TECHNOWIZARDS REPORT 2020-21

DEPARTMENT OF COMPUTER SCIENCE

BISHOP CHULAPARAMBIL MEMORIAL COLLEGE, KOTTAYAM

BISHOP CHULAPARAMBIL MEMORIAL COLLEGE, KOTTAYAM

DEPARTMENT OF COMPUTER SCIENCE

ASSOCIATION REPORT – 2020-21

INAUGURATION

Computer Science Association - ***Technowizards*** was inaugurated on 14th November by Mr. Naveen D. Nair, Operations Head Logic Software Solutions, Kottayam. He took an informative seminar on "ICT ACT"through which our students get the knowledge of different types of cyber crime and its punishments.

New office bearers were selected and they are:

President: Jomol Sebastian (3rd year)

Supporting member: Anjaly Sunny(3rd year)

Secretary: Hema Prabha M. (2nd year)

Supporting member: Ruba Pramesh (2nd year)

Treasurer: Neeraja Rajan (1st year)

Supporting member: Indulekha P.S. (1st year)

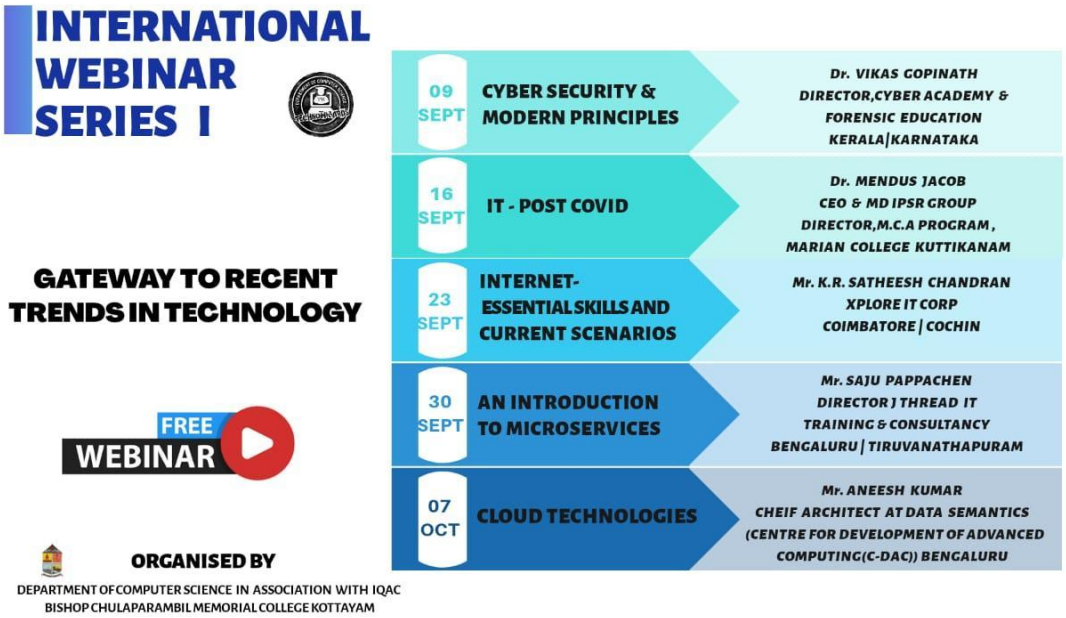
ACADEMIC PERFORMANCE

Total No. of Students Registerd for Univarsity Exam	**23**
No. of Students Passed	**17**
No. of Students Failed	**6**
No. of Students with A Grade	**5**
No. of Students with B+ Grade	**7**

No. of Students with B Grade	**5**
Pass Percentage	**73.91%**
Topper	**Arya Devi M.R. (CGPA - 7.93)**

WEBINAR

We conducted an International webinar series I and II on ***Gateway to Recent Trends in Technology*** - from 9th September 2020 onwards. We conducted one hour webinars every week on Wednesdays 2:00 PM(IST).

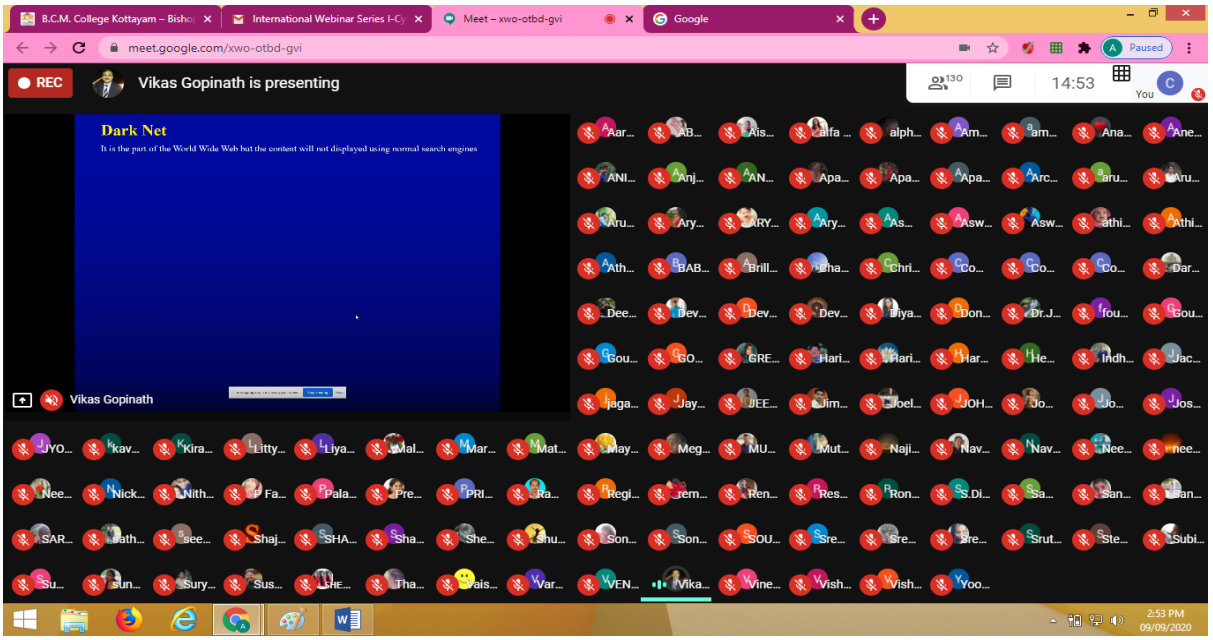


Webinar 1 – Cyber Security and Modern Principals by Dr. Vikas Gopinath, Director, Cyber Academy and Forensic Education, Kerala/Karnataka

For the inaugural talk we got an eminent personality Dr. Vikas Gopinath, Director, Cyber Academy and Forensic Education. He has over 25 years of experience in IT Education Training Field. He has held many positions such as Sr. Faculty (Cyber Forensic) at Kerala Police Academy, Trichur; Professor (Cyber Forensic) at Police Training College, Trivandrum and Patron at Indian Criminology & Forensic Science Association. Currently in Cyber Forensic Education and Investigation as Director.

He completed Graduation in Computer Science from Calicut University, Post-Graduation from Nehru Institute of Economics Planning and Research, Coimbatore, Honor's Diploma in Systems Management from Bangalore and Specialize on Various Information Technology Oriented Programs. Currently he is doing Research on Cyber Forensic & Security in Delhi University. He Received EXCELLENCE AWARD for the best Trainer in 2006- 2009.

Number of Participants



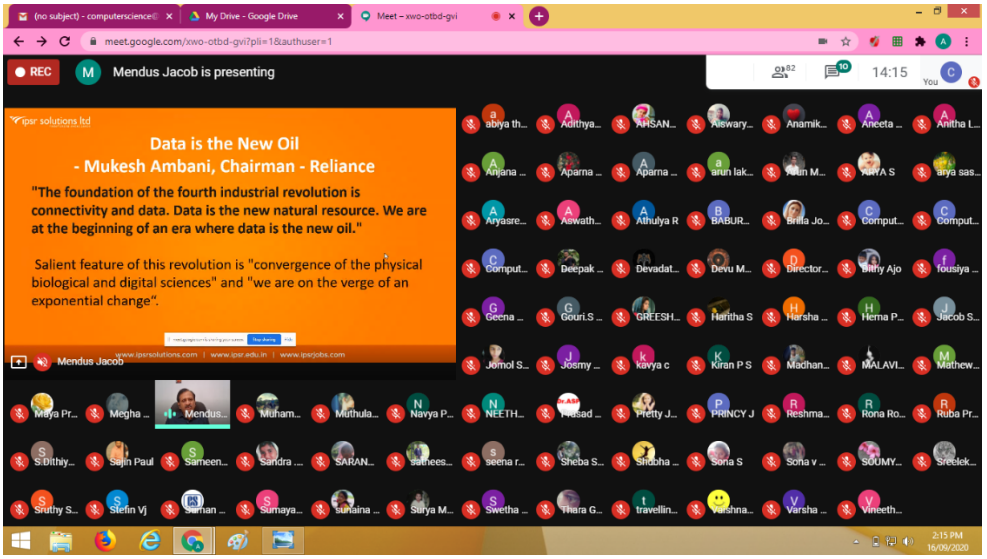
Webinar 2 – Opportunities in Information Technology by Dr. Mendus Jacob, CEO, IPSR Solutions Ltd., Kottayam

Dr. Mendus Jacob, CEO & M.D. of IPSR group of concerns and Director of MCA programme, Marian College Kuttikkanam is an Experienced Academician and Chief Executive Officer. He is a Strong business development professional skilled in various areas of Mathematics, Management and IT. He was the former director of The School of Applicable Mathematics (MGU). Has 23 years teaching experience and 3 years research experience.

He has published more than 16 papers at National and International levels. He took his Ph.D in Operation Research and M.Phil in Numerical Analysis from Meerut university. He is Research Guide in Mathematics, Management and Computer Applications at Lincoln University, Malasia. He started Institute of Professional Studies and Research (IPSR) in 1999 which now stands out as a best example for an industry in India. He was Resource person for many National and International

Conferences and Faculty Development Programmes, e-literacy programmes and exhibitions. Received the Best Entrepreneur Award from Chief Minister of Kerala and IT Education Excellence Award from the Defense Minister of India.

Number of Participants



Webinar 3 – Internet – Essential Skills and Current Scenarios by Mr. K.R Satheesh Chandran, Sales Head, Xplore IT Corp, Coimbatore.

Mr. K.R. Satheesh Chandran is an educationist with 13 years of experience in IT/ITES education industry, currently heading the sales and marketing wing of Xplore IT Corp which is a subdivision of Xplore Intellects Pvt Ltd, based at Coimbatore.

He excelled in his career with several IT Educational companies like NIIT, Everonn Education Ltd etc. He has handled Business English Trainings, workshops on Cyber Security and Ethical Hacking across the country and abroad. He is an Electronics and Communication Engineer also holds MBA in International Business. He holds a Microsoft Certification in Marketing and his core expertise includes process orientation, metrics based management, mergers and acquisitions and Cyber Security tools and techniques.

Number of Participants

Around 100 participants are joined for the webinar.

Webinar 4 – An Introduction to Microservices by Mr. Saju Pappachan, Director, JThread IT Training Consultancy, Bangalore.

Mr. Saju Pappachan is an IT professional with 25 years of experience in major companies like Curam Software, Ireland , Tec Systems New York, ArisGlobal, India, SoftBrands, India and is currently the Director of JThread technologies and JThread IT Training & consultancy, Bangalore|Thiruvanathapuram. He is Computer Science Engineer and also IBM Certified Ecommerce Professional and Sun Certified Java Programmer (now Oracle). He has conducted many personality development sessions in different colleges and organizations on

Confidence Building, Self Esteem, Continuous Improvement and has covered all the topics regarding different aspects of a happy life.

Number of Participants

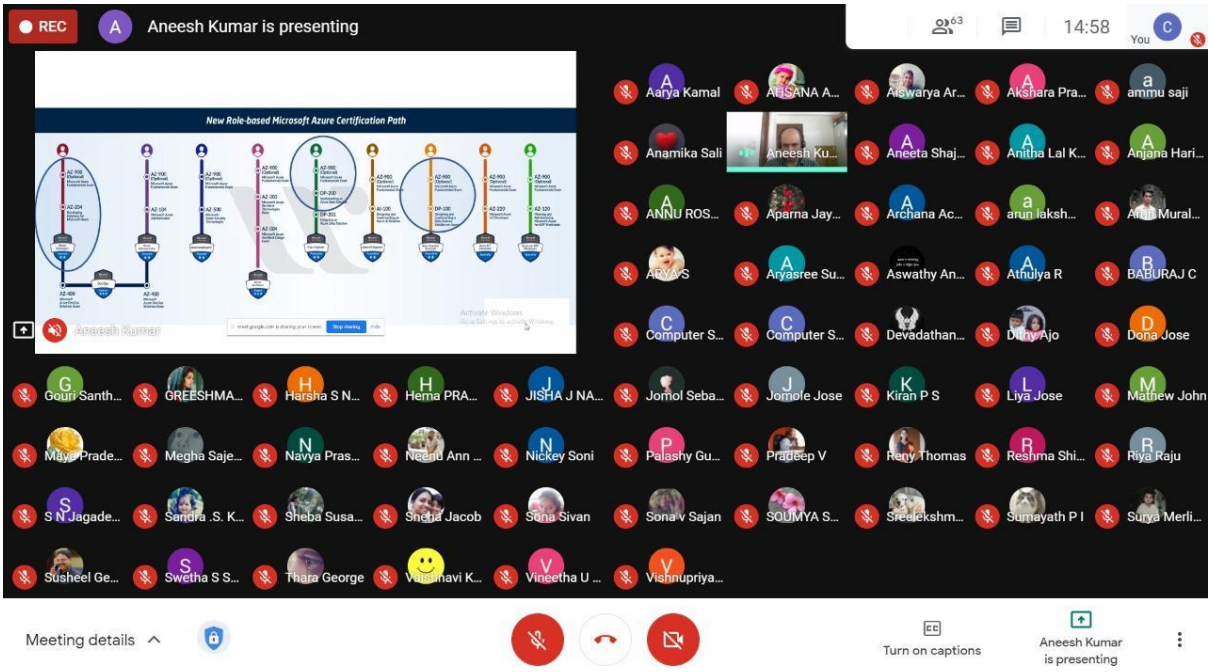
More than 80 participants are joined for the webinar.

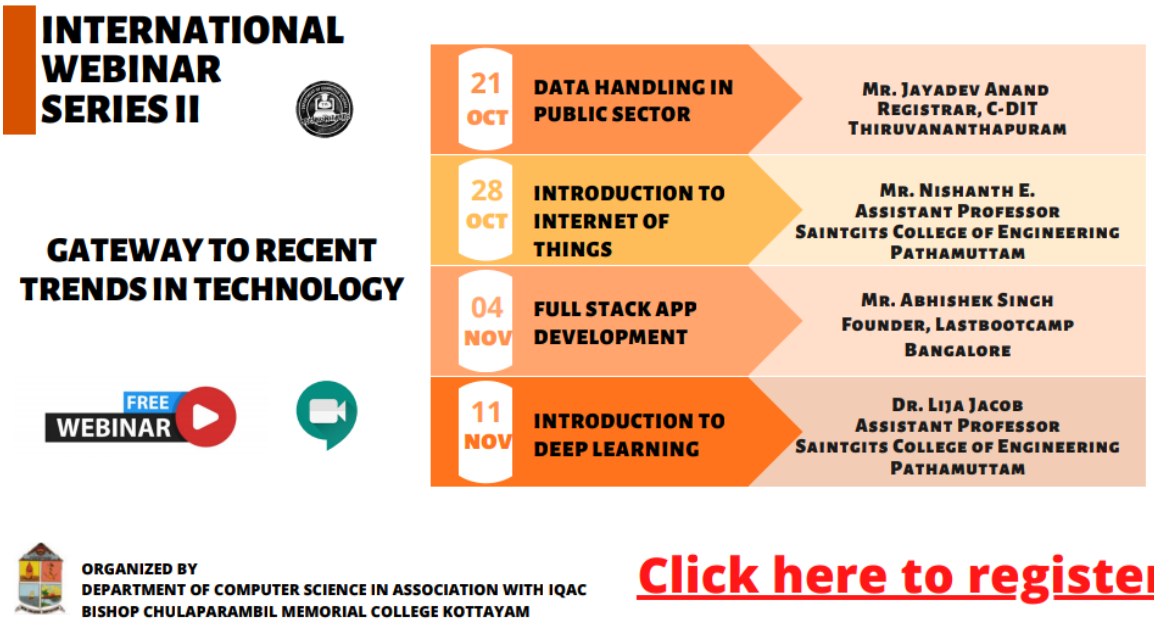
Webinar 5 – Cloud Technologies by Mr. AneeshKumar, Chief Architect, Data Semantics, Bangalore.

Mr Aneesh Kumar Aryam Vally is a well know Data Scientist and a Cloud Architect also in the modern technology arenas of Computer Science Engineering. Currently he is working as Chief Architect in Data Sematics Bangalore. He has 18 years of experience in software development in various IT companies like Polaris, Tata Consultancy Service, GE Health

Care, Daimler Chrysler (Benz), Nouse Info tech etc Worked in design and development of advanced analytics systems leveraging machine learning, big data and cloud computing. He has conducted several machine learning and big data courses for professionals focusing their career improvement strategies. He holds and teaches for relevant industry certifications in the space of Machine Learning, Big Data and Cloud Computing.

Number of Participants



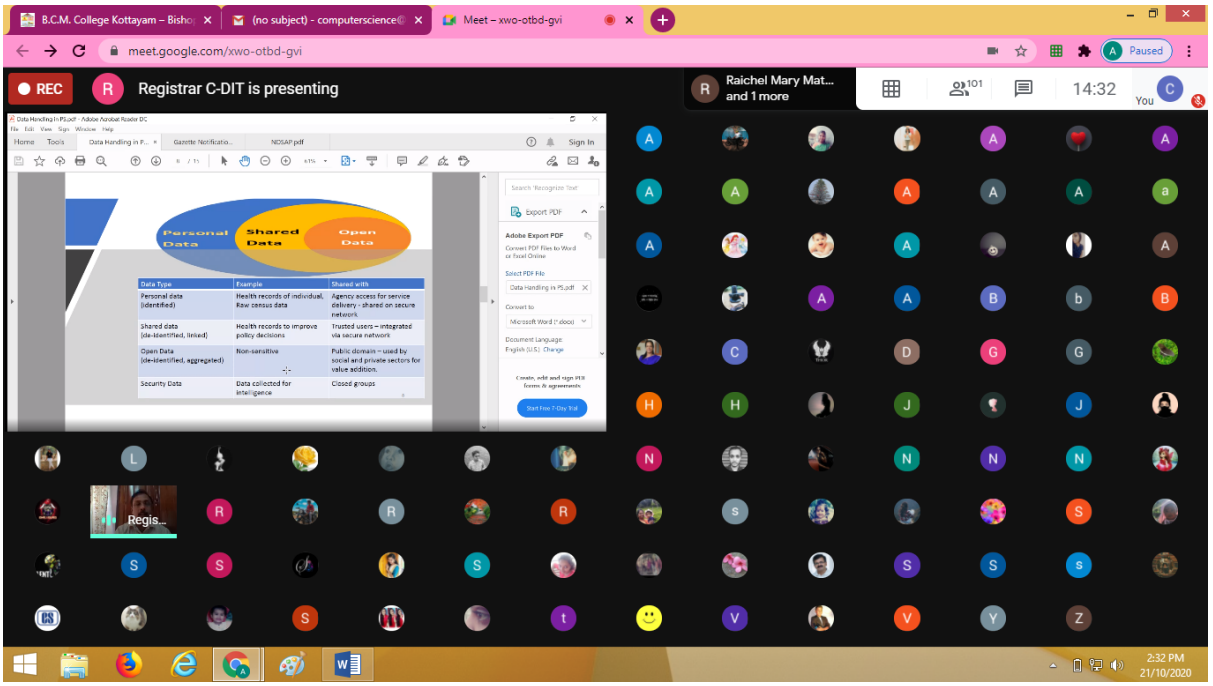


Webinar 6 – Data Handling in Public Sector by Mr. Jayadev Anand, Registrar, C-DIT, Thiruvananthapuram

Mr. Jayadev Anand, Registrar, C-DIT, Thiruvananthapuram has 28 years of experience in various realms of IT Projects management.He worked as Asst Director then Dy.Director and Head EDP at rubber board India, Programmer and Asst. Manager at The South Indian Bank, and Asst. Design Engineer at MECON India Ltd. He is computer Engineer having MBA in e-Bussiness and PG Diploma in Information and Communication Laws.

He recerived award of appreciation at the 24th IFFK as registrar of CDIT for the technical support provided in the areas of online registration, spot registration, show booking, website & mobile app and staff support.

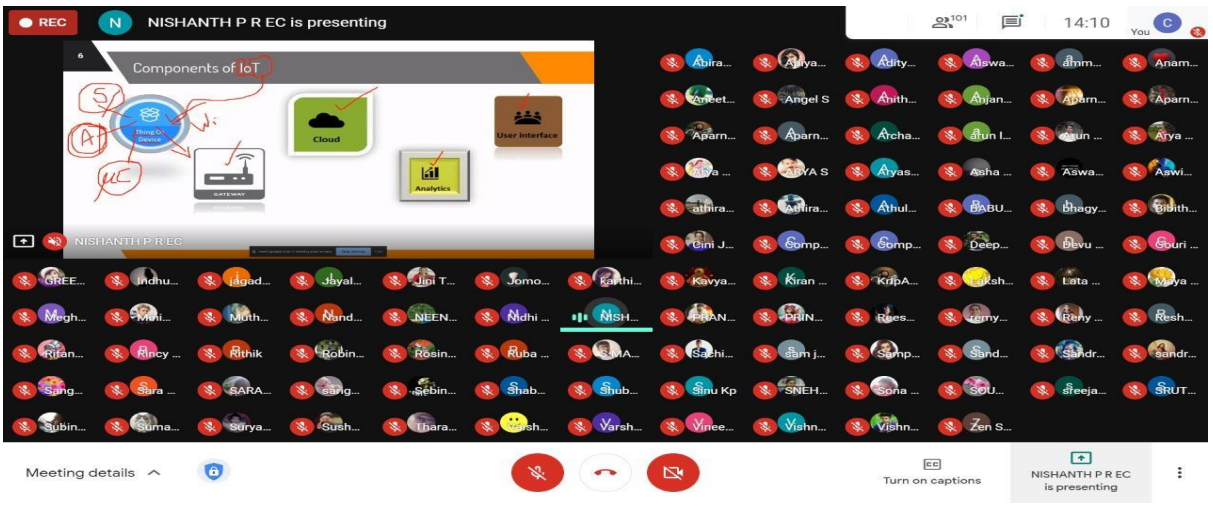
Number of Participants



Webinar 7 – Introduction to Internet of Things by Er. Nishanth P.R., Assistant Professor Dept. of ECE, Saintgits College of Engineering, Pathamuttom

Er. Nishanth P.R., has 13 years of teaching experience at SAINTGITS College of Engineering. He is also an entrepreneur leading a startup incubated at Saintgits College of Engineering focused on Electronics Product Design and Development. His areas of interest are Embeded systems, Internet of Things, Robotics, and Software Engineering. He is an Elctronics and Communication Engineer having M.Tech in Embedded Systems.

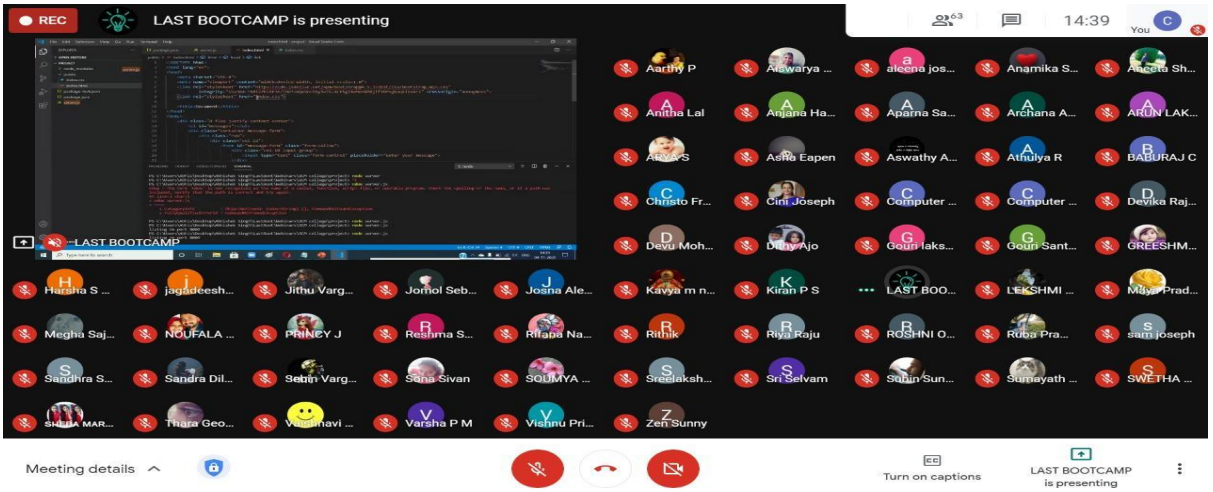
Number of Participants



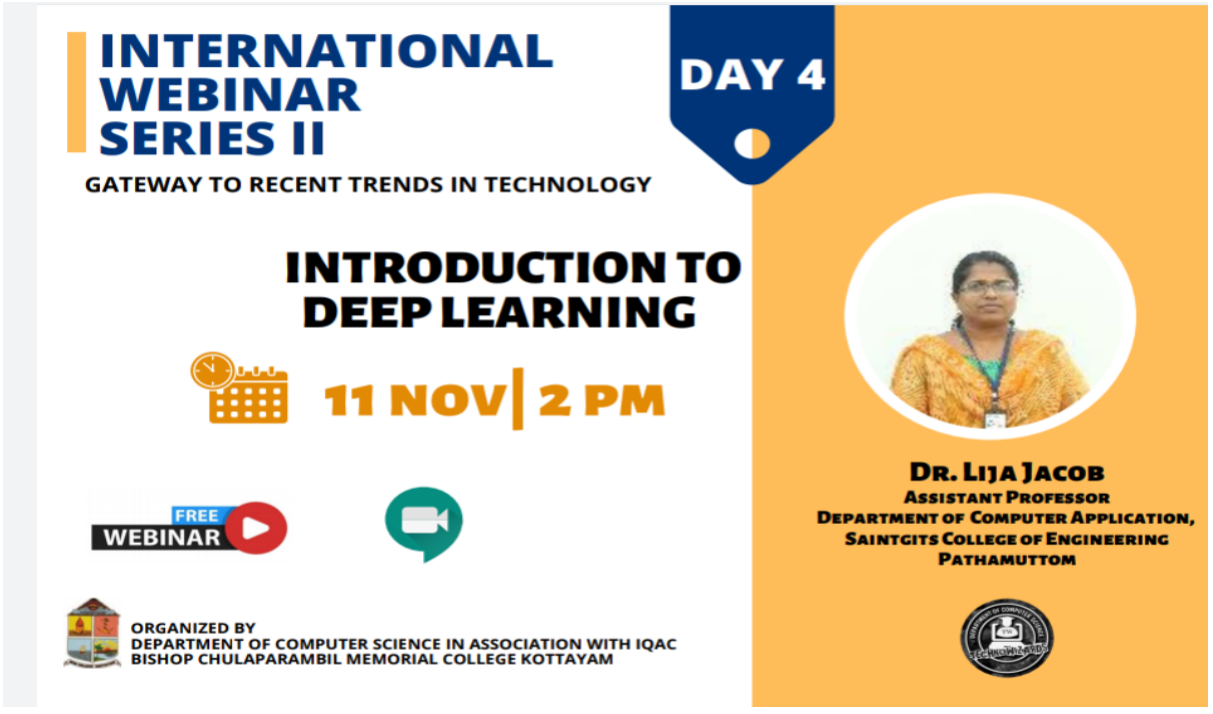
Webinar 8 – Fullstack App Development by Mr. Abhishek Singh, Founder, Lastbootcamp, Bangalore

Mr. Abhishek Singh, is the founder of Last Bootcamp, which is an e-learning platform to learn coding from scratch and start your career in Software development. He had written 50K+ lines of code over 7 different languages. Developed Data migration application for ERP solutions, Built data encrypt/decrypt pipelines to maintain security over the network, Built report generation tools to give insights about data, Integrated social network web application to connect Software Developers in tech world and Integrated e-commerce web application to browse and buy millions of products.

Number of Participants



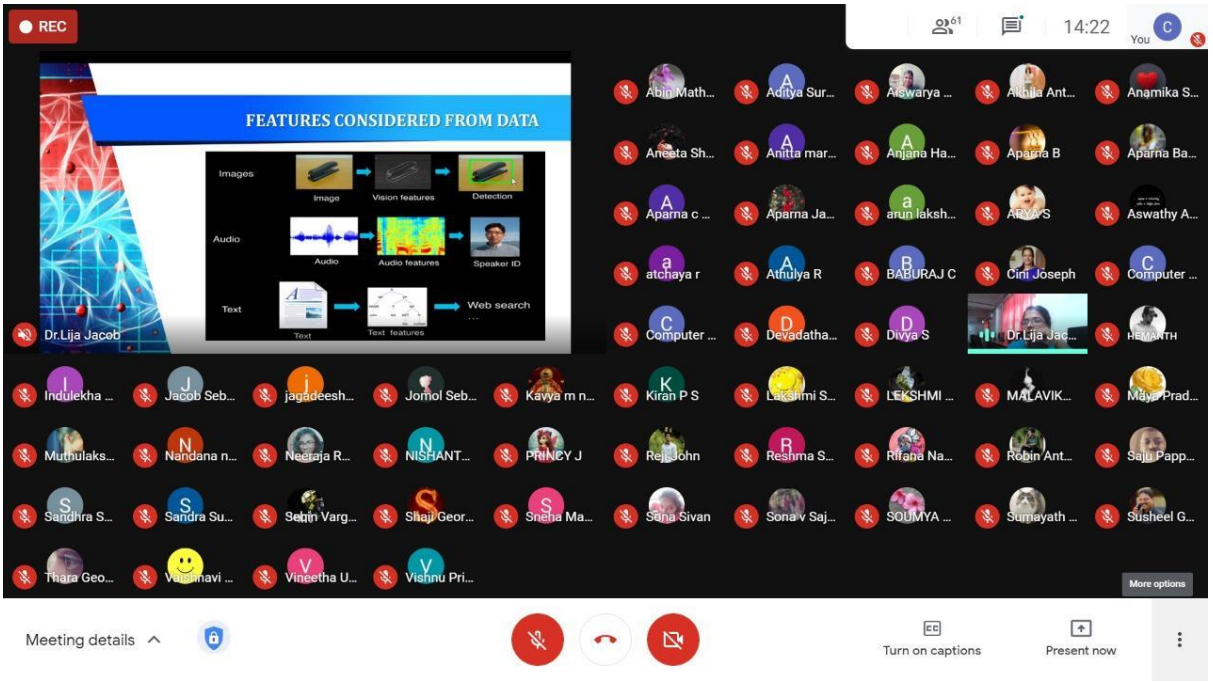
Webinar 9 – Introduction to Deep Learning by Dr. Lija Jacob, Assistant Professor Dept. of Computer Application, Saintgits College of Engineering, Pathamuttom



Dr. Lija Jacob, has 17 years of solid teaching experience with effective leadership skill. Worked as Course Coordinator cum Lecturer at BCM College for Women, Kottayam, and as Lecturer at Lourdes Matha

College of Science and Technology, Thiruvananthapuram. Currently working as Senior Assistant Professor in the Department of Computer Applications at Saintgits College of Engineering, Pathamuttom, Kottayam. She has more than 9 International publications and presented two papers at various international conferences. Chaired a National Conference conducted by Santhigiri College of Computer Sciences in 2018. She has won First Prize in My Big Idea Competition conducted by Saintgits College of Engineering,in many years. She Developed a Chabot for MCA in the college website and is an Active member of BODDHISATVA' the team working in collaboration with Bennett University in AI projects. She took her PhD. from Bharathiyar University and M.Phil from Madura Kamaraj University.

Number of Participants



Webinar 10 – Leadership and Entrepreneurship by Mr. Kochouseph Thomas Chittilappilly , Founder, Chairman and Chief Executive Officer of V-Guard Industries Ltd and a chain of amusement parks called Wonderla

"Only when one takes the risk of getting a few scars,
does one gain the opportunity of winning stars"

INTERNATIONAL WEBINAR ON
LEADERSHIP & ENTREPRENEURSHIP

KEYNOTE SPEAKER:
MR. KOCHOUSEPH CHITTILAPPILLY

(Founder , chairman and chief executive officer of V - Guard industries Ltd and a chain of amusement parks called wonderla)

STAFF COORDINATOR
Mrs. DIVYA . S : +919446983677

STUDENT COORDINATOR
Ms. SURYA MERLIN JOSE : +918593024525

NOVEMBER 5, 2020
12PM to 1 PM

ORGANIZED BY
DEPARTMENT OF COMPUTER SCIENCE IN ASSOCIATION WITH IQAC
BISHOP CHULAPARAMBIL MEMORIAL COLLEGE KOTTAYAM

Mr **Kochouseph *Thomas* Chittilappilly** is a well known Indian business magnate, writer, investor and philanthropist. He is the Founder, Chairman and Chief Executive Officer of V-Guard Industries Ltd and a

chain of amusement parks called Wonderla. He is post graduated in physics from St. Thomas College, Thrissur. His career started in 1973 at Telics, a Thiruvananthapuram based electronics company manufacturing voltage stabilizers and emergency lamps, as a supervisor where he worked for three years. In 1977, he founded V-Guard Industries, a small electronics manufacturing unit for the production of voltage stabilizers with a capital of ₹100,000.and with 2 employees. Now the company grew over the years to become the largest selling stabilizer brand in India. The company have a product range composed of Pumps and Motors, Electric and Solar Water Heaters, Wiring Cables, UPS, and Ceiling Fans.

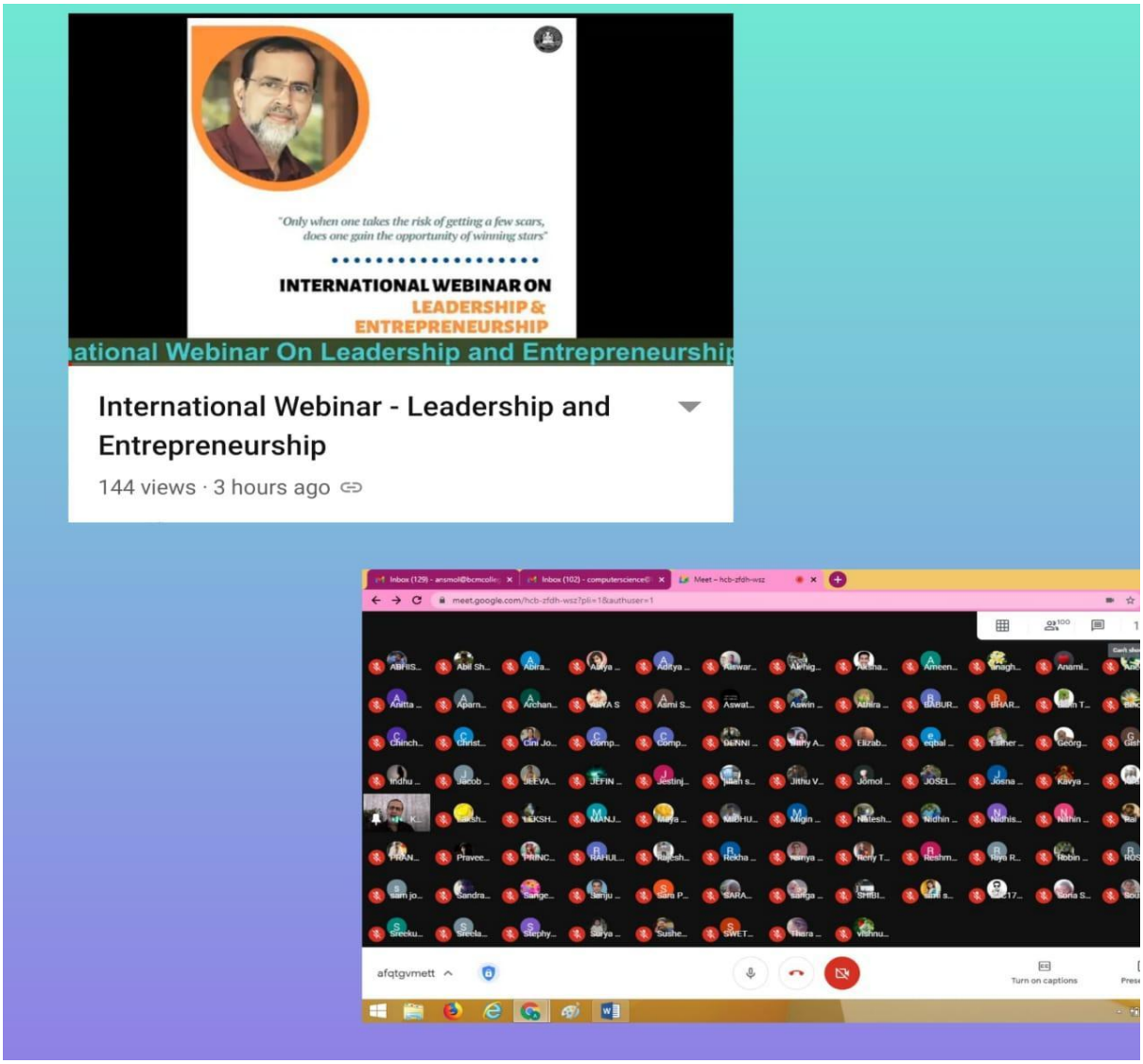
He published his first book, *Practical Wisdom*, in 2005, which is an account of practical management techniques he derived from his personal experiences. Two more books in the same series followed, in the years 2010 and 2012. In between, he published his autobiographical work, *Ormakkilivathil* in 2011 which had a foreword written by renowned Malayalam writer, T. Padmanabhan. In 2015 he wrote two inspirational ,nostalgic book Ormakalilekku-Oru-Yathra and The Gift How I Gave Away A Kidney and Got Richer At Heart.

K Chittilappilly foundation (KCF) is an initiative by Shri. Kochouseph Chittilappilly with the prime objective of undertaking public charitable activities in India in a corporate level without any discrimination as to religion, caste, creed or gender. Thomas Chittilapilly Trust, another charitable venture of Chittilapilly which is named after his father runs two institutions, an old age home where elderly people are housed and provided with sustenance and medical care, and *Shantimandiram*, a

home for destitute children where they are provided with shelter, education, and food.

He is a recipient of *Rashtriya Samman* from the Government of India for being the highest taxpayer in India. He was selected as the *Malayala Manorama Newsmaker of the Year 2011*, the year he became an organ donor. He is also a recipient of awards such as *Millennium Businessman of Kerala* from Business Deepika, *Tourism Man of the Year 2000* from Destination Kerala, *Manager of the Year 2000* from the Travancore Management Association and *Tourism Man of the Year 2011* from the Association of Tourism Trade Organizations, India (ATTOI).

Number of Participants



WORKSHOP

We had conducted an international workshop on LaTeX in collaboration with ICFOSS from 11 January 2021 onwards. A 5 days long course which provides the participants with hands on experience on LaTeX.. Total 47 candidates are participated.

Workshop Details.pdf

Seminar on Visual Effects

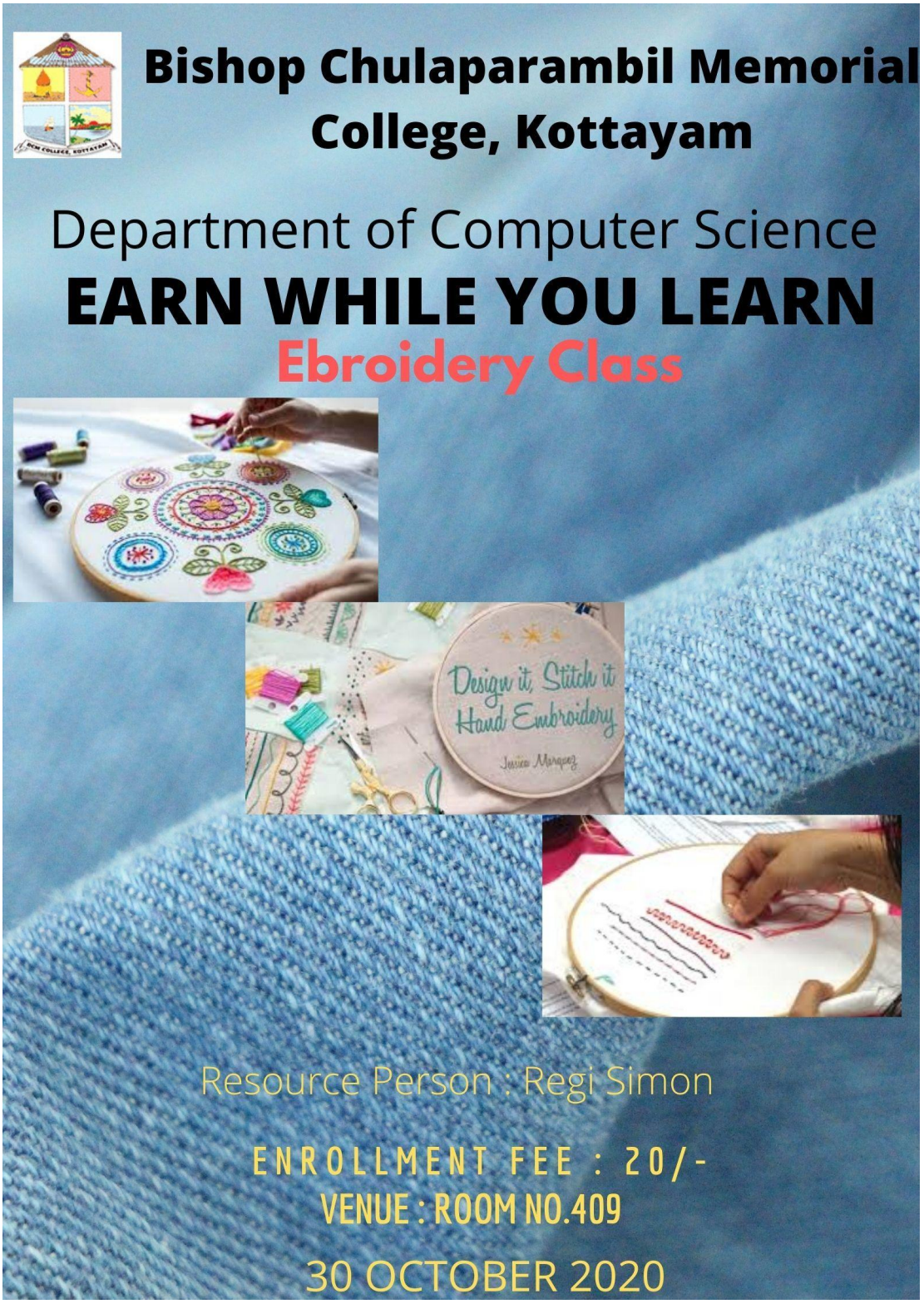
We conducted a seminar on Visual Effect by Sreejith M, Career Guidence Officer, Maya Academy of Advanced Cinematics, Aptech Brach on 23rd March 2021 for 3DC students. 23 Students participated in it.

EARN WHILE YOU LEARN PROGRAMME 2020 – 21

A program through which students can earn money by sharing their knowledge and skills in any area to the interested group. With this programme our students motivate students of other departments to be independent and confident with their skills. The department will collect a nominal fee from the participants and 50% of this will be given to the tutor(i.e. to the student who took the class).

As a part of EWYL (Earn While You Learn) programme we conducted embroidery class on 30th October 2020 by Regi Simon.

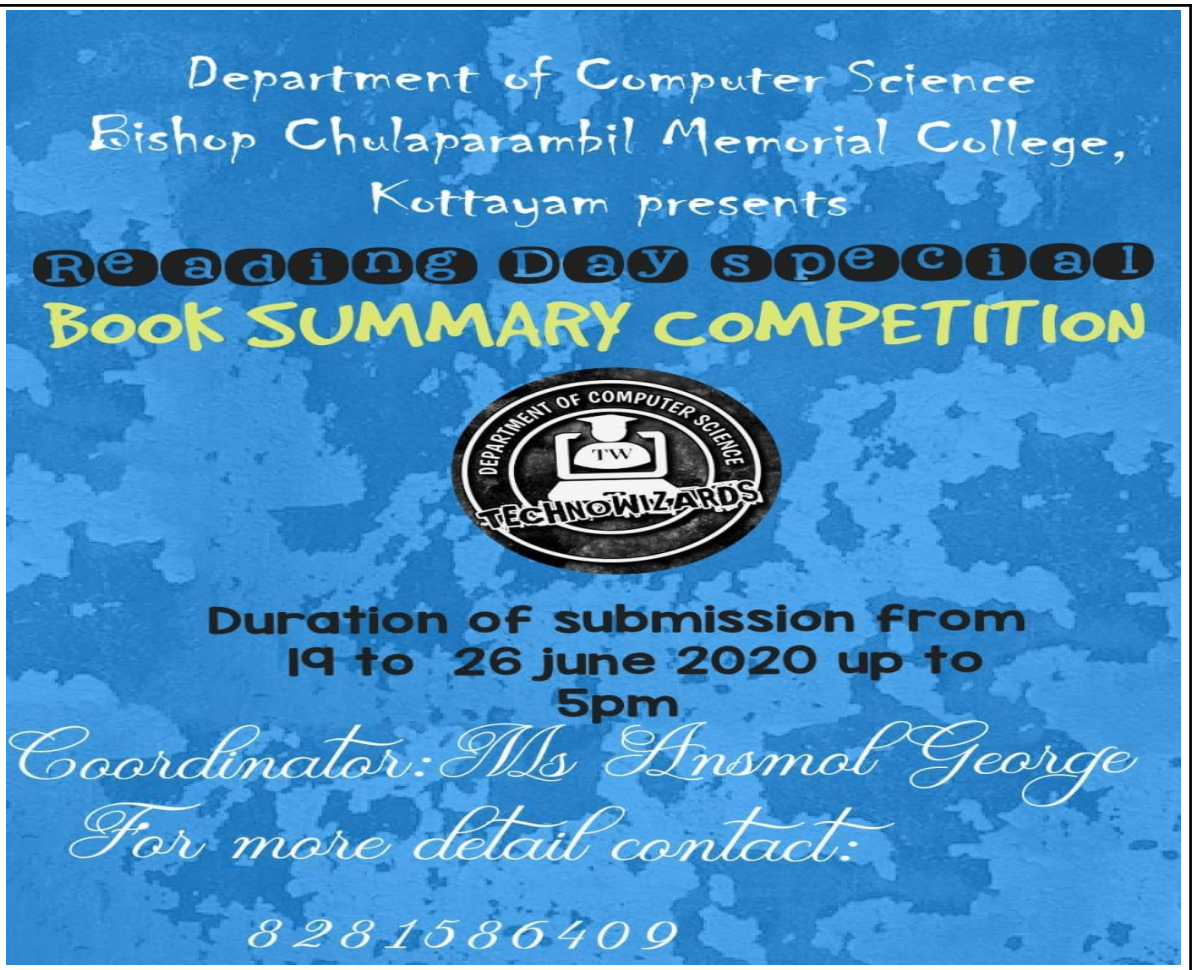
Dept. of

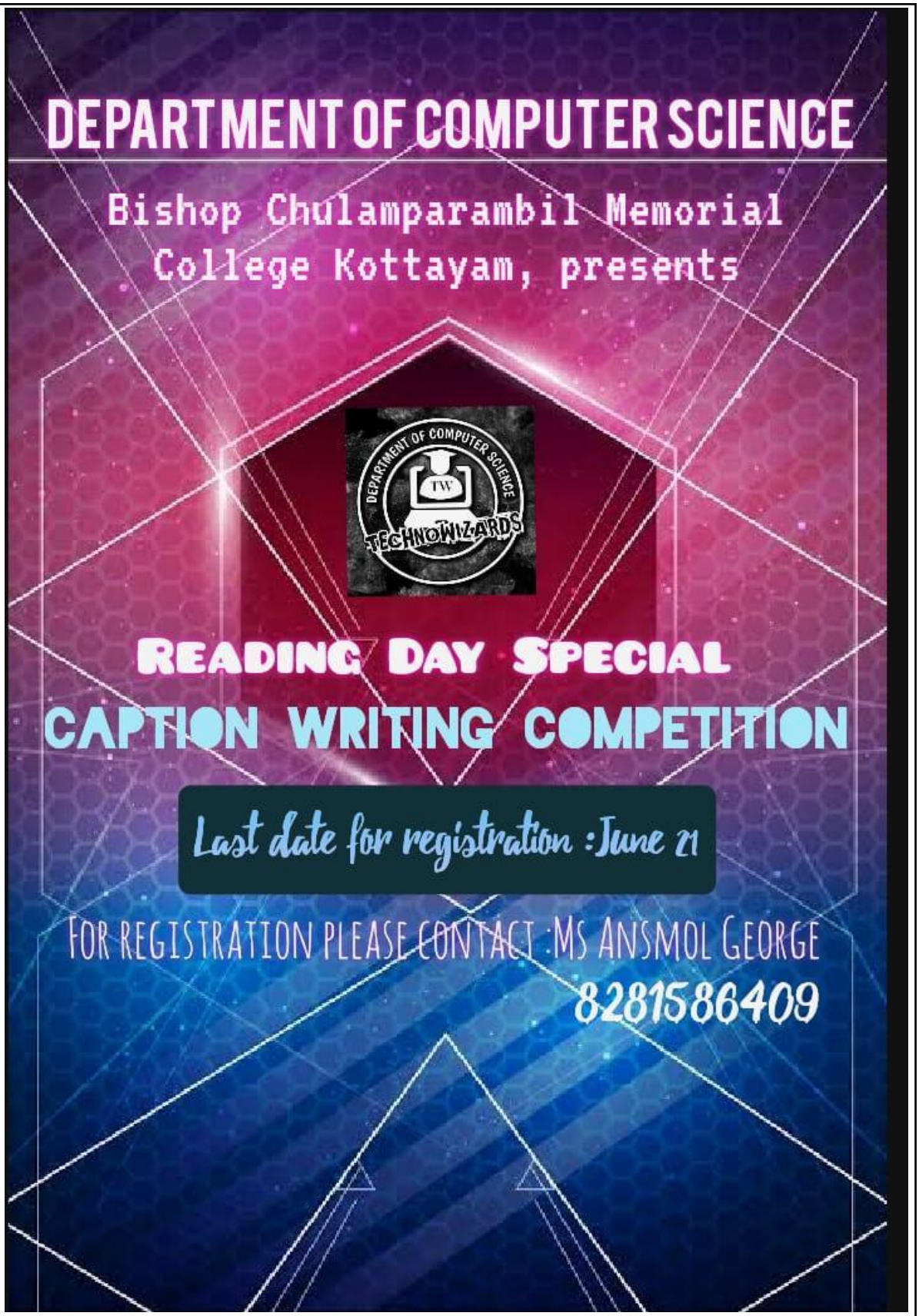

Bishop Chulaparambil Memorial College, Kottayam
Department of Computer Science
EARN WHILE YOU LEARN
Ebroidery Class
Design it, Stitch it
Hand Embroidery
Resource Person : Regi Simon
ENROLLMENT FEE : 20/-
VENUE : ROOM NO.409
30 OCTOBER 2020

DAY OBSERVATIONS CONDUCTED BY THE DEPARTMENTS

COMPETITIONS CONDUCTED

Sl. No:	**Day**	**Competiotion & Level**	Level	**Date**	**Winner**	**No. of Participants**
1.	**Reading Day**	**Book Summary** **Caption Writing**	**Inter Dept**	**June 19, 2020**	**First:** Athira Muralidharan , II DC History **First:** Suzaine Kurian, II DC FSQC	15 Participants List

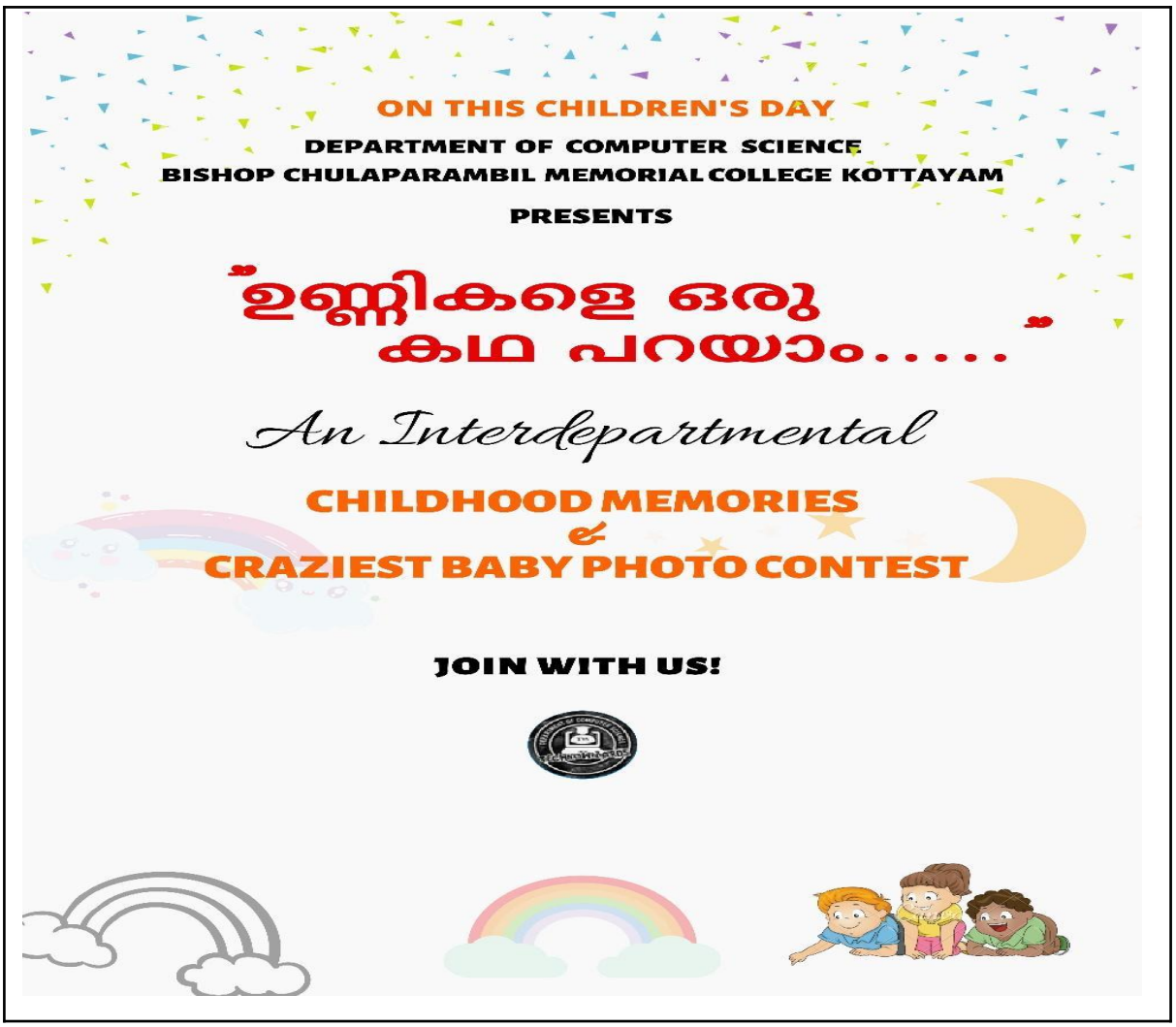

Department of Computer Science
Bishop Chulaparambil Memorial College,
Kottayam presents
Reading Day special
Book SUMMARY COMPETITION
DEPARTMENT OF COMPUTER SCIENCE
TW
TECHNOWIZARDS
Duration of submission from
19 to 26 june 2020 up to
5pm
Coordinator: Ms Ansmol George
For more detail contact:
8281586409

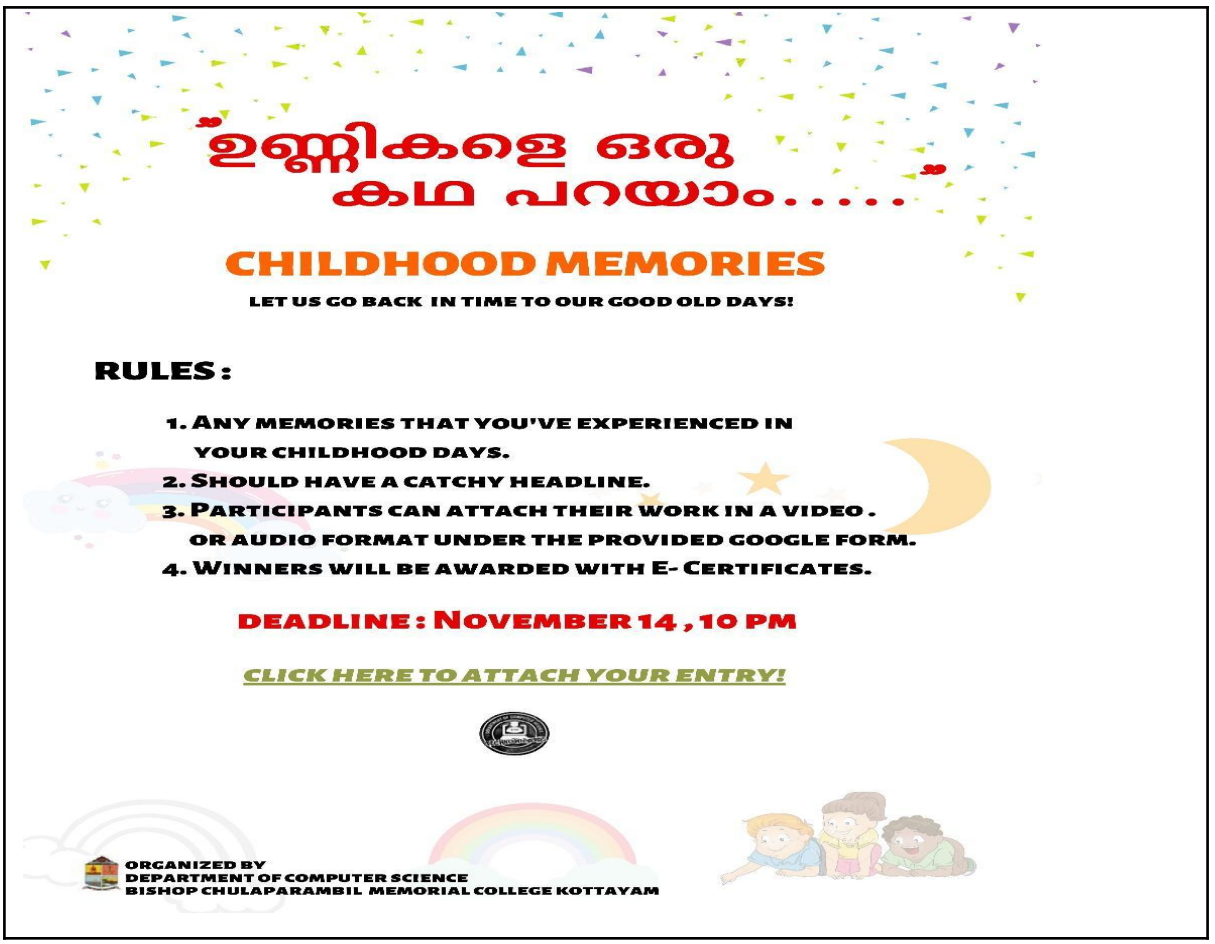

DEPARTMENT OF COMPUTER SCIENCE
Bishop Chulamparambil Memorial
College Kottayam, presents
DEPARTMENT OF COMPUTER SCIENCE
TECHNOWIZARDS
READING DAY SPECIAL
CAPTION WRITING COMPETITION
Last date for registration : June 21
FOR REGISTRATION PLEASE CONTACT : MS ANSMOL GEORGE
8281586409

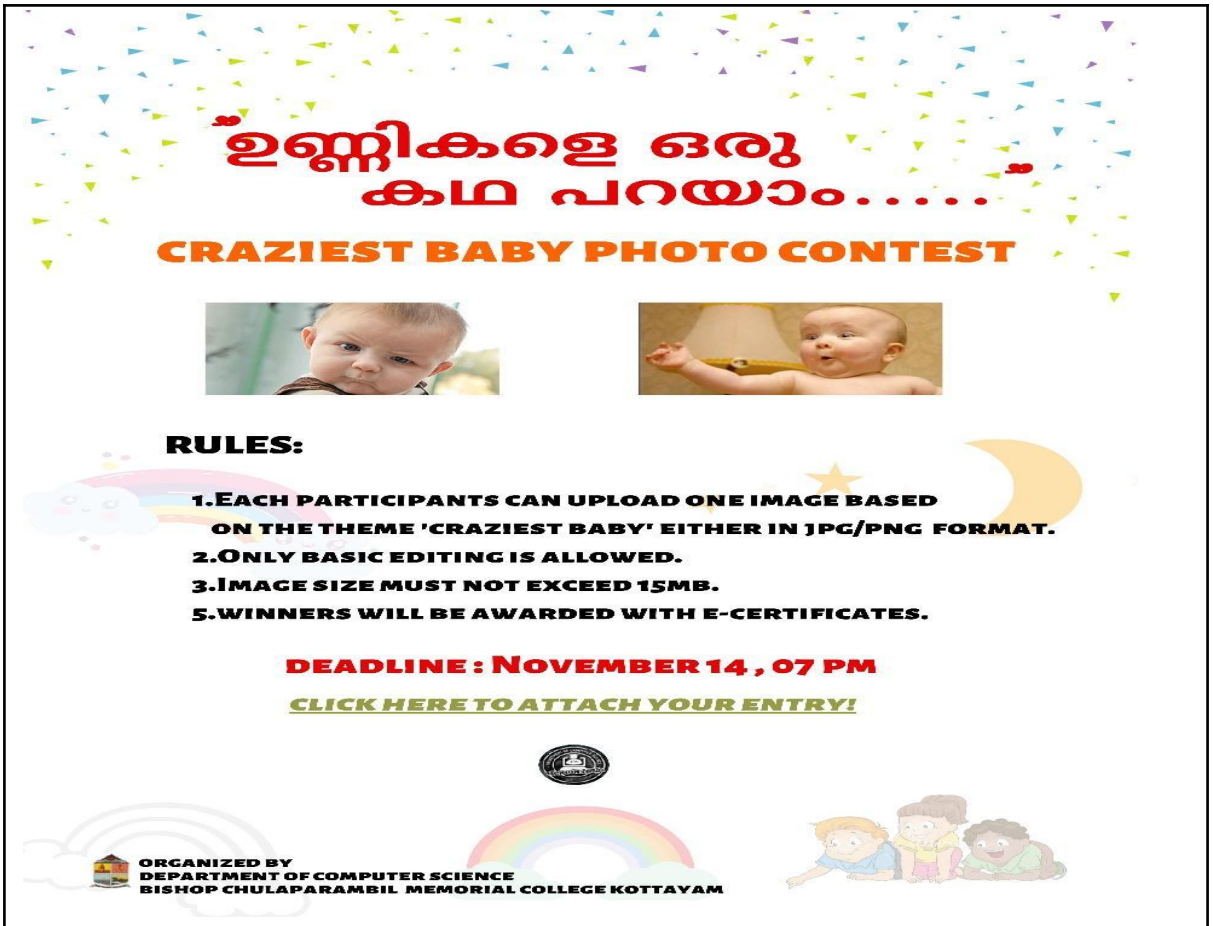
2	**Independence Day**	**ArtGerm – Digital Painting Competition**	**Inter Collegiate**	**August 15, 2020**	**First**: – Juby Mary Thomas, St. Mary's College for Women, Thiruvalla **Second:** – Aswathy Nair, Bishop Speechly College for Advanced Studies, Kottayam **Third:**– Abhijith K. Sasi, Sreesabarisa College	11 Participants List

ARTGERM
2K20
GENERAL RULES
1.Open for both UG and PG students.
2.Paintings should be based on our theme.
3.You can use any digital painting app.
4.Upload your paintings in .jpeg or .png format to the google form provided to you.
5.File size must not exceed 10MBs
6. Submit your paintings before 10 pm on August 15.
ORGANIZED BY
DEPARTMENT OF COMPUTER SCIENCE
BISHOP CHULAPARAMBIL MEMORIAL COLLEGE KOTTAYAM

3	**Childrens Day**	**Unnikale oru Kadha Parayam** **1. Childhood Memories** **2. Craziest Baby Photo Contest**	**Inter Dept**	**November 14, 2020**	**First:** Hanna Sherin C,, Chemistry **Second:** Asbiliya S. Nair, English Model 1 **First:** Fajarna Jabbar, FSQC **Second:** prize Anna Susan Varghese, FACS	11 Participation List


ON THIS CHILDREN'S DAY
DEPARTMENT OF COMPUTER SCIENCE
BISHOP CHULAPARAMBIL MEMORIAL COLLEGE KOTTAYAM
PRESENTS
"ഉണ്ണികളെ ഒരു കഥ പറയാം....."
An Interdepartmental
CHILDHOOD MEMORIES
&
CRAZIEST BABY PHOTO CONTEST
JOIN WITH US!


ഉണ്ണികളെ ഒരു കഥ പറയാം.....
CHILDHOOD MEMORIES
LET US GO BACK IN TIME TO OUR GOOD OLD DAYS!
RULES :
1. ANY MEMORIES THAT YOU'VE EXPERIENCED IN YOUR CHILDHOOD DAYS.
2. SHOULD HAVE A CATCHY HEADLINE.
3. PARTICIPANTS CAN ATTACH THEIR WORK IN A VIDEO . OR AUDIO FORMAT UNDER THE PROVIDED GOOGLE FORM.
4. WINNERS WILL BE AWARDED WITH E- CERTIFICATES.
DEADLINE : NOVEMBER 14 , 10 PM
CLICK HERE TO ATTACH YOUR ENTRY!
ORGANIZED BY
DEPARTMENT OF COMPUTER SCIENCE
BISHOP CHULAPARAMBIL MEMORIAL COLLEGE KOTTAYAM



4	**Cyber Security Day**	**Quiz O Grand**	**Inter Collegiate**	**November 30, 2020**	63 participants score above 75% and got certificate	112 Participants List

5	**Christmas**	**Jingle Bells Christmas Smells**	**Inter Dept**	**December**	**First :** Elizabeth Joseph, FSQC	15

		1. **Star Making** 2. **Wreath Making**		**25, 2020**	**First:** Misha V. Paul, BA English Model I	Participants List

Christmas Wreath Making.
Rules
• Wreath can be made according to your own creativity.
• It should be attractive.
• You can attach photo of your wreath along with the a short time lapse video to the provided google form.
Click here to attach your entry!
Last date Dec 24,2020 • 10pm
"Have yourself a Merry little Christmas."

A Selfie with Family
Theme: Christmas
You can attach your selfie to the provided google form.
Click here to attach your entry!
Last date Dec 24,2020 • 10pm
"Have yourself a Merry little Christmas."

Star Making
Rules
• Star can be made according to your own creativity.
• It should be attractive.
• You can attach photo of your star along with a short time lapse video to the provided google form.
Click here to attach your entry!
Last date Dec 24,2020 • 10pm
"Have yourself a Merry little Christmas."

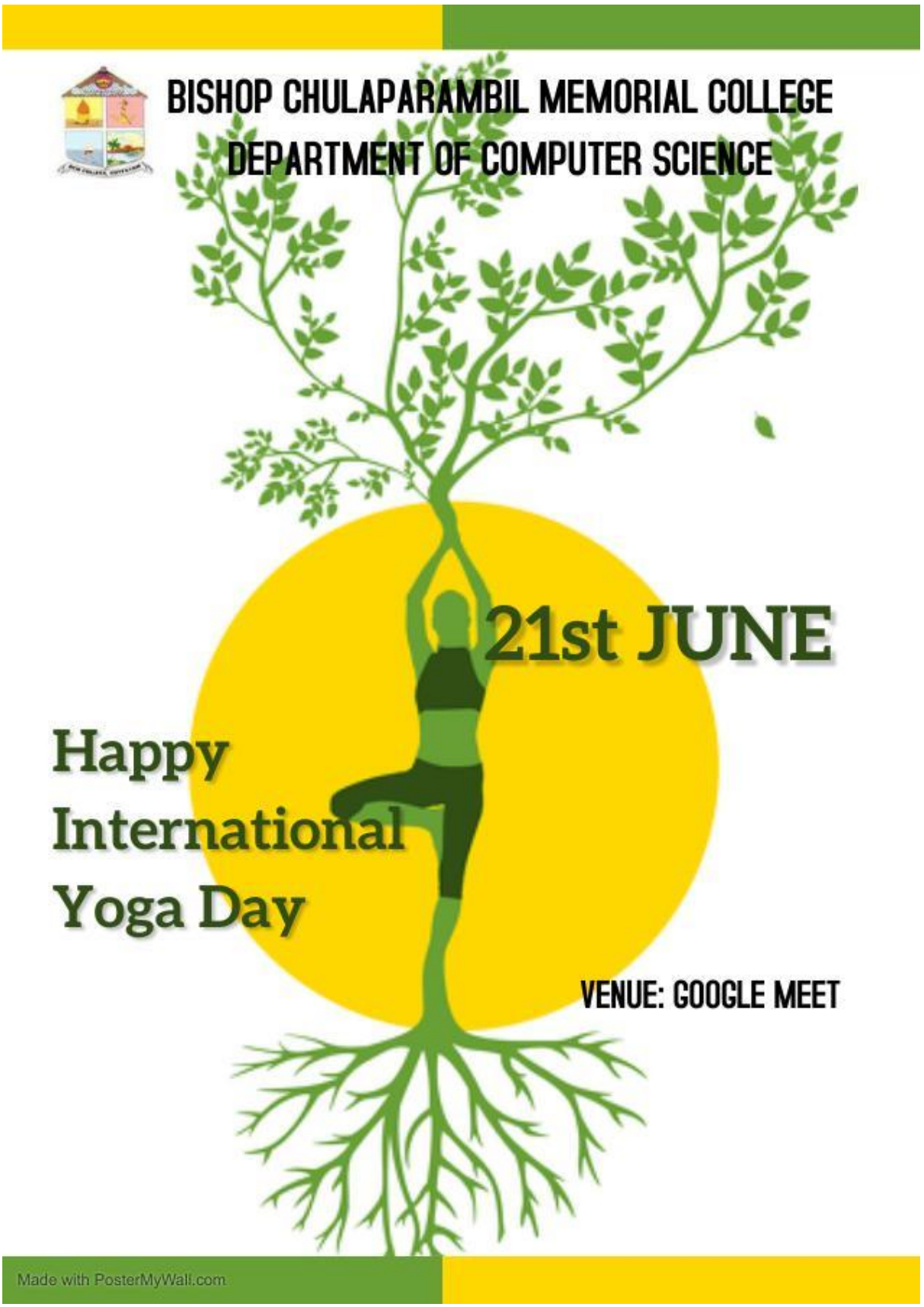
VIRTUAL CELEBRATION

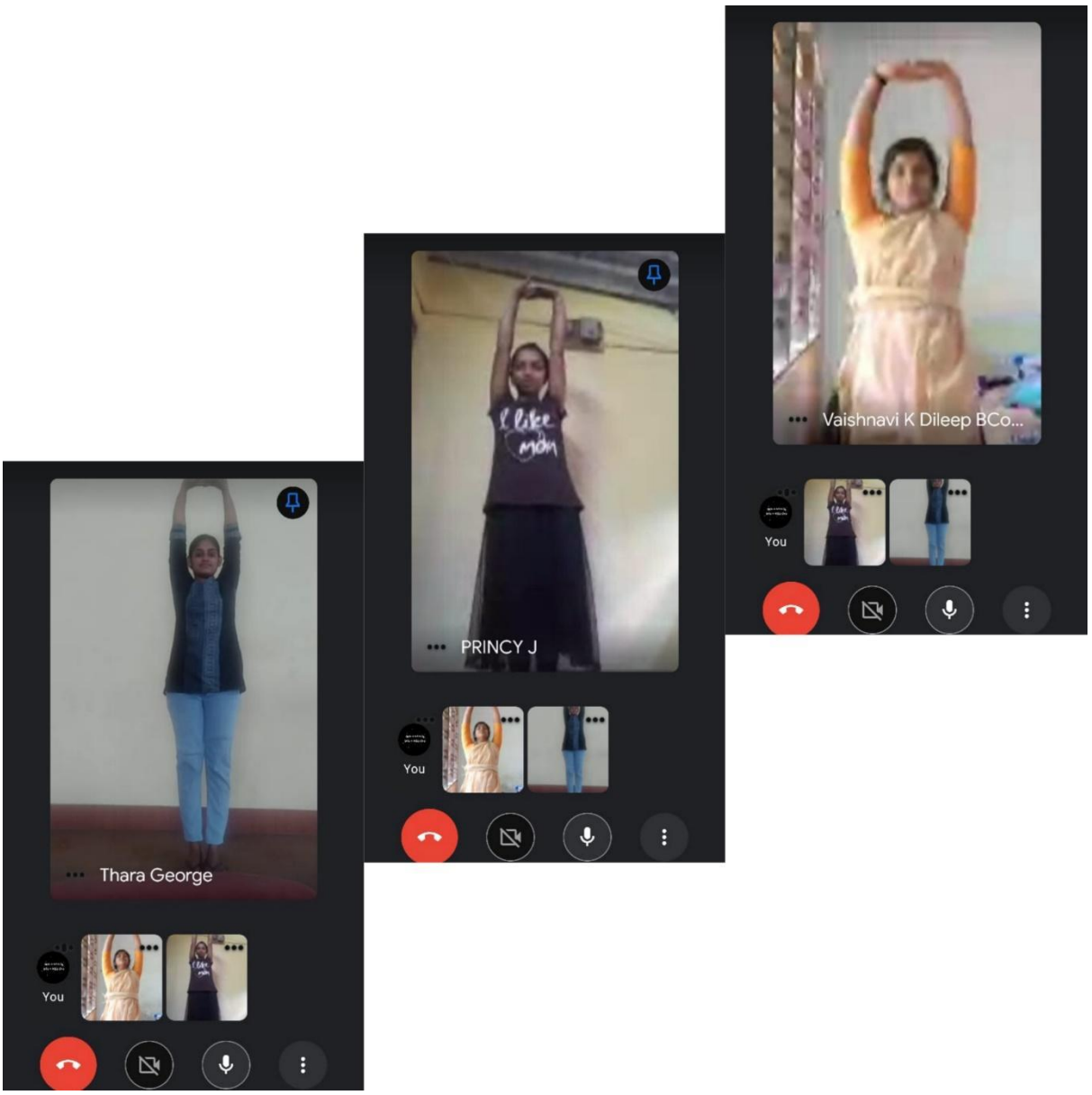
Environment Day Celebration

Every year, World **Environment Day** is observed on June 5. This day is celebrated to encourage awareness and action for the protection of the environment. So we celebrated Environment Day by planting trees/flower-plants at our home. All our students energetically participated in this event.

Yoga Day Celebration

The International **Day** of **Yoga** has been **celebrated** annually on 21 June since 2015. This year we celebrated virtually due to Corona. Students performed many Yogasan and explained its benefits.


BISHOP CHULAPARAMBIL MEMORIAL COLLEGE
DEPARTMENT OF COMPUTER SCIENCE
21st JUNE
Happy
International
Yoga Day
VENUE: GOOGLE MEET
Made with PosterMyWall.com



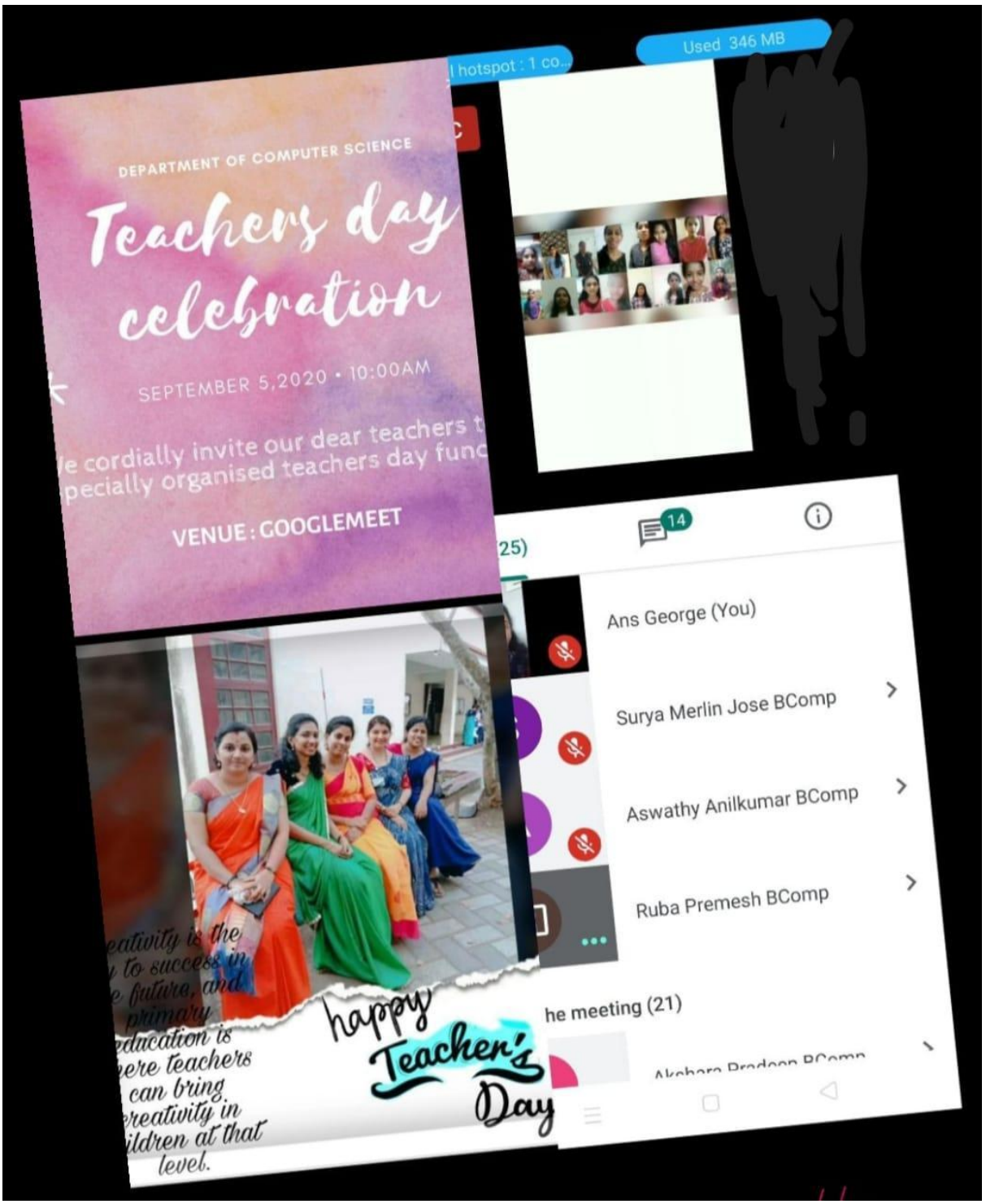
Onam Celebration

We celebrated onam virtually and students performed many arts from. Also they prepared a video showing their onam celebration in Corona days.

Teachers Day Celebration

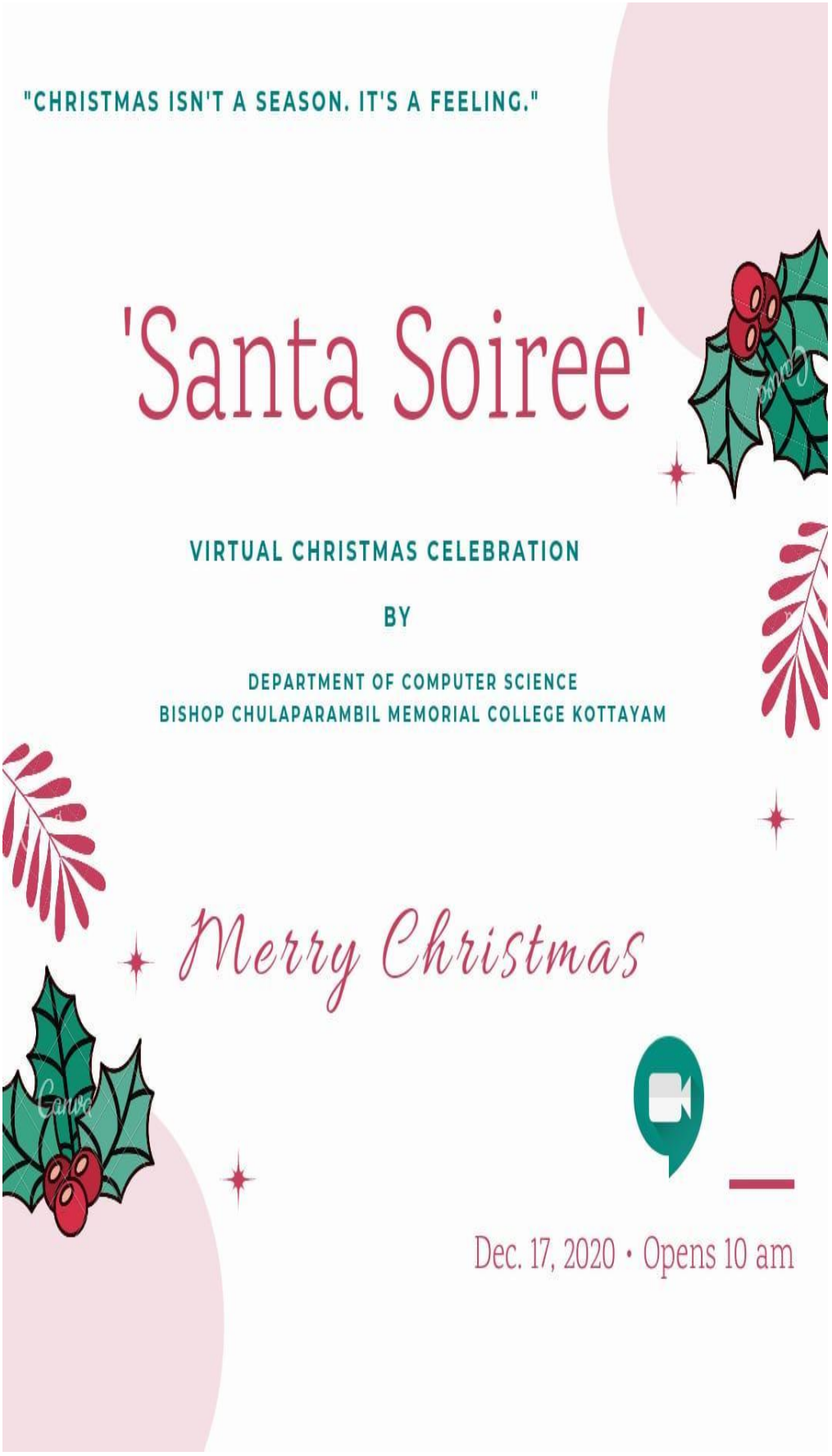
Our beloved students organized a Teachers Day Celebration trough google meet on September 5, 2020. Many fun ganes are organized for teachers and they prepared a video of their beloved teachers.

DEPARTMENT OF COMPUTER SCIENCE
Teachers day celebration
SEPTEMBER 5,2020 • 10:00AM
We cordially invite our dear teachers to this specially organised teachers day function.
VENUE: GOOGLEMEET



Christmas Celebration

Christmas is also celebrated virtually on 17 December, 2020 and all our students participated in the event. Many games and arts form are organized.


"CHRISTMAS ISN'T A SEASON. IT'S A FEELING."
'Santa Soiree'
VIRTUAL CHRISTMAS CELEBRATION
BY
DEPARTMENT OF COMPUTER SCIENCE
BISHOP CHULAPARAMBIL MEMORIAL COLLEGE KOTTAYAM
Merry Christmas
Dec. 17, 2020 • Opens 10 am

ACHEIVEMENTS OF STUDENTS

Placement

Jomol Sebatian of third year Computer Science got placed at MNC's like Deloitte and Wipro. She accepted the job offer from Deloitte.

Sl. No:	Students Name	Competion Details	Level	Prize
1	Thara George (II DC)	Poster Design Competion organized by Womens Cell, BCM College	College level	First
2	Sona V Sajan (II DC)	Valentines Day Letter Making Competition organized by FACS Dept., BCM College	College level	First
3	Princy J. (II DC)	Christmas Tree Making Competition	College level	First

		organized by Physics Dept., BCM College		
4	Sona Sivan	KSEB Power Quiz	District Level	First
5	Sona Sivan	Logical Quiz Competion Organizeed by Mathematics Dept., BCM College	College Level	First
6	Sona Sivan	Road Safety Quiz Competition organized by Kerala Government	State Level	Third Prize along with a cash prize of 250/-
7	Harsha S. Nair	Keralanadanam	College Level	First Prize
8	Harsha S. Nair	Folk Dance	College Level	First Prize
9	Harsha S. Nair	Ottanthullal	College Level	First Prize
10	Harsha S. Nair	Cartooning	College Level	Third Prize
11	Neeraja Rajan	Cartooning	College Level	First Prize

Arts Festival 2021 Winners List

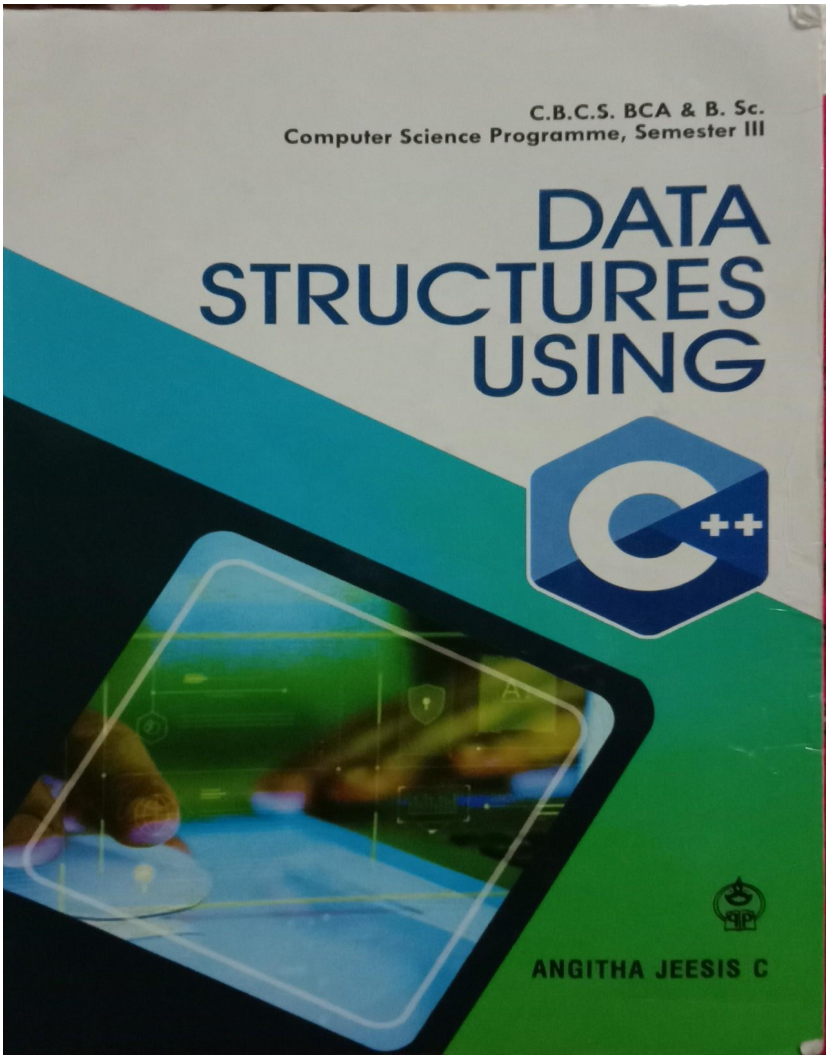
FACULTIES ACHIEVEMENT

Book Publication

Name of the Department: COMPUTER SCIENCE

Faculty Name: **ANGITHA JEESIS C**

Name of the book: DATA STRUCTURE USING C++



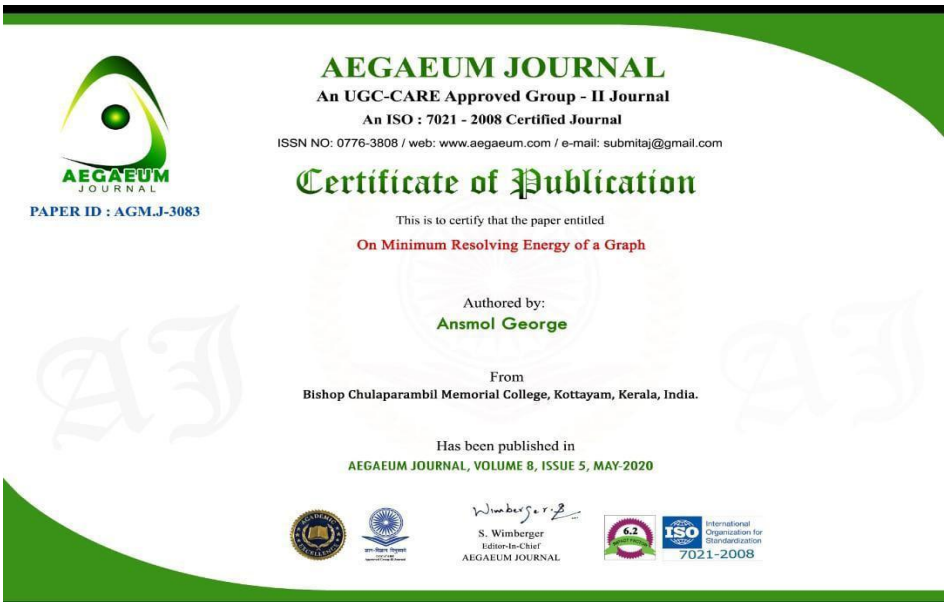
This text book is about data structure using c++ for third semester BCA and B.Sc Computer Science of MG University, Kottayam. It teaches the abstract concepts of data structure through object oriented programming language C++. It enabling students to have the much needed foundation for efficient programming, leading to better problems-solving in their respective disciplines

Paper Publication

NAME: **ANSMOL GEORGE**

DEPARTMENT: Computer Science

Published a paper entitled " On Minimum Resolving Energy of a graph" in 'Aegaeum Journal, volume 8, issue 5



AEGAEUM JOURNAL

An UGC-CARE Approved Group - II Journal

An ISO : 7021 - 2008 Certified Journal

ISSN NO: 0776-3808 / web: www.aegaeum.com / e-mail: submitaj@gmail.com

AEGAEUM JOURNAL

PAPER ID : AGM.J-3083

Certificate of Publication

This is to certify that the paper entitled

On Minimum Resolving Energy of a Graph

Authored by:

Ansmol George

From

Bishop Chulaparambil Memorial College, Kottayam, Kerala, India.

Has been published in

AEGAEUM JOURNAL, VOLUME 8, ISSUE 5, MAY-2020

S. Wimberger
Editor-In-Chief
AEGAEUM JOURNAL

6.2

ISO 7021-2008

Published a paper entitled " The Minimum Resolving Energy of a graph" in 'International Journal of Mathematics and its Applications, Volume 8.

International Journal of

Mathematics And its Applications

ISSN: 2347-1557

Certificate of Publication

This is to certify that Ms/Mr. ANSMOL GEORGE, *Department of Mathematics, Bishop Chulaparambil Memorial College, Kottayam, Kerala, India*, has contributed a paper as author/co-author to "*International Journal of Mathematics And its Applications*" entitled on "*The Minimum Resolving Energy of a Graph*" and has got published in **Volume 8 Number 1 (2020), 239–246.**

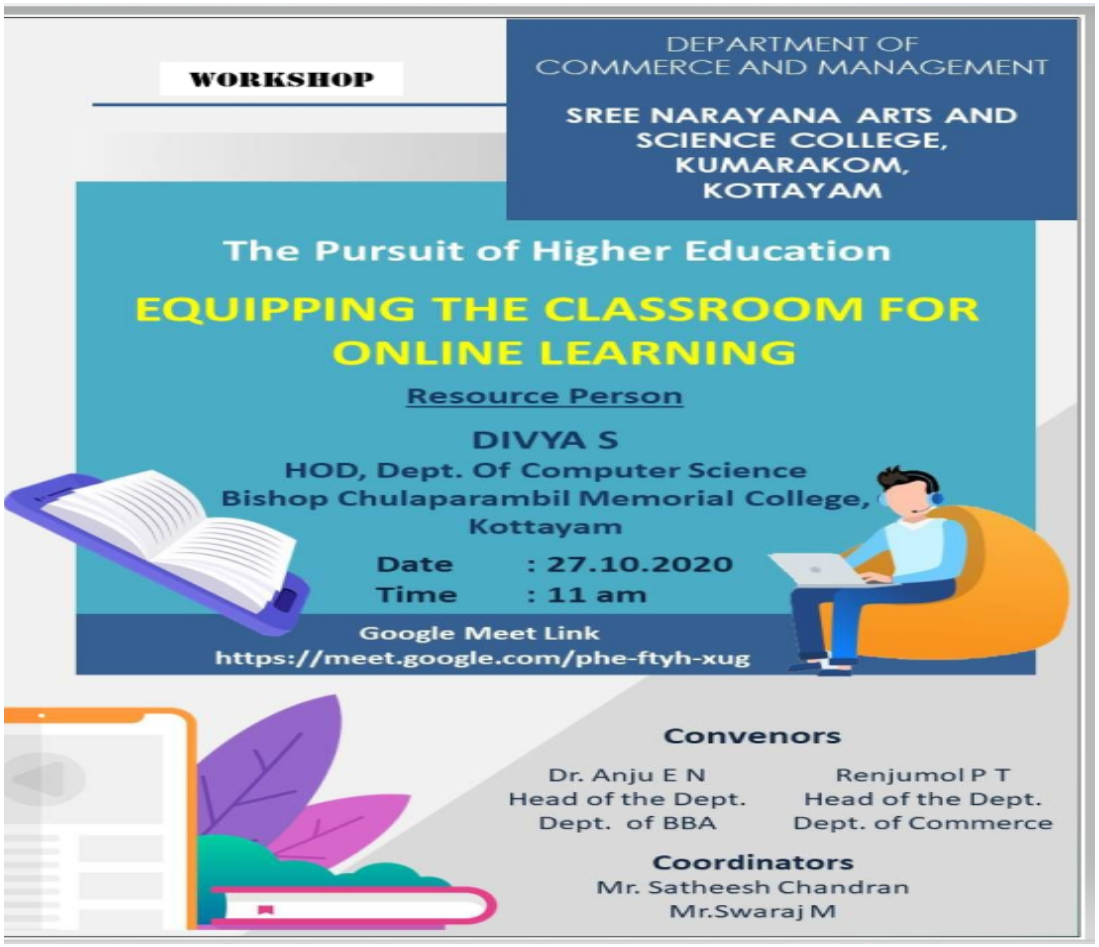
H. M. Srivastava — Editor-in-Chief

K. Kumar — Managing Editor

Sanjib Kumar Datta — Editorial Board Member

Resource Person

Divya S. as Resource Person for a one day online workshop on the topic **"Equipping the Classroom for Online Learning"** for Department of Commerce and Management, **Sree Narayana Arts and Science College, Kumarakom** on 27 October 2020 at 11 am.



COURSERA PARTICIPATION

Angitha Jeesis C completed 9 courses.

PARTICIPATION OF STUDENTS AND FACULTIES

More than 40 students and all faculties participated in various webinars, workshops, online courses, online competitions etc.

Participation List

UNIQUE/INNOVATIVE PROGRAMME

Student Digital Initiative(Live Lab)

To tackle the issue of frequent updating and maintenance of systems, the college authorities initiated the Student Digital Initiative, entrusted with the Department of Computer Science.

This year, the students effectively maintain and update all the 139 systems installed with LINUX software under the proper guidance of the teachers. The student digital Initiative has helped in the timely updation and maintenance of the computer systems in the college.

International Webinars and Workshops

We conducted 10 international webinars in which eminent persons like **Mr Kochouseph Thomas Chittilappilly** well known Indian business magnate, writer, investor and philanthropist also he is the Founder, Chairman and Chief Executive Officer of V-Guard Industries Ltd and a chain of amusement parks called Wonderla, **Dr. Vikas Gopinath**, Director, Cyber Academy and Forensic Education and **Mr. Jayadev Anand**, Registrar, C-DIT, Thiruvananthapuram took part as our chief speaker.