

BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES & COMMERCE

SAINIKPURI, SECUNDERABAD - 500094 REACCREDITED WITH 'A' GRADE BY NAAC AUTONOMOUS COLLEGE - AFFILIATED TO OU

CyberSecurity Workshop

Organised by
The Department Of Computer Science
in collaboration with
Supraja Technologies

Key Workshop Highlights:

Duta: September 25th - 27th, 2023 Time: 9am to 5pm

Introduction to Cyber Sectority
Network Security Essentia
Introduction to Sniffing
Steganography & Cryptography
Login Bypass

Login Bypass Creating backdoors

Ethical Hacking Techniques

Key Take aways

Practical Skills Internship to hway Tool Kit Certifical S

REGISTER NOW

Mr.K.Srinivas Rao, M.Sc. CS Course Coordinator, Dept. of Computer Science Dr.S.Ramana, Program Coordinator, Dept. of Computer Science Mrs.V.Sreeprada, Faculty Incharge, Dept. of Computer Science

Contact: 90 001 45 083

Bring Your Gear: Kindly bring your laptops, chargers and a pendrive of atleast 4GB.

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BHAVAN'S VIVEKANANDA COLLEGE OF SCIENCE, HUMANITIES &

COMMERCE, Sainikpuri.

Workshop Report: Cybersecurity Workshop for PG Students in Collaboration

with Supraja Technologies

Date: September 25th 26th & 27th 2023

Location: N21A labs

Duration: 9am to 5pm

Introduction:

The three-day Cybersecurity Workshop for M.Sc. Computer Science IIyr students,

held at BVC, Sainikpuri was a comprehensive exploration of crucial topics in the

field of cybersecurity. Organized in collaboration with Supraja Technologies, the

workshop aimed to enhance students' understanding of cybersecurity concepts,

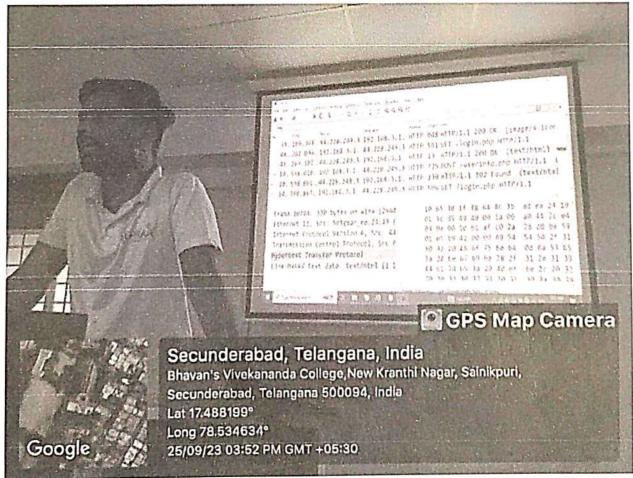
ethical hacking, networking basics, and practical skills in various hacking

techniques. The event was designed to empower students with the knowledge and

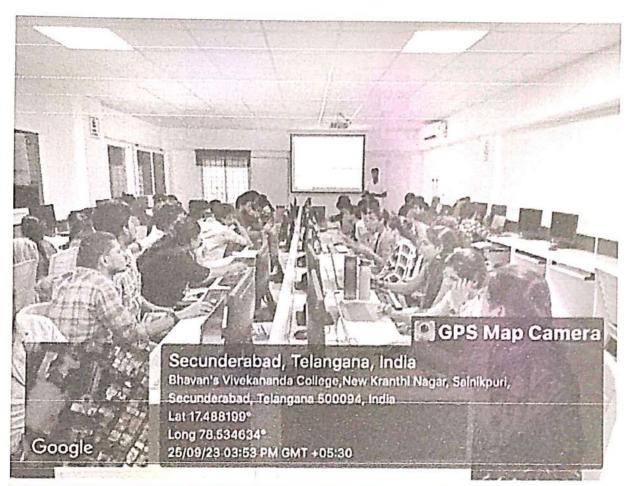
skills necessary to safeguard digital assets and combat cyber threats effectively.

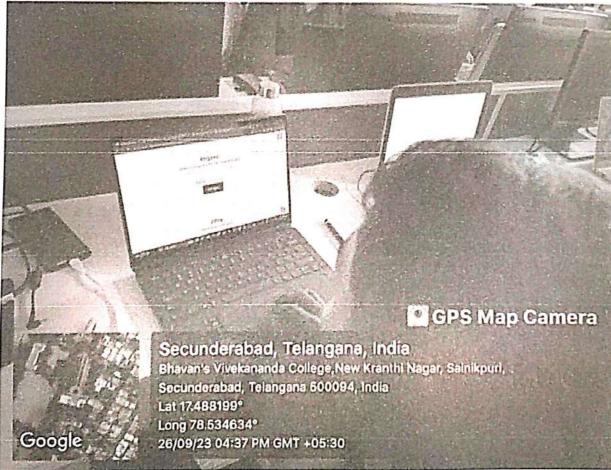
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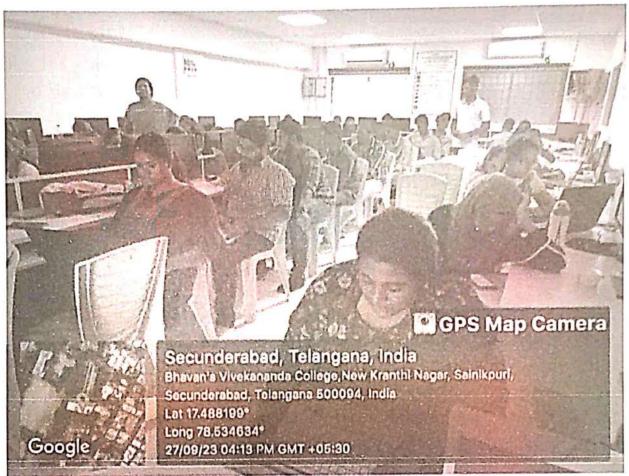


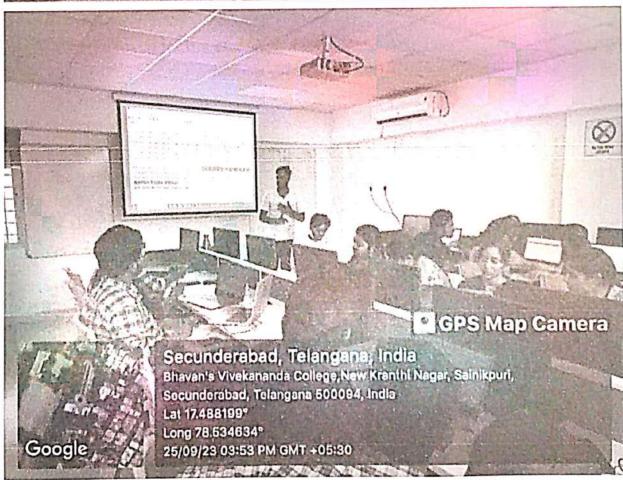
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CURRICULUM

Day 1: Cybersecurity Fundamentals and Networking Basics

- The first day of the workshop commenced with an introduction to Cybersecurity, covering ethical hacking, types of hackers, and the phases of hacking.
- > students gained insights into various ethical hacking certifications, the security triangle, and the Cyber Kill Chain.
- > The session also delved into the basics of networking, including network types, ports, IP addresses, and proxies.
- ➤ Practical demonstrations of HTTP server response codes, TCP, UDP, and networking protocols provided a hands-on learning experience.

Day 2: Advanced Hacking Techniques and Security Measures

- ➤ Day 2 focused on advanced hacking techniques, including sniffing, steganography, cryptography, login bypass methods, and basic attacks such as phishing and social engineering.
- > students engaged in practical hands-on sessions, exploring various sniffing methodologies and encryption/decryption processes.
- ➤ Additionally, attendees learned about password cracking techniques and advanced methods for Windows and Linux systems.

Day 3: Google for Hacking and Web Application Attacks

- > The final day of the workshop emphasized the use of search engines like Google and Shodan for hacking purposes.
- > students learned about Google operators and Shodan search engine functionalities, enabling them to identify vulnerable websites and network devices.
- > The workshop also covered web application attacks, including an overview of web architecture, common security misconceptions, and SQL basics.
- > students gained practical insights into SQL injection, session hijacking, parameter tampering attacks, OTP/2-factor authentication bypass, and no rate-limiting attacks.

Outcomes:

☑ The workshop yielded significant outcomes for students, including increased awareness of cybersecurity threats and enhanced knowledge of various hacking techniques and preventive measures.

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Attendees developed practical skills through hands-on activities, enabling them to identify and mitigate potential threats effectively. Moreover, the workshop provided valuable networking opportunities, allowing students to connect with industry experts and peers, fostering a collaborative learning environment.

Conclusion:

In conclusion, the Cybersecurity Workshop for PG students was a resounding success, thanks to the expertise and dedication of the team from Supraja Technologies. The workshop not only equipped students with essential cybersecurity knowledge and skills but also inspired them to pursue further studies and careers in the field. By raising awareness and providing practical training, the workshop has significantly contributed to building a more secure digital community.

Acknowledgments:

We express our sincere gratitude to the CEO of Supraja Technologies and his team for their invaluable contributions to the workshop. Their expertise and commitment to cybersecurity education played a pivotal role in the success of the event. We also extend our congratulations to all those students who were offered internships, and we appreciate the active participation of all the students, making the workshop a truly enriching experience.

We would like to extend our gratitude to our Management, Principal and Staff for the immense support in making it possible to organize this workshop.

Mr.N.Bhaskar, Wilsholm

Head Department of Computer Science

Mr.K.Srinivas Rao,

M.Sc. CS Course Coordinator,

Dept. of Computer Science

Dr.S.Ramana,

Program Coordinator,

V. Sarafrada Dept. of Computer Science

Mrs.V.Sreeprada,

Faculty Incharge,

Dept. of Computer Science

The Principal,

Bhavan's Vivekananda College of Science, Humanities & Commerce,

Desence Colony, Sainikpuri.

Respected sir,

Subject: Cyber Security Workshop Conducted by Computer Science Department.

I am pleased to inform you about the Workshop on Cyber Security organized by the Computer Science Department in collaboration with SUPRAJA TECHNOLOGIES at our College. The workshop aims to raise awareness among our students about the importance of cyber security in today's digital age.

The workshop is scheduled from September 25th to 27th from 9 am to 5 pm 2023 in lab N21Aat Library Block. A total of 44 students from M.Sc. Computer Science (III Semester) will attend this program. The objectives of the workshop were structured by Supraja Technologies' CEO Mr. Santosh Chaluvadi as follows:

Raise Awareness: The workshop aimed to educate students about the potential risks and threats associated with using digital devices and the internet.

Promote Responsible Digital Behavior: Students will be educated about the significance of responsible online behavior, including the importance of using strong passwords, avoiding sharing personal information online and practicing ethical online conduct.

Hands-on Activities: The workshop included practical exercises and simulations that allowed students to apply their knowledge and learn practical skills to safeguard their digital presence and the basics of encryption and steganography.

Resources for Further Learning: Participants were provided with a licensed toolkit recommended resources to further enhance their understanding of cyber security.

On successful completion of the workshop, the participants will be given certificates through Supraja Technologies, and at the end of the session, the resource members will be conducting an assessment that helps them decide who can avail the internship opportunities provided by them.

The Computer Science Department has initiated this crucial session that will equip our students with the necessary skills to navigate the digital landscape safely. With your encouragement sir, we hope to organize more such events in the future.

We would like to extend our gratitude for your support in making it possible to organize this workshop.

Thank you Sir.

Yours sincerely.

Head, Dept. of Comp. Sci. Dept. of Comp. Sci.

Mr.K.Srinivas Rao

Course Co-Ordinator, M.Sc.(CS) program Faculty

Program Co-Ordinator, Dept. of Comp. Sci.

Faculty Incharge, Dept. of Comp. Sci.

Dr. G.S.V.R.K. Choudary Principal, BVC

Bhavan's College of Science,	, Humanities & Commerce			
M.Sc. Computer Science	Cyber Security Workshop			

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PAN Number: AAICC1770E, TAN Number: HYDC10078F ISO Certificate Number: 031122019107 MSME Registration Certificate No : UDYAM-AP-06-0035821 Company Identification Number (CIN Number): U72900AP2019PTC111909

Supraja Technologies Trademark Application ID No for Class 41: 4146139

CERTIFICAT

OF PARTICIPATION

Ref No.

This is to certify that M. D. Rugmuddun has

participated in 3 Days Practical Hands-on Workshop on Ethical Hacking & Cyber Security (Level-1)

conducted by Dept. of Computer Science in association with Supraja Technologies from 21st to 23rd Aug, 2023 in Bhavan's Vivekananda College of Science, Humanities & Commerce (Autonomous), Sainikpuri.

Supraja Technologies Santosh Chaluvadi Founder & CEO







Company Identification Number (CIN Number) : U72900AP2019PTC111909

1SO Certificate Number : 031122019107

Supraja Technologies Trademark Application ID No for Class 42: 4146144 Supraja Technologies Trademark Application ID No for Class 41: 4146139 MSME Registration Certificate No: UDYAM-AP-06-0035821

CERTIFICATE

in recognition for your contribution & dedicated efforts for successfully organizing 3 Days Practical Hands-on Workshop

on Ethical Hacking & Cyber Security (Level-1) conducted by Supraja Technologies from 25th To 27th Sep, 2023 in

Bhavan's Vivekananda College of Science, Humanities & Commerce (Autonomous), Sainikpuri. are greatly appreciated.

We value what you have done. Thankyou!

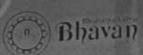
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Supraja Technologies Santosh Chaluvadi Founder & CEO









DEPARTMENT OF COMPUTER SCIENCE

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SEPTEMPER 2ND, 2023



"A GOOD TEACHER CAN INSPIRE HOPE, IGNITE THE IMAGINATION, AND INSTILL A LOVE OF LEARNING."

Bhavan's Vivekananda College of Science, Humanities & Commerce

Autonomous Coffege Affiliated to Osmania University
Re-Accordited with 'A' Grade by NAAC
Notnikpurt, Seconderated 400004

Department : Computer Science

Self- Governing Day

Self-Governing Day was organized by the FusionTech Club of the Computer Science Department under the effective guidance of Mr.G.MaheshKumar and Ms.S.JayaLaxmi on 02-09-2023. The aim of the "Self-Governing Day" was to equip or encourage experimental learning techniques. Additionally, the aim of this event is to make the students bold and help them understand how they conduct themselves professionally, if they were educators themselves in Preparing them towards their future goals.



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The event featured students from BCA I, II and III, each paired with a designated concern teacher. Below is a table summarizing the participating students, their respective concern teachers, the classes they conducted, the subjects taught, and the tools used for teaching:

Student's name	Concern teacher's	Classes	Subjects taught	Tools used for teaching		
Reema Kashmiri	Ms.K.V.B.Saraswathi	BCA 1A	Programming in C	Static model create using thermoco conducted few fu activities for selection sort and bubble sort Conducted ora quizzes.		
Suha Noureen	Ms.S.Jayalaxmi	BCA1A	Introduction to web technologies	PPT, practica codes(project), ora quizzes		
Adep Ajay	Mr.k.Naveen kumar	BCAIB	Introduction to Web Technologies	Live examples with oral quizzes		
S. Siddharth	Ms. K.Padmapriya	BCA1B	Programming in C	Google Form, example using students to explain 1D and 2D arrays.		
Pushyaarag. C	Mr.S.Naveen Kumar	BCA1B	Introduction to Web Technologies (Lab)	Explained with codes using systems in the computer lab.		
M, Vijayalakshmi	Ms.B.Divya Rekha	BCA2	Database Design	PPT .		
Sethu	Ms. Sharon Rosy	BCA2	Operating Systems	PPT, Google Form		
Maanya	Ms. S.Jayalaxmi	BCA3	Object Oriented System Design	PPT		
Shoeb Khan	Mr.G.Mahesh Kumar	BCA3	ASP.NET	White board and pc for practical representation in computer lab.		
Naseema	Ms.B.Divya Rekha	BCA3	Software Quality & Testing	PPT ·		
Joice	Ms.K.Padmapriya	BCA3	Data Mining	PPT and white board		
Vishnu Vardhan	Ms.B.Vijetha	BCA2	Java programming	PPT		

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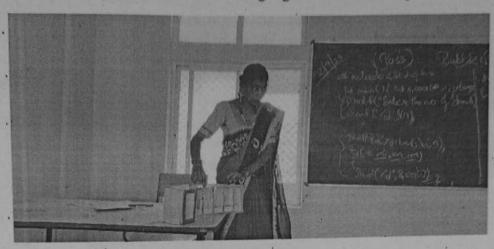
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Tools/Mechanisms Used for Teaching

The tools and mechanisms used by the student teachers during the event can be categorized into three main areas: Model Building, Experiential Learning, and ICT (Information and Communication Technology) tools.

Model Building:

• Utilized thermocol models for sorting algorithms and oral quizzes.



Experimental Learning:

- Conducted lab sessions with practical code examples.
- · . Conducted oral quizzes.
- Employed student-involved demonstrations for 1D and 2D arrays.



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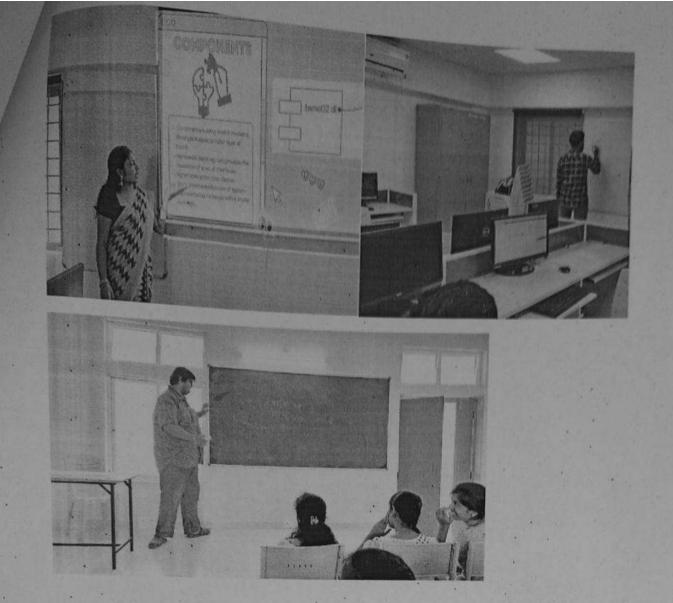


ICT Tools:

- Effectively used PowerPoint presentations (PPT) for conveying database design, Object-Oriented System Design, Software Quality and Testing, and Java Programming, Data Mining.
- Utilized Google Forms for interactive quizzes in the case of operating systems.
- Demonstrated ASP.NET concepts with whiteboards and PCs.

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Outcome of the event

The "Self-Governing Event" proved to be a resounding success, achieving several noteworthy outcomes:

- 1. Enhanced Teaching Skills: Participating students gained valuable experience and improved their teaching skills by conducting classes. They learned to communicate complex concepts effectively, engage students through interactive methods, and adapt their teaching styles to different subjects and audiences.
- 2. Peer Learning: The event encouraged peer learning as students shared their teaching experiences, challenges, and successes. This collaborative atmosphere fostered a sense of community and support among participants.
- 3. Inspiration for Future Educators: Several students expressed an interest in pursuing teaching as a career after experiencing the event, highlighting the event's success in inspiring future educators.

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- 4. Exposure to Teaching Tools: Students were exposed to a variety of teaching tools and mechanisms, including model building, experimental learning, and ICT tools. This exposure enriched their pedagogical toolkit and prepared them for future teaching roles.
- 5. Increased Empathy for Teachers: Through this experience, students gained a deeper appreciation for the challenges and responsibilities that teachers face on a daily basis. They developed empathy for educators and a better understanding of the efforts required to impart knowledge effectively.

The event ended with a valedictory session in which all the students participated in the event were felicitated.



In conclusion, the "Self-Governing Day" not only provided students with an opportunity to experience the role of teachers but also imparted valuable teaching skills, empathy, and exposure to teaching tools. It served as a testament to the importance of hands-on experiential learning in preparing future educators and promoting a culture of continuous learning and growth.

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BHAVAN'S VIVEKANANDA COLLEGE OF SCIENCE, HUMANITIES & COMMERCE, Sainikpuri.

Workshop Report: Cybersecurity Workshop in Collaboration with Supraja Technologies

Date: August 21st, 22nd & 23rd 2023

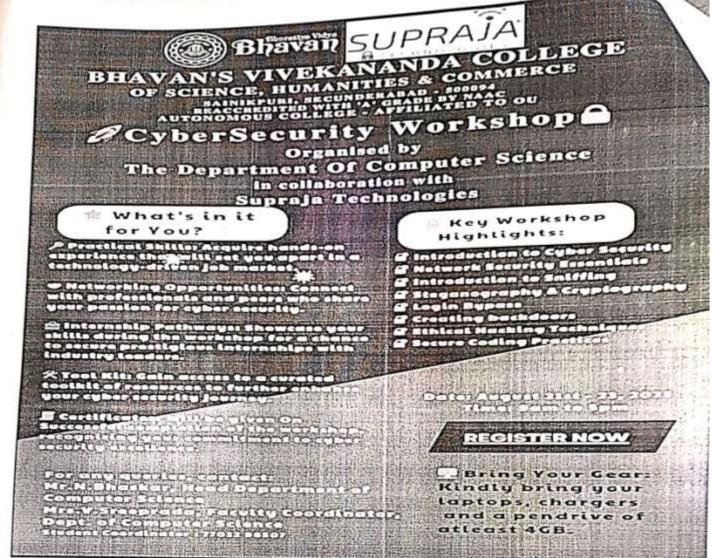
Location: N21A, N21B labs

Duration: 10am to 5pm

Introduction:

The Cyber Security workshop conducted by Department of Computer Science in collaboration with the CEO Mr. Santosh Chaluvadi of Supraja Technologies and his three teammates, Mr. Srujan Atluri Senior Security Analyst, Mr. Venkat Sai Kumar, Junior Security Analyst and Mr. Siddhu Kundurthi, Junior Security Analyst was a significant step towards enhancing awareness and knowledge about the critical aspects of cyber security. In an increasingly digital world, where technological advancements are rampant, the workshop aimed to educate Students of final year from UG where a total of 88 students registered for the workshop. The importance of Cyber Security, potential threats, training on hands-on tool and best practices to safeguard digital assets were the main key points of the workshop. The test was conducted on 3-Day training/workshop to assess students. 30 students were qualified and they were offered internship/training to learn new concepts with implementation of tools with a possibility of absorbing them for job opportunities in their organizations. Under the guidance of Mr. Bhaskar, Head Department of Computer Science, Ms. Sreeprada, faculty in Department of Computer Science and coordinator for the workshop along with student coordinators Nishanth Ambati and Chandrahas of B.Sc. MECs - IIIyr conducted and monitored students on these 3-Days.

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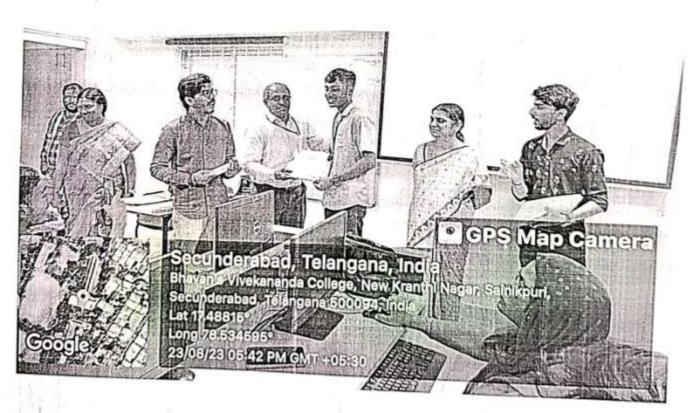
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Workshop Objectives:

At the end of this Workshop, participants will be able to:

- Understand,performandsecurethemselvesfromvariouskindso f EthicalHacking & Cyber Security attacks
- Understand,performandsecurethemselvesfromvariouskindsofEma il,Social Media, System, Servers & Mobile attacks/hacking
- Understand, perform and secure themselves from various kinds of Web Application Attacks and will be able to patch them to produce a secure web application.
- Understand Security Architecture of Mobile Platforms

CURRICULUM(LEVEL-1)

Day-1

Introduction to Cyber Security

- ✓ Ethical Hacking
- ✓ Types and kinds of Hackers, Phases of Hacking
- ✓ Types of Ethical Hacking Certifications
- ✓ Security Triangle, Cyber Kill Chain
- ✓ Conclusion

Basics of Networking

- ✓ Introduction to Networks
- ✓ Types of Networks
- ✓ Ports,NAT,IPAddresses,Proxies,VPNs
- ✓ OSILayers,3-WayHandshake
- ✓ HTTP Server Response Codes
- ✓ TCP, UDP|GET&POST Method
- ✓ Conclusion

Day-2

SNIFFING

- ✓ Introduction to Sniffing
- ✓ Types of Sniffing
- ✓ Practical Hands-on on Various Sniffing Techniques and Methodologies
- ✓ Conclusion

STEGANOGRAPHY & CRYPTOGRAPHY

- ✓ Introduction to Steganography & Cryptography
- Types of Steganography & Cryptography
- ✓ Hands-on on Various Steganography & Cryptography Tools
- ✓ Extraction of Various Hidden Files/Information and Text
- Encryption and Decryption of Sensitive Information
- ✓ Conclusion

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LOGIN BYPASS

- Windows Login Bypass–General & Advanced Methods (User Access Control Bypass for Privilege Escalation)
- ✓ PasswordCrackingforProtectedFiles
- ✓ PasswordCrackingforProtectedFiles
- ✓ LinuxPassCracking–General&Advanced
- ✓ Conclusion

BASIC ATTACKS AND SECURITY

- Basic Phishing, Advanced Phishing
- ✓ Gmail Password Cracking Using Memory Analysis
- ✓ IDN Homograph Attack
- ✓ Fake Emails
- ✓ Header Analysis
- ✓ Social Engineering Techniques
- ✓ Conclusion

Day-3

- ✓ Google for Hacking
- Using Various Operators of Google
- ✓ Shodan Search Engine
- ✓ Finding Network Webcams, Target

Networks and Vulnerable Websites

Conclusion

Google for Hacking

WEB APPLICATION ATTACKS

- ✓ WEBAPPLICATIONATTACKS
- ✓ IntroductiontotheWebArchitecture
- ✓ SecurityMisconceptions
- ✓ OverviewonOWASPTop10Web Application
- ✓ Vulnerabilities
- ✓ SQL Basics
 - ✓ TypesofSQLInjection
 - ✓ SessionHijacking
- ✓ ParameterTamperingAttack

- ✓ OTP/2FactorAuthenticationBypass
- ✓ NoRateLimitingAttack

Outcomes:

The cybersecurity workshop yielded several positive outcomes:

Increased Awareness: Participants gained a heightened awareness of cyber threats and the importance of cybersecurity in their personal and professional lives.

Enhanced Knowledge: Attendees acquired a better understanding of various cybersecurity concepts, tools, and techniques to protect their digital assets.

Practical Skills: The hands-on activities equipped participants with practical skills, enabling them to recognize potential threats and respond effectively.

Networking Opportunities: The workshop fostered connections between participants and the experts from Supraja Technologies, creating a supportive network for ongoing learning.

Conclusion:

The cybersecurity workshop conducted in collaboration with the CEO of Supraja Technologies and his three teammates proved to be an insightful and informative event. By addressing the pressing need for cybersecurity education, the workshop contributed to building a more secure digital community. Participants left the workshop better prepared to navigate the complex world of cybersecurity and implement measures to protect themselves and their organizations from potential threats.

Acknowledgments:

We extend our heartfelt gratitude to the CEO of Supraja Technologies and his team for their invaluable contributions to the workshop. Their expertise and commitment to cybersecurity education played a pivotal role in the success of the event. We also thank all the students who registered and congratulate all those who were offered internship in the workshop.

We would like to extend our gratitude to our Management, Principal and Staff for the immense support in making it possible to organize this workshop.

(V.Sreeprada)

(N.Bhaskar)

Coordinator,

Head of the Department

Faculty, Department of Computer Science

Department of Computer Science



BHAVAN'S VIVEKANANDA COLLEGE

Report on

VALUE ADDED COURSE ON INTERNET OF THINGS

The Department of Computer Science and the Dept. of Physics & Electronics in collaboration with Siddhartha Technologies and Services organized a 30hrs value added course on "INTERNET OF THINGS" for under graduate students from 18thJuly to 4thAugust 2023.

This is an interdisciplinary course which is scheduled for 2hrs per day with practical session. Students learnt about Arduino programming, interfacing the Sensors by using NodeMCU Module.

A total of **52** students attended the course from different streams.

The Course Content was delivered and demonstrated by

- 1. Mrs. M.Prasanna, **HoD**, Dept. of Physics & Electronics
- 2. Mrs. V. Padmapriya, Lecturer, Dept. of Computer Science
- 3. Mrs. V. Lavanya, Lecturer, Dept. of Physics & Electronics
- 4. Mrs. M. Amitha, Lecturer, Dept. of Computer Science
- 5. Mr Bipin Gondane, Resource Person , Siddhartha Technologies and Services





Principal Dr GSVRK Choudary at the inaugural of the Value added course





Mrs M.Prasanna demonstrating various IoT boards.

Mr Bipin demonstrating IoT experiments using raspi pico









Students working during the practical sessions - i) blink LED using toggle switch and LDR sensor using NodeMCU Module ii) Controlling light device connected to relay module using mobile app.



Topics covered in INTERNET OF THINGS

Duration: 30 hours programme

Course objectives:

The objective of the course is -

- ➤ Provide participants with a solid foundation in IoT concepts, including the underlying technologies, components, and architecture that constitute IoT systems.
- ➤ Enable participants to interact with IoT devices, sensors, and actuators, allowing them to apply the knowledge gained to create tangible IoT solutions

Session by Mrs M. Prasanna

(4hrs)

Introduction to Electronic components, Ohm's law, series parallel connections, Digital and analog signals, microprocessors and microcontrollers; sensors and actuators, embedded systems, IoT boards, Arduino Uno, NodeMCU, TinkerCad Simulations for Interfacing sensors to Arduino boards.

Session by Mrs. M Amitha

(4hrs)

Installation of Arduino IDE and add-ons for ESP8266, Arduino IDE Program structure, functions for Input and Output operations, variable declaration and control statements, Programs for LED control, LED with a push button, toggle switch for blinking LED, light control using LDR.

Session by Mrs. Lavanya

(4hrs)

Introduction to IoT, Various communication protocols in IoT, MQTT Communication with NodeMCU through Arduino IDE, LED Controlling through WiFi using Arduino & NodeMCU, LED Controlling from Webpage using Node MCU, Working and interfacing of relay module to Node MCU, Home automation - controlling AC device connected to relay module using mobile app.

Session by Mr. Bipin

(4hrs)

Introduction to Raspberry pi Pico & RP2040, applications using Raspi Pico board using Arduino IDE, Introduction to Raspberry pi Pico (W) and Micro python, IoT protocols and projects using Pico with micropython & Thorny IDE.

Session by Mrs.V. Padmapriya

(4hrs)

Arduino librarires, working and Interfacing of sensors – Temperature, ultrasonic, soil moisture and IR sensors, IoT applications using Arduino IoT cloud

Project guidance: (10hrs)

Sensor Integration with Node MCU

- 1. Temperature and Humidity Monitoring Using Node MCU and display values in serial monitor
- 2. Weather Monitoring station using DHT11 and sending sensor data to cloud
- 3. Rainfall and soil Moisture sensing using Node MCU and monitoring through mobile application
- 4. Home automation using relay and controlling devices with Blink Application
- 5. LED controlling through WiFi using Arduino & Node MCU
- 6. Smart Street light controlling using LDR
- 7. Smart Dustbins using Node MCU
- 8. Interfacing LED with Raspi Pico using Micro python

Course Outcomes

- 1. Workshop participants will gain a comprehensive understanding of IoT concepts, including the fundamental principles, technologies, and applications that make up the IoT ecosystem.
- Through practical demonstrations and hands-on activities, participants will have the opportunity to work with IoT devices, sensors, and data, allowing them to gain practical experience in setting up and interacting with IoT systems.
- 3. Attendees will learn how to prototype and design basic IoT solutions, allowing them to create simple projects that incorporate sensors, actuators, and data processing.
- 4. The workshop will encourage collaboration between participants from different fields, fostering interdisciplinary discussions and the exchange of ideas related to IoT applications and challenges.

These outcomes aim to provide attendees with all round understanding of IoT concepts, practical skills, and insights into its applications across various sectors. Workshop attendees will receive a certificate of participation, acknowledging their engagement and completion of the workshop's activities.

Value added course - Internet of Things

Students Registration list 2023

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