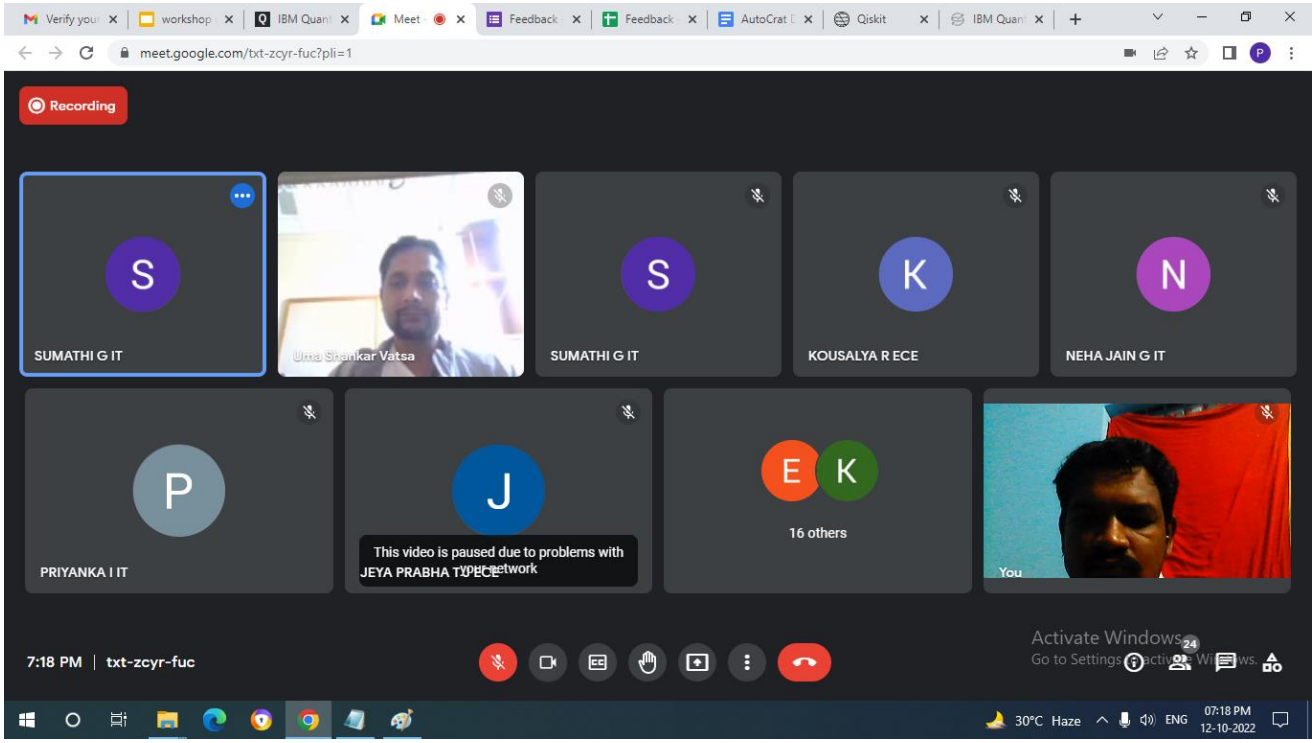


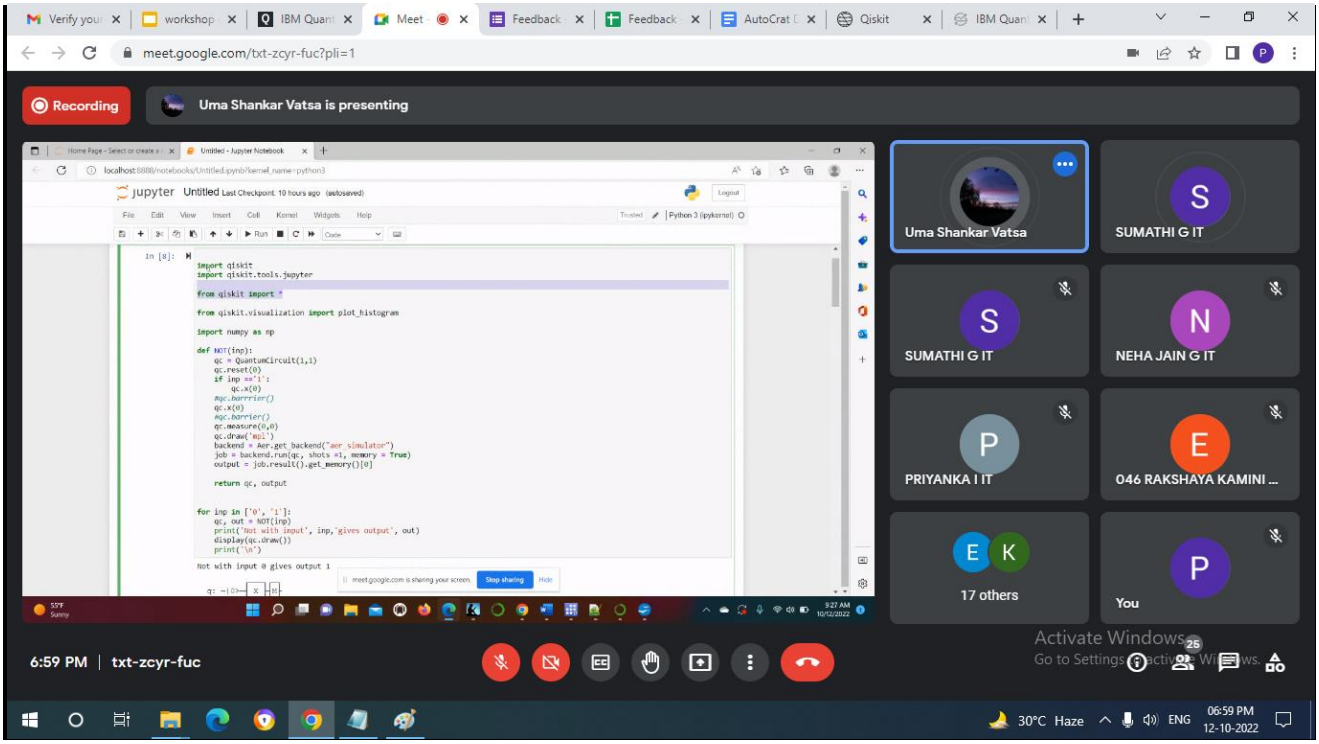


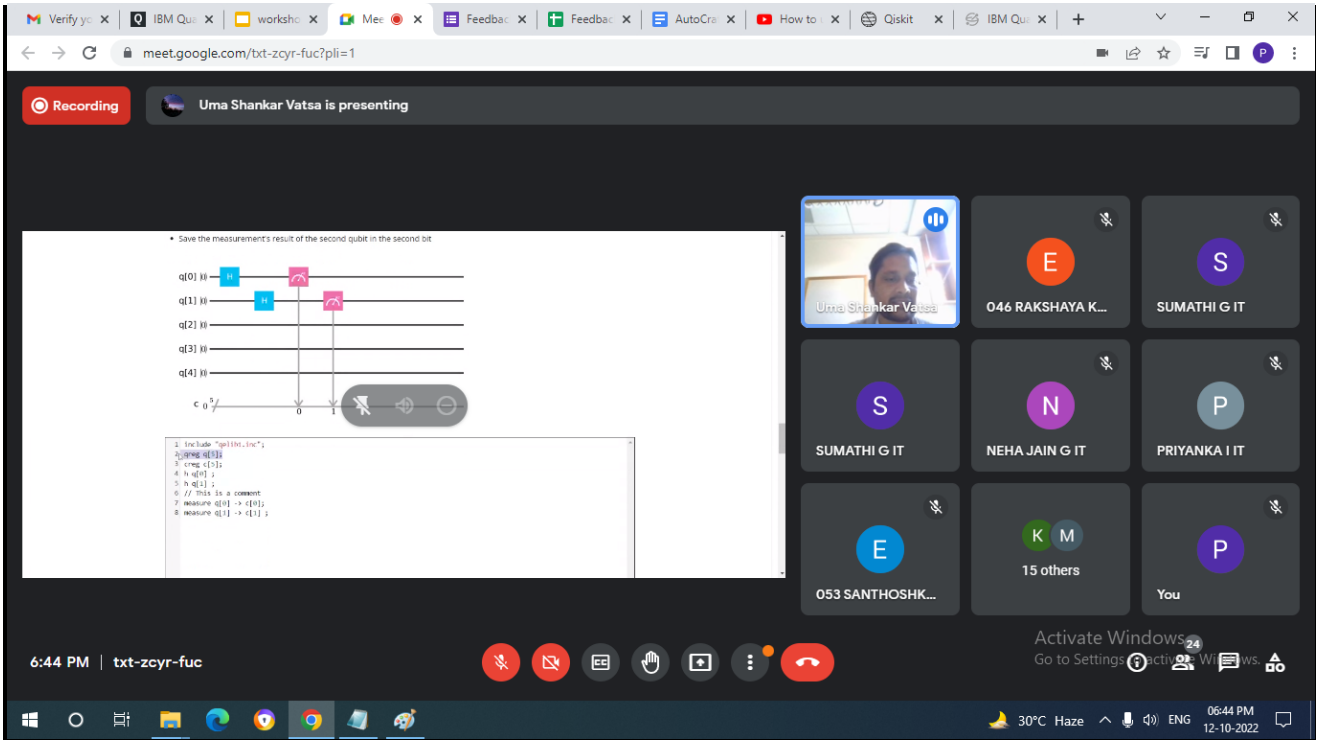
Resource link:
https://www.youtube.com/watch?v=u1XXjWr5frEhttps://www.youtube.com/watch?v=o1_D4FscMnU

DAY 05


Recording
Uma Shankar Vatsa is presenting
IBM Q Experience
The IBM Quantum Experience platform allows anyone with access to the internet to write and run quantum algorithms on a real quantum computer. In this section, you will receive the necessary resources to be able to implement algorithms on the IBM platform, but we encourage you to register on the IBM page to access the composer's graphical interface (alternatively, if you are comfortable writing text-based programs, the interface here may be just fine).
The IBM Q composer allows one to express quantum circuits and quantum algorithms in a simple graphical way, and on the IBM Q site you will be able to save the results of your programs and access them later. To introduce you to the use of the platform, IBM has a comprehensive user guide.
Once in the composer, you can create a new experiment and choose if you want to run your program on a real quantum computer, or to simulate it using a classical computer. When you decide to run your code on the quantum computer, you will have to choose the number of times that you want to run the code and which "backend" you will use. There are a number of possible backends on which you can run your codes. In this course, you will only use either the classical numerical simulator, or the five-qubit backend ibmqx2 (Yorktown). You will learn more about the backend options in the following sections.
Uma Shankar Vatsa
SHASHIDAR G
SUMATHI G IT
SUMATHI G IT
SWETHA B IT
NEHA JAIN G IT
12 others
You
6:17 PM | txt-zcyr-fuc
Activate Windows
Go to Settings to activate Windows.
32°C Haze
ENG
06:17 PM
12-10-2022


Recording
SUMATHI G IT
Uma Shankar Vatsa
SUMATHI G IT
KOUSALYA R ECE
NEHA JAIN G IT
PRIYANKA I IT
JEYA PRABHA T ECE
This video is paused due to problems with your network
16 others
You
7:18 PM | txt-zcyr-fuc
Activate Windows
Go to Settings to activate Windows.
30°C Haze
ENG
07:18 PM
12-10-2022


meet.google.com/txt-zcyr-fuc?pli=1
Recording
Uma Shankar Vatsa is presenting
jupyter Untitled
import qiskit
import qiskit.tools.jupyter
from qiskit import *
from qiskit.visualization import plot_histogram
import numpy as np
def NOT(inp):
Not with input 0 gives output 1
Uma Shankar Vatsa
SUMATHI G IT
SUMATHI G IT
NEHA JAIN G IT
PRIYANKA I IT
046 RAKSHAYA KAMINI ...
17 others
You
6:59 PM | txt-zcyr-fuc
Activate Windows
Go to Settings to activate Windows.
30°C Haze
ENG
06:59 PM
12-10-2022


meet.google.com/txt-zcyr-fuc?pli=1
Recording
Uma Shankar Vatsa is presenting
• Save the measurement's result of the second qubit in the second bit
q[0]
q[1]
q[2]
q[3]
q[4]
c
Uma Shankar Vatsa
046 RAKSHAYA K...
SUMATHI G IT
SUMATHI G IT
NEHA JAIN G IT
PRIYANKA I IT
053 SANTHOSHK...
15 others
You
6:44 PM | txt-zcyr-fuc
Activate Windows
Go to Settings to activate Windows.
30°C Haze
ENG
06:44 PM
12-10-2022

CERTIFICATE SAMPLE

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