TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN, SIRCILLA

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

Teaching Learning Practices

Academic Year 2022-23

" Student seminar on Normalization "

Date: 27th June, 2022

Topic: Normalization.

Objectives: The primary objectives of the seminar were:

- To conceptual clarity.
- To enhance practical skills.

Teaching-Learning Methods Involved

The seminar employed several innovative teaching-learning methods, detailed below:

A Collaborative Learning

Collaborative learning emphasizes teamwork and collective problem-solving. The seminar's discussion panel allowed:

Peer Feedback: Students provided constructive feedback to each other, promoting a deeper understanding of the subject matter.

Group Discussions: Facilitated collaborative learning and diverse perspectives on the topics discussed.

Topics Covered: The seminar covered a wide range of topics related to symmetric key cryptography, including:

1. First Normal Form (1NF):

- ❖ Eliminates repeating groups within a table.
- ❖ Ensures that each column contains atomic values (indivisible).
- ❖ Each attribute must contain only a single value.

2. Second Normal Form (2NF):

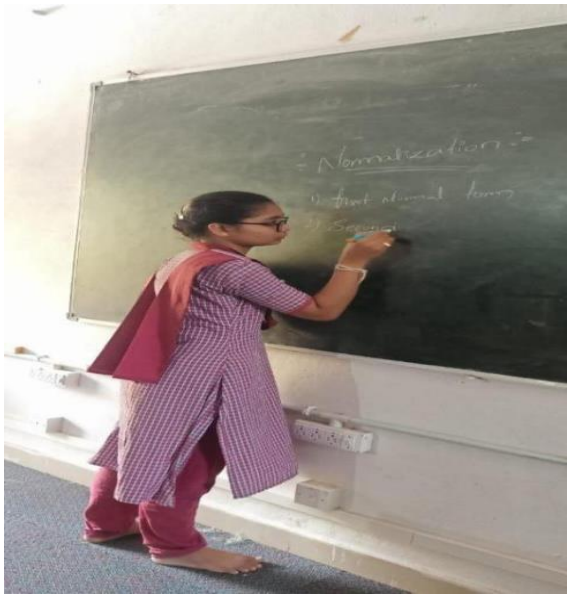
- ❖ Satisfies 1NF.
- ❖ Ensures that non-key attributes are fully functionally dependent on the primary key.

- Involves removing partial dependencies where a non-key attribute is dependent on only a part of the primary key.

3. Third Normal Form (3NF):

- Satisfies 2NF.
- Eliminates transitive dependencies, where a non-key attribute is functionally dependent on another non-key attribute.
- Involves breaking down tables to remove attributes that are not directly dependent on the primary key.

A seminar given by a student called G. Anusha from MPCs II Year on DBMS-Normalization on 27-06-2022. In this seminar she explained how many normal forms are there and where there are used in practical way.



Outcomes:

Improved Problem solvingskills: The seminar format helped students develop their public speaking skills and problem solving skills.

List of participants –MPCs III Year students

Student Feedback –

1. **A.Manjula – MPCs III year – "**The session was very useful to me I clarified my doubts in practical way".
2. **M. Divya – MPCs – III year** – "I revised the topic again with this session".

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Title: “Seminar on Understanding Cyber security Threats”

Date: 25th July 2022

Presenter: T. Sindhuja from B. Com (CA) III Year

Objectives:

- Provide a comprehensive overview of different types of computer viruses.
- Raise awareness about the potential risks posed by viruses.

The purpose of the seminar on cyber security viruses is to educate attendees about the various types of computer viruses, their characteristics, and their impacts on individuals, businesses, and society. The seminar aims to enhance participants' understanding of cyber security threats and empower them with knowledge and strategies to mitigate the risks associated with viruses.Importance of understanding viruses in the context of cyber security.

Overall, a seminar given by a student on cyber security viruses is not only a valuable learning experience for the presenter but also for the audience, fostering a collaborative environment where knowledge is shared and ideas are exchanged.

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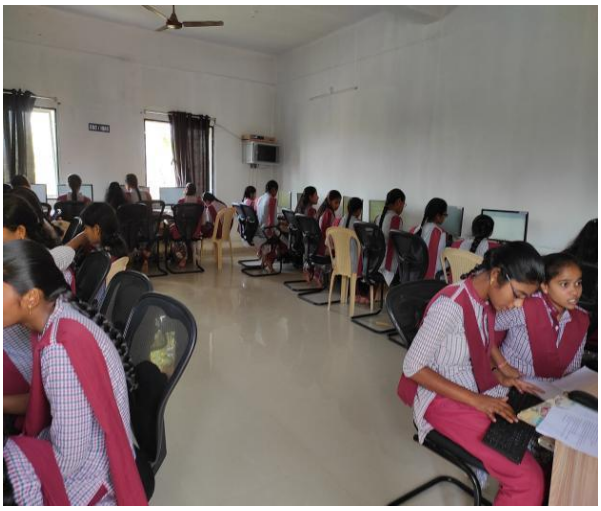
Title: “Enhancing Programming Skills and Critical Thinking through Debugging Exercises”

Date: 22nd August, 2022

Objectives:

- ✧ The primary objective of debugging exercises is to improve students' programming proficiency.
- ✧ Promote critical thinking by requiring students to analyze code, identify logical errors, and devise effective strategies for troubleshooting.
- ✧ Debugging exercises challenge students to apply problem-solving techniques to real-world coding scenarios.
- ✧ Pair programming and group debugging exercises facilitate collaboration and communication among students.
- ✧ Successfully resolving coding challenges in debugging exercises boosts students' confidence in their programming abilities.
- ✧ Aim to equip students with the technical expertise, problem-solving acumen, and collaborative skills necessary for success in programming and related fields.



Hands on Learning Methodology:

- ✧ By encountering and resolved various typed of errors, students gained hands-on experience in coding and developed a deeper understood of programming concepts and syntax.
- ✧ By navigating through errors and found solutions, students developed resilience, adaptability, and perseverance in tackling complex problems.
- ✧ By worked together to diagnose and resolved issues, students learned to articulate their thought processes, exchange ideas, and collaborate effectively as parted of a team.

Overall, debugging exercises are valuable learning experiences that not only help students improve their coding skills but also cultivate important problem-solving abilities essential for success in programming and beyond.

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Seminar: Unraveling the Magic of Recursive Functions

Date: 4th November, 2022

Presenter: S. Divya, B.A I Year

Introduction:

The seminar on "Unraveling the Magic of Recursive Functions" offered a comprehensive exploration of one of the fundamental concepts in computer science. Hosted by S. Divya, the seminar aimed to elucidate the principles, mechanics, and applications of recursive functions.

Conclusion:

The seminar on recursive functions concluded with a recapitulation of key concepts and a reflection on the importance of recursion in computer science and problem-solving. Attendees emerged with a heightened understanding of recursion, equipped with the knowledge and skills to apply recursive thinking effectively in their academic and professional endeavors.

In conclusion, the seminar on "Unraveling the Magic of Recursive Functions" was a resounding success, enriching attendees with valuable knowledge and empowering them to approach computational challenges with confidence and creativity.

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"Exploring Computer Science: Insights from the Quiz Activity"

Date: 22nd November, 2022

Objectives:

- To assess participants' understanding of core concepts in computer science while promoting engagement and active participation.
- To facilitate learning and skill development, encouraging participants to identify areas for improvement.
- As a platform for community building, fostering connections among participants with shared interests.
- The insights gained from this activity will help us improve upcoming educational programs so they better address our student's needs.

Outcomes:

- The quiz conducted on 22/11/2022 resulted in active participation and keen interest.
- Effectively assessed participants' knowledge and provided valuable learning opportunities
- Immediate feedback enabled participants to identify areas for improvement.
- Facilitated community building among participants with shared interests.
- Successful in promoting engagement, assessing knowledge, and fostering a collaborative learning environment.

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Title: "Student Seminar on Symmetric key Cryptography."

Date: 28-01-2023

Presenter: A.Akhila, B.Com(CA) II Year

Topic: Symmetric key Cryptography.

The seminar on Symmetric key cryptography, organized by the Department of Computer Science , was an academic event where student presented their knowledge on various aspects of the cyber security.

Objectives

The primary objectives of the seminar were:

- To encourage active student participation in understanding and analysing cryptography rules.
- To enhance research and presentation skills on a globally relevant topic.
- To foster a collaborative learning environment.
- To integrate theoretical knowledge with practical application in real-world scenarios.

Teaching-Learning Methods Involved

The seminar employed several innovative teaching-learning methods, detailed below:

Active Learning

Active learning involves students engaging with the student lecture through discussions, problem-solving, case studies, and other interactive activities. In this seminar:

Student Presentations: Students actively researched and prepared their topics, facilitating deeper understanding and retention.

Topics Covered

The seminar covered a wide range of topics related to symmetric key cryptography, including:

- *Key Generation:* The sender and receiver agree on a secret key and securely exchange it before communication begins. This key must be kept confidential to maintain the security of the communication.
- *Encryption:* The sender uses the shared secret key to encrypt the plain-text message, transforming it into cipher text. This process obscures the original message's content.
- *Decryption:* The receiver uses the same secret key to decrypt the cipher text back into plain text, revealing the original message.

Outcomes:

The seminar had several positive outcomes:

Improved Presentation Skills: The seminar format helped students develop their public speaking and presentation skills.

Greater Engagement: The interactive nature of the seminar fostered higher levels of student engagement and interest in the subject matter.

List of participants –

B.Com CA III Year students

Student Feedback –

1. **Poojitha, B.Com – II year – "**The session was very interactive and we had general discussion".
2. **L.Soujanya – B.Com – II year** – " I learned logical thinking with this session.

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Poster Presentation Report on "5G Technologies and Cyber Security"

Date: 27th March, 2023

Introduction:

The poster presentation on "5G Technologies and Cyber Security" provided an insightful exploration into the intersection of 5G advancements and the critical considerations surrounding cyber security. Hosted on 27th March, 2023, the presentation attracted a diverse audience of students, faculty members, and cyber security enthusiasts. Through a visually engaging poster display and interactive discussions, the presentation offered valuable insights into the transformative potential of 5G technologies and the imperative of implementing robust cyber security measures.

Students gained a deeper understanding of how these advancements enable unprecedented speed, capacity, and connectivity, laying the groundwork for transformative applications in various sectors. The presentation delved into the cyber security challenges posed by the rollout of 5G networks.

Outcomes:

- In conclusion, the poster presentation on "5G Technologies and Cyber Security" provided a comprehensive overview of the opportunities, challenges, and imperatives surrounding the convergence of 5G advancements and cyber security.
- Students left with a deeper understanding of the transformative potential of 5G technologies and the critical importance of implementing robust cyber security measures to safeguard against emerging threats. ‘

- The presentation served as a valuable platform for knowledge exchange, collaboration, and community engagement, contributing to the ongoing discourse on cyber security in the digital age.

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Role-play Scenario: "Setting up an Online Boutique"

Date of the Event: 11th April, 2023

Learning objectives:

1. Understand the process of setting up and managing an e-commerce business.

2. Develop skills in customer interaction, problem-solving, and sales.

3. Gain insights into the importance of marketing and branding in e-commerce.

4. Learn about the operational challenges and strategies for success in the e-commerce industry.

Students were divided into groups, each representing a team of entrepreneurs looking to start an online boutique selling handmade jewelry. The roleplay will simulate the process of setting up and managing an e-commerce business.

Roles:

1. *CEO/Founder:* Responsible for overall strategy, decision-making, and coordination.

2. *Marketing Manager:* In charge of developing marketing campaigns, managing social media accounts, and building brand awareness.

3. *Customer Service Representative:* Handles customer inquiries, resolves issues, and ensures customer satisfaction.

4. *Operations Manager:* Manages inventory, shipping logistics, and ensures smooth operations.

5. *Product Designer:* Designs and creates unique handmade jewelry products.

6. *IT Specialist:* Manages the e-commerce platform, website maintenance, and technical support.

Scenario Overview:

- Each team started by brainstorming and developed their business concept, included the target market, unique sold proposition, and brand identity.

- Teams then proceeded to set up their online stored used a simulated e-commerce platform.

- Throughout the role-played, teams faced various challenged such as inventory management issues, customer complaints, technical glitches on the website, and competition from other online retailers.

- Teams needed to worked together to overcome these challenged, made strategic decisions, and adapt their business planned accordingly.

The role-played concluded with a reflection session where teams discuss their experiences, lessons learned, and strategies for future success in the e-commerce industry.

Learning Outcomes:

1. Students would gained practical experience in setting up and managed an e-commerce business, included key aspects such as marketing, customer service, operations, and technology.

2. Students would developed critical thought, problem-solved, and teamwork skills as they navigate challenged and made decisions in a simulated business environment.

3. Students would understood the importance of branding, marketing, and customer satisfaction in the success of an e-commerce venture.

4. Students would gained insights into the operational challenged and strategies for success in the e-commerce industry, prepared them for future careers in entrepreneurship, marketing, or business management.

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"Unlocking Potential: Student-Initiated Projects"

Academic Year: 2022-23

Title of the Projects: 1. "Hospital Data Management"

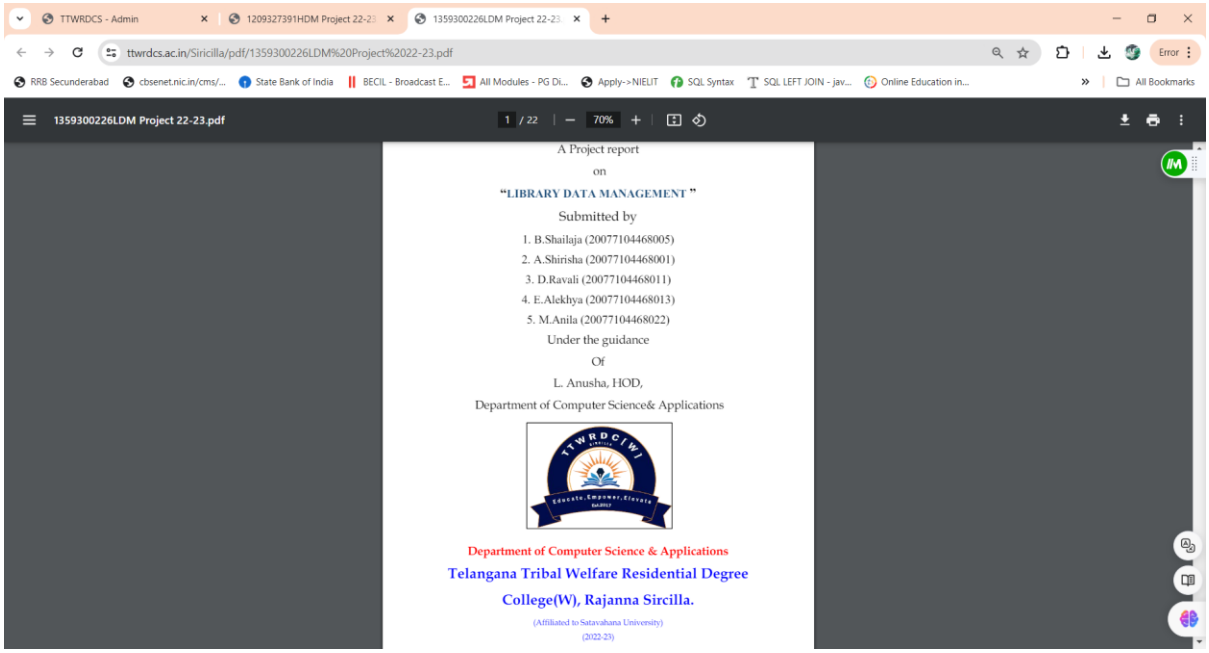
2."Library Data Management"

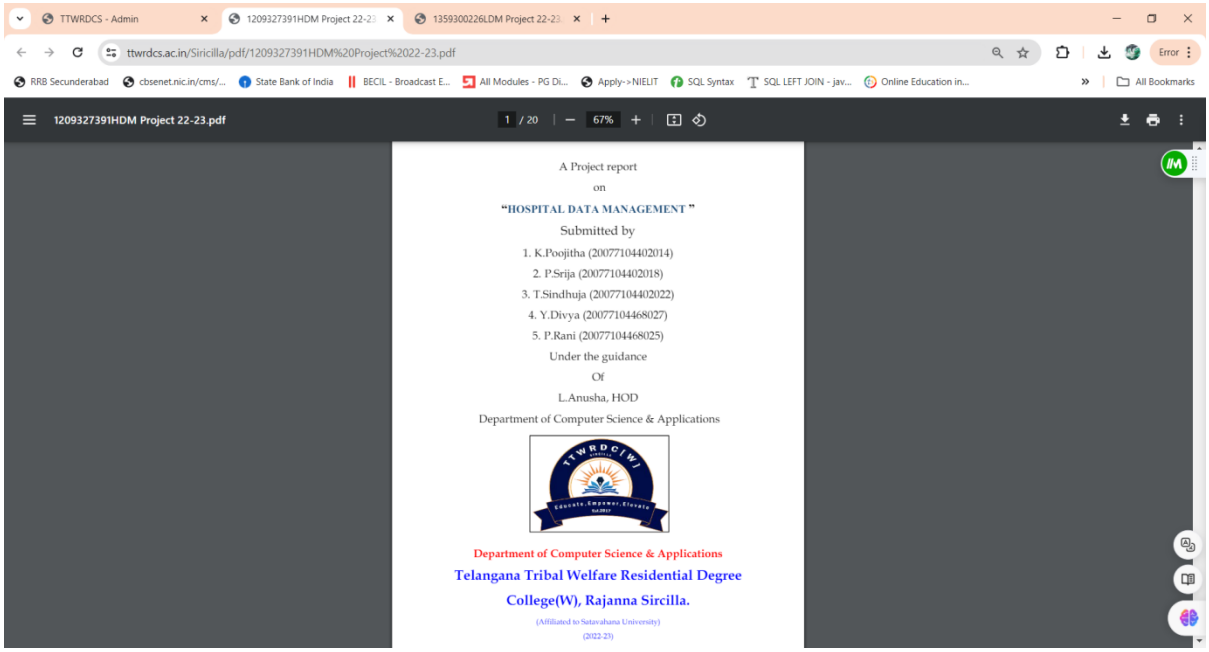
Introduction: Engaging students in computer science projects offers a dynamic avenue for personal and professional growth. Through hands-on exploration, individuals develop and refine a spectrum of technical skills, ranging from programming prowess to advanced problem-solving abilities.

These projects serve as fertile ground for innovation, encouraging participants to conceive and implement novel solutions to real-world challenges. Collaboration with peers fosters effective communication and teamwork, while networking opportunities expand professional horizons.

Successfully completing projects not only enriches one's portfolio but also instills a profound sense of accomplishment and fulfillment. Beyond individual benefits, these endeavors often

contribute to societal advancement, addressing pressing issues and enhancing the quality of life for communities.





Student study projects offer invaluable opportunities for hands-on learning, teamwork, and problem-solving. They provide a practical application of theoretical knowledge, fostering creativity and innovation while enhancing critical thinking skills. Through collaboration with peers and faculty, students expand their professional networks and build confidence in their abilities. Successful completion of projects not only strengthens resumes but also cultivates personal growth and clarifies career aspirations. Ultimately, student projects contribute to the advancement of knowledge within their respective fields, preparing students for future academic and professional endeavors.

Academic Year 2021-22

"Leveraging ICT for Interactive Learning: Web Technologies"

Date: **5th Nov, 2021**

Objectives:

The objectives of ICT-based teaching encompass a wide range of goals aimed at leveraging technology to enhance the teaching and learning process.

- Aims to create engaging and interactive learning experiences that cater to diverse learning styles.
- To increase access to educational resources.
- Enable collaborative learning environments where students can work together, share ideas, and communicate with peers and instructors.
- Aims to cater to the individual needs and preferences of students through personalized learning experiences.
- Aims to instill a culture of lifelong learning among students, encouraging them to become self-directed learners who continuously seek knowledge and skills.

HTML (Hypertext Markup Language) serves as the foundation of web development, making it an essential skill for students pursuing careers in technology and digital media. The topics were elucidated to the students through the use of ICT tools.

By integrating ICT-enabled learned methodologies into the taught of HTML fundamentals (Web Technologies), we could cater to diverse learned styles, promote active participation, and empower students to developed practical skills that was essential in today's digital economy. This approach not only enhanced the effectiveness of HTML education but also laid the groundwork for future exploration and mastery of more advanced web technologies.

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Title: "Enhancing Understanding of Web Technologies through Projector Presentations"

Date: 27th February, 2022

Objectives:

The objectives aim to enhance the learning experience by providing visual aids and interactive demonstrations.

- Visual aids help clarify complex concepts, reinforce key points, and improve comprehension.
- To showcase live coding demonstrations, interactive examples, and real-time experiments.
- Show how html, css, JavaScript, and other web technologies work together to create web pages, applications, and interfaces.
- To create visually appealing and engaging presentations that captures students' attention and maintains their interest throughout the session.

Usage of a projector to elucidate the subject matter in the realm of Web Technologies could have been highly effective. By employed this visual aid, complex concepts and intricate details could present in a cleared and concise manner. The projector allowed for the display of diagrams, charts, and other visual aids that enhanced the understood of the topic at handed. This method of explanation not only engaged the students, but also facilitates a more comprehensive comprehension of the subject matter.

In conclusion, the use of a projector in teaching web technologies enables:

- **Enhanced Understanding:** Visual aids and interactive demonstrations clarify complex concepts, making them easier to comprehend.
- **Engagement and Interaction:** Live coding demonstrations, interactive examples, and real-time experiments foster active participation and encourage exploration.
- **Effective Demonstration:** Coding concepts, design principles, and development techniques are effectively showcased through live examples and project walkthroughs.

- **Critical Analysis:** Code reviews, analysis sessions, and project critiques encourage students to apply best practices and refine their coding skills.
- **Process Visualization:** Visualization of processes and workflows aids in understanding data flow, user interactions, and page layouts.
- **Motivation:** Engaging presentations captivate students' attention, making learning enjoyable and memorable.

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"Exploring Sorting and Searching Techniques: A Seminar on Data Structures in C++"

Date: 9th January,2022

Presenters: B.Shirisha & P.Rani MPCs II Year

Objective:

The objective of the seminar on sorting and searching techniques is to provide participants with a comprehensive understanding of fundamental algorithms used in computer science for organizing and retrieving data.

- To gain a deep comprehension of various sorting algorithms
- To explore different searching techniques
- To learn about advanced searching methods.
- Understand the importance of choosing the appropriate sorting and searching techniques based on the characteristics of the data and the requirements of the application.
- Encourage them to apply the knowledge gained from the seminar to optimize algorithms and solve real-world problems efficiently.

B. Shirisha and P. Rani, both from MPCs II Year given a seminar focusing on data structures in C++. Their session delved into the essential topic of sorting and searching techniques. Throughout the seminar, students were guided through an exploration of various algorithms critical for efficiently organizing and retrieving data. Shirisha and Rani provided valuable insights into sorting algorithms like Bubble Sort, Selection Sort, and Merge Sort, as well as searching algorithms such as Linear Search and Binary Search. Their seminar proved to be an engaging and enlightening experience, equipping students with essential knowledge and skills in the field of computer science.

Overall, the seminar aims to equip students with the necessary knowledge and skills to effectively utilize sorting and searching techniques in their academic pursuits and professional endeavors within the realm of computer science and beyond.

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Title: "Enhancing Programming Skills: Group-Based Debugging Exercise"

Date: 14th March, 2022

Objective: The primary goal of the group-based debugging exercise is to improve programming skills and problem-solving abilities among the participants through collaborative learning and hands-on experience with real-world code issues.

By working in pairs, students will not only develop their technical proficiency but also enhance their communication and teamwork skills.

Overview:

The exercise involves dividing the participants into pairs and providing each group with a set of programming tasks containing deliberate bugs. These bugs encompass various types such as syntax errors, logical errors, and runtime errors. The participants are tasked with identifying and fixing these bugs within a specified time frame, promoting efficient problem-solving strategies and fostering a supportive learning environment.

Process:

- *Group Formation:* Participants are paired based on complementary skill levels and programming backgrounds, ensuring each group has a diverse range of expertise and perspectives.
- *Exercise Assignment:* Each group is given a series of programming tasks along with corresponding code snippets containing intentional bugs.
- *Collaborative Debugging:* Groups work together to analyze the code snippets, identifies the bugs, and implements appropriate fixes. They leverage both their individual strengths and collective problem-solving abilities to efficiently troubleshoot the issues.
- *Communication and Collaboration:* Participants are encouraged to communicate openly within their groups, discussing their approaches, sharing insights, and providing constructive feedback to each other. Effective collaboration not only accelerates the debugging process but also fosters a supportive learning environment.
- *Time Management:* A predetermined time limit is set for each debugging task to ensure that participants stay focused and productive. Time management skills are emphasized to encourage efficient allocation of resources and prioritization of tasks.

Outcomes:

- *Enhanced Programming Skills:* Students gain practical experience in debugging code and develop a deeper understanding of programming concepts through hands-on practice.
- *Improved Problem-Solving Abilities:* By tackling real-world code issues collaboratively, participants sharpen their analytical and critical thinking skills, learning to approach problems systematically and methodically.

- *Effective Communication and Collaboration:* Working in pairs encourages students to communicate effectively, share knowledge, and collaborate towards common goals, fostering a supportive and inclusive learning environment.
- *Confidence Building:* Successfully resolving debugging challenges boosts students' confidence in their programming abilities and equips them with valuable skills for future projects and career pursuits.

Conclusion: The group-based debugging exercise serves as a dynamic and interactive learning experience, enabling participants to strengthen their programming skills, enhance their problem-solving abilities, and cultivate effective communication and collaboration skills. By engaging in hands-on debugging tasks within a supportive team environment, participants are better prepared to tackle real-world programming challenges and excel in their academic and professional endeavors.

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"Enhancing Student Learning Through Project Engagement"

Academic Year: 2021-22

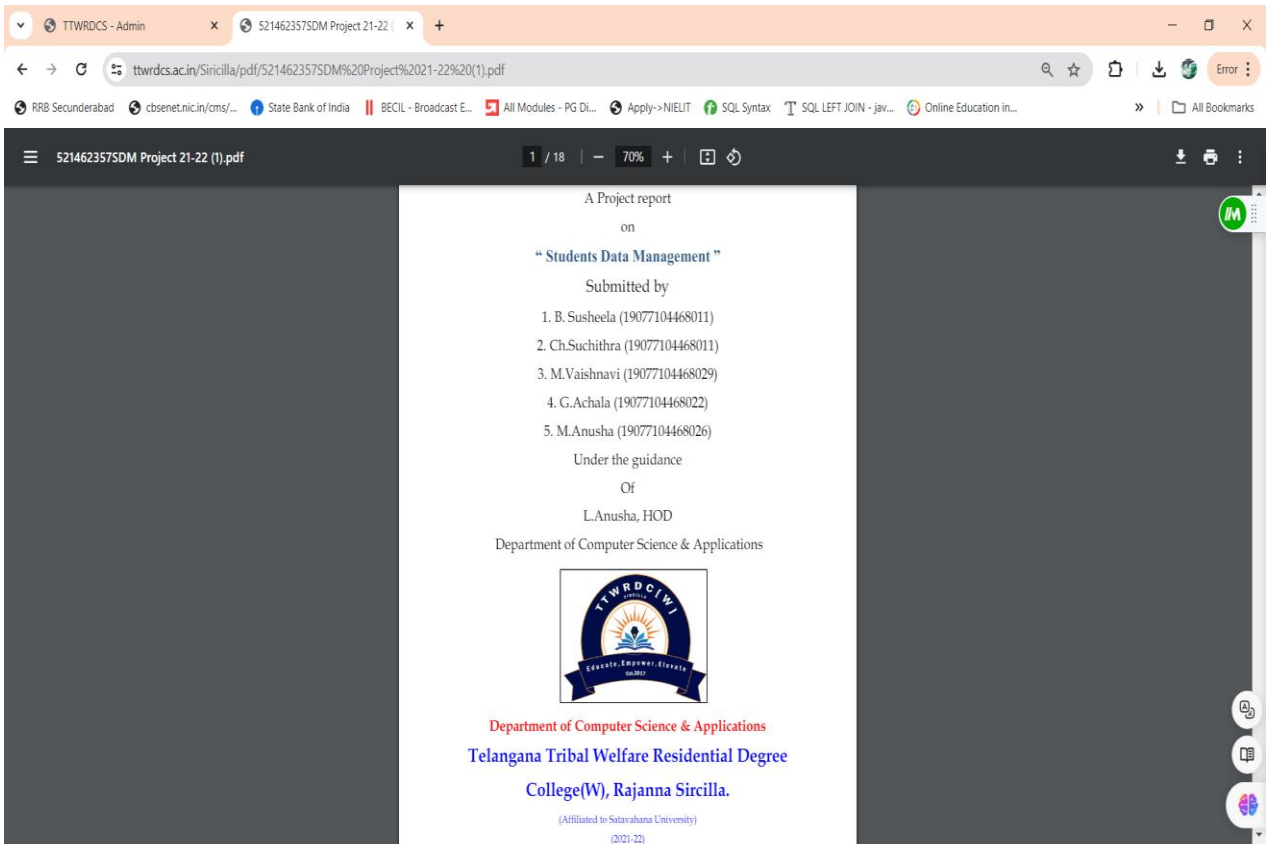
Title of the Projects: 1. "Students Data Management"

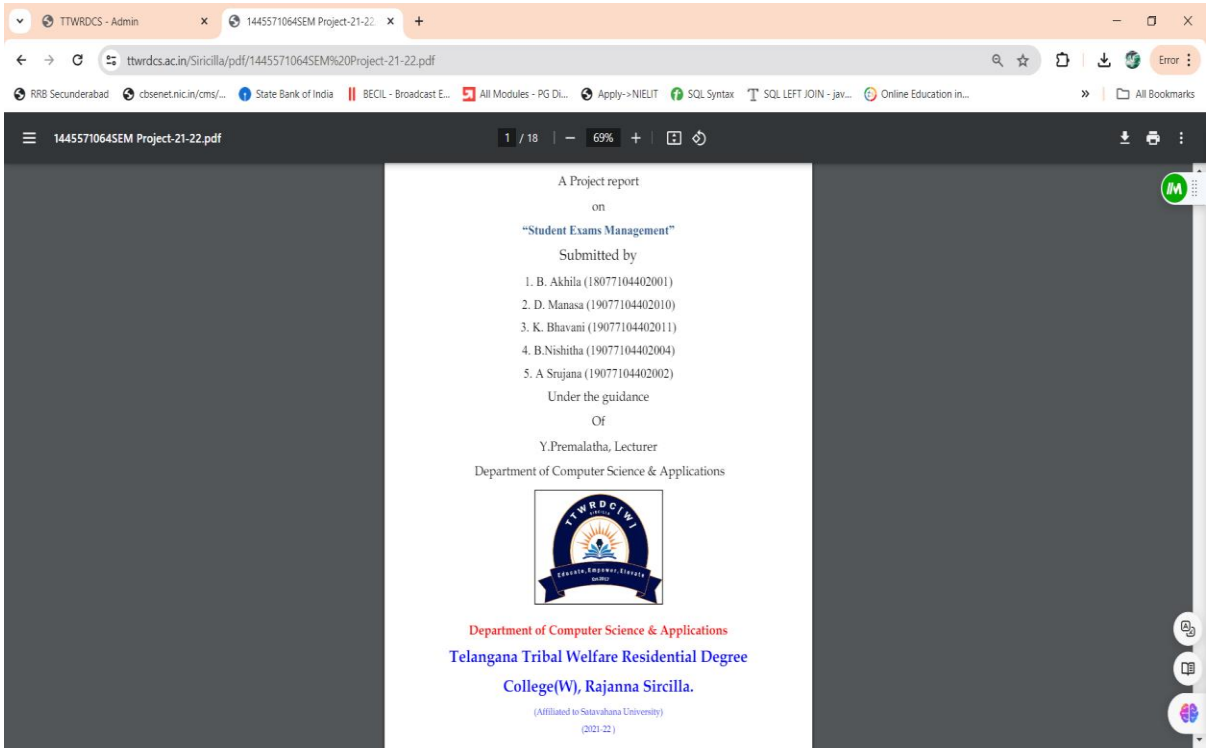
2."Student Exams Management"

Introduction: Department of Computer Science & Applications aimed to explore the benefits of project engagement in enhancing student learning outcomes. Through a series of structured activities and initiatives, we sought to investigate how hands-on project work complements traditional classroom instruction and contributes to holistic student development.

Objectives:

- To assess the impact of project engagement on student learning.
- To evaluate the effectiveness of project-based learning methodologies.
- To identify best practices for integrating projects into the curriculum.
- To measure the correlation between project engagement and student motivation.





A Project report

on

"Student Exams Management"

Submitted by

1. B. Akhila (18077104402001)
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Under the guidance

Of

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(2021-22)

Engaging in projects benefits students by providing practical application of theoretical knowledge, fostering critical thinking and problem-solving skills, promoting collaboration and teamwork, encouraging creativity and innovation, and facilitating holistic development. These experiences go beyond traditional learning, equipping students with essential skills and confidence for academic, professional, and personal success.

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Academic Year 2020-21

"Learning at a Distance: The Rise of Zoom in Pandemic Education"

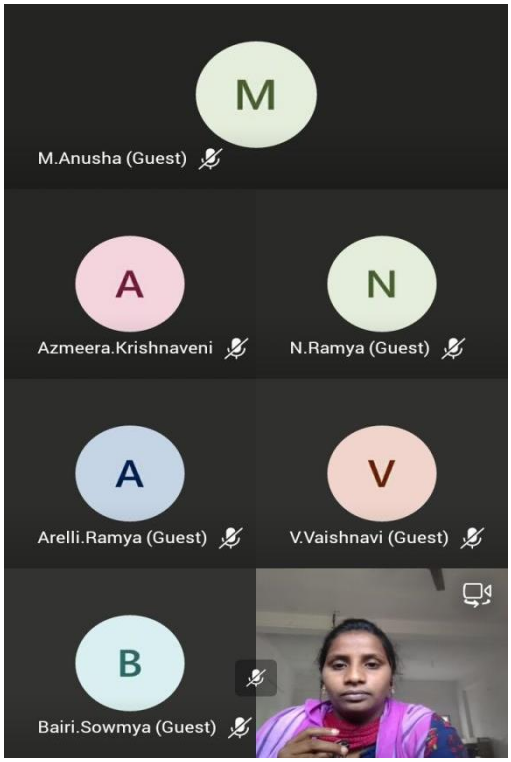
Date: September, 2020

Objectives:

- Aim to ensure that online classes during the pandemic effectively deliver education while prioritizing the well-being and academic success of students.

During the pandemic, Zoom emerged as a pivotal tool for conducting online classes, offering both advantages and challenges. Its intuitive interface facilitated seamless communication between us, fostering accessibility to education from the safety of one's home. Features like breakout rooms encouraged interactive learning, mirroring the collaborative environment of physical classrooms.

Additionally, the ability to record sessions allowed for flexible learning, enabling students to revisit material at their own pace. However, technical glitches and connectivity issues often disrupted the learning process, leading to frustrations and hindrances in engagement. Moreover, prolonged exposure to virtual environments resulted in "Zoom fatigue," affecting student motivation and attentiveness. Despite these drawbacks, Zoom's widespread adoption showcased its potential to revolutionize education, prompting a reevaluation of digital learning strategies and the importance of balancing technology with pedagogical effectiveness.



Webinar Title: "Exploring SWAYAM: Your Gateway to Online Learning"

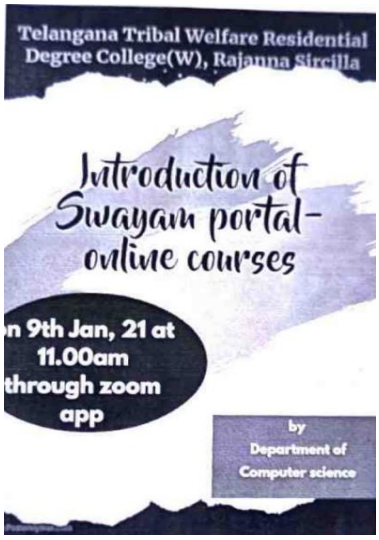
Date: 9th January, 2021

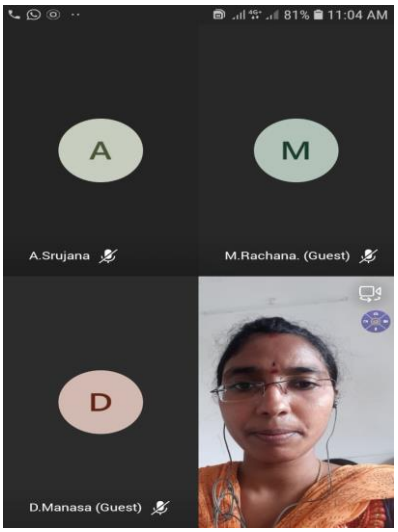
Objectives:

- Provide participants with a comprehensive understanding of the SWAYAM initiative, its objectives, and its significance in the context of online learning.
- Introduce participants to the wide range of courses available on the SWAYAM platform, spanning various subjects, disciplines, and skill levels.
- Guide participants through the process of accessing the SWAYAM portal, browsing courses, registering for classes, and utilizing the platform's features and tools effectively.

In this webinar, Department of Computer Science & Applications introduced the SWAYAM portal, an online platform offering a diverse array of courses from academic to vocational fields. Our aim was to familiarize you with SWAYAM's objectives, showcased the breadth of courses available, and provided practical guidance on navigating the platform effectively. By the end of the session, students were equipped with the knowledge and

resources to explore SWAYAM's offerings, enroll in courses of interest, and embark on your journey of online learning during the pandemic.





In Summary, the webinar include a clear understanding of the SWAYAM portal's objectives, familiarity with the breadth of available courses, and practical knowledge on how to navigate the platform effectively. Students were empowered to leverage SWAYAM as a valuable resource for academic enrichment, skill development, and career advancement. Armed with this knowledge, students were motivated to explore SWAYAM courses, enroll in those aligned with their interests and goals, and embark on their journey of online learning with confidence.

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"Empowering Education: Student-Led Village Learning Centers During the Pandemic"

Pandemic Period: 2020-21

Objectives:

- To bridge the educational gap caused by the pandemic by providing accessible and quality education to children in communities.
- To empower students as educators and leaders within their communities, fostering a sense of responsibility, empathy, and civic engagement.

- To promote holistic development by offering a diverse range of educational activities, including academic tutoring, skill-building workshops, and community outreach programs.

During the COVID-19 pandemic, traditional educational systems faced unprecedented challenges, leading to widespread disruptions in learning for children worldwide. In response to this crisis, Gurukulum took the initiative to establish village learning centers (VLCs) within their local communities.

The VLCs were conceived as a grassroots effort to address the educational needs of children who were unable to access formal schooling due to lock-downs, restrictions, or lack of resources. Led by dedicated student volunteers, these centers aimed to provide a supportive and enriching learning environment for children of all ages, ensuring that no child was left behind in their educational journey.

Key Features:

Student Leadership: The VLCs were entirely run and managed by student volunteers, who took on various roles, including teaching, organizing activities, and coordinating with local authorities and community members.

Community Engagement: The initiative aimed to build strong ties between the school and the surrounding community, leveraging local resources and expertise to support the VLCs' operations.

Flexible Curriculum: Recognizing the diverse learning needs and interests of children, the VLCs offered a flexible curriculum that encompassed academic subjects, life skills, and creative arts, tailored to the preferences and abilities of the learners.

Remote Learning Support: In addition to in-person sessions, the VLCs provided support for remote learning, including access to online resources, virtual tutoring, and educational materials for children with limited internet connectivity.

Conclusion:

The outcomes of the student-led village learning centers (VLCs) have been remarkable. Not only have these centers provided essential educational support to communities during the pandemic, but they have also empowered student volunteers with leadership skills and a sense of civic responsibility.

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Seminar on "Unlocking Database Efficiency: Understanding Normal Forms in DBMS"

Date: 21st January, 2021

Objective:

We aim to create a space where students can exchange their research discoveries, thoughts, and perspectives on a specific subject or field.

About the Program:

In the midst of the pandemic, the academic community continues to thrive through innovative means of engagement. One such initiative was a seminar conducted by M. Rachana, a student in the second year of the B.Com (CA) program. The seminar delved into the realm of Database Management Systems (DBMS), specifically focusing on the concept of Normal Forms.

Content Overview:

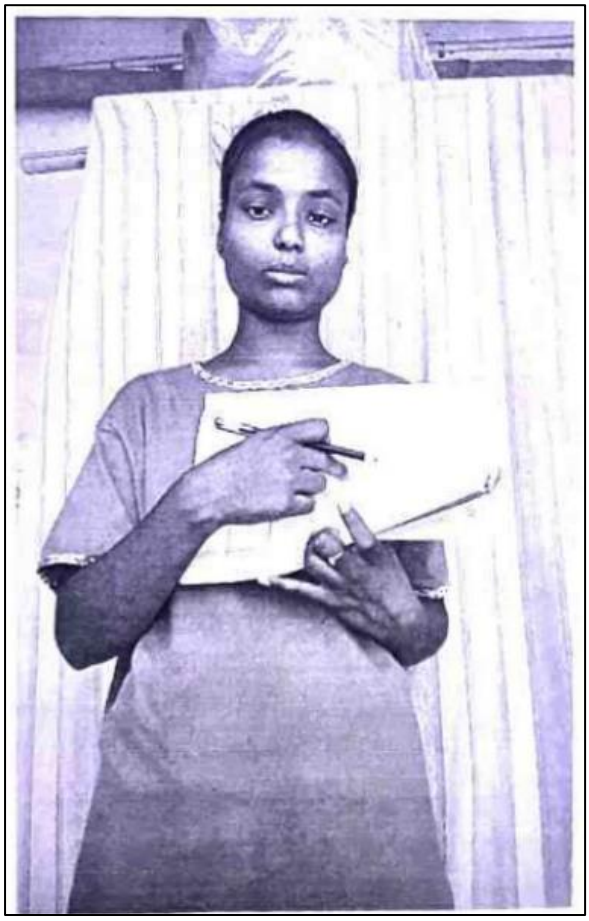
M. Rachana commenced the seminar by providing a comprehensive overview of DBMS and its significance in modern data management. She highlighted the importance of structured data storage and efficient retrieval mechanisms in today's digital age.

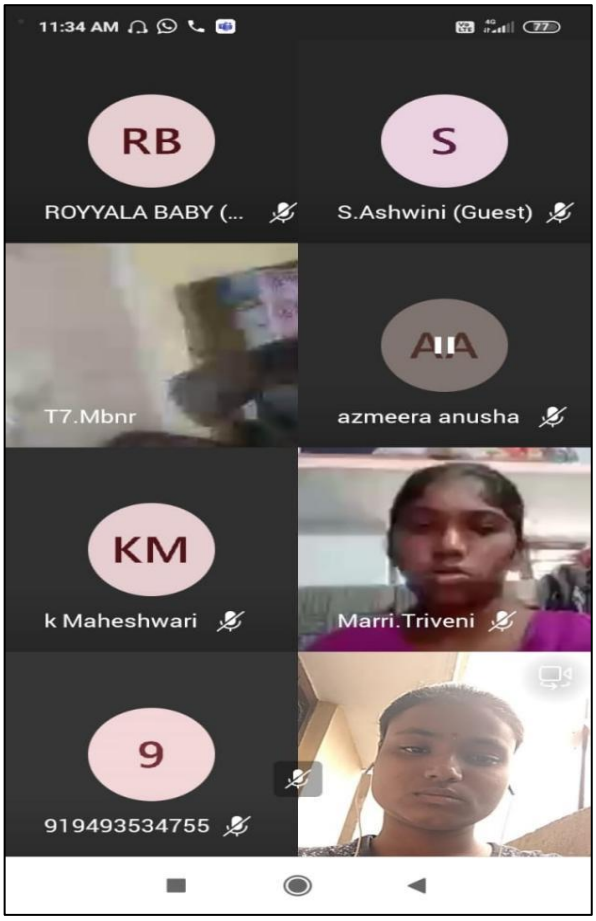
The core of the seminar centered around Normal Forms, which are essential principles in database design aimed at ensuring data integrity and minimizing redundancy. M. Rachana meticulously explained each Normal Form, starting from the First Normal Form (1NF) to the

Boyce-Codd Normal Form (BCNF) and beyond. She elucidated the criteria for achieving each Normal Form and illustrated them with practical examples.

Key Takeaways:

- Clear understanding of Database Management Systems and its relevance in contemporary business environments.
- In-depth knowledge of Normal Forms and their significance in database design.





- In-depth knowledge of Normal Forms and their significance in database design.
- Practical insights into implementing Normal Forms to enhance data organization and integrity.
- Awareness of the iterative process involved in achieving higher Normal Forms and its implications on database performance.

Conclusion:

In conclusion, M. Rachana's seminar on DBMS - Normal Forms was a resounding success, showcasing her proficiency in the subject matter and her ability to disseminate complex concepts with clarity and precision. The seminar not only enriched the knowledge of attendees but also exemplified the resilience and dedication of students amidst challenging circumstances.

Overall, M. Rachana's seminar serves as a testament to the commitment of students towards academic excellence, even in the face of adversity.

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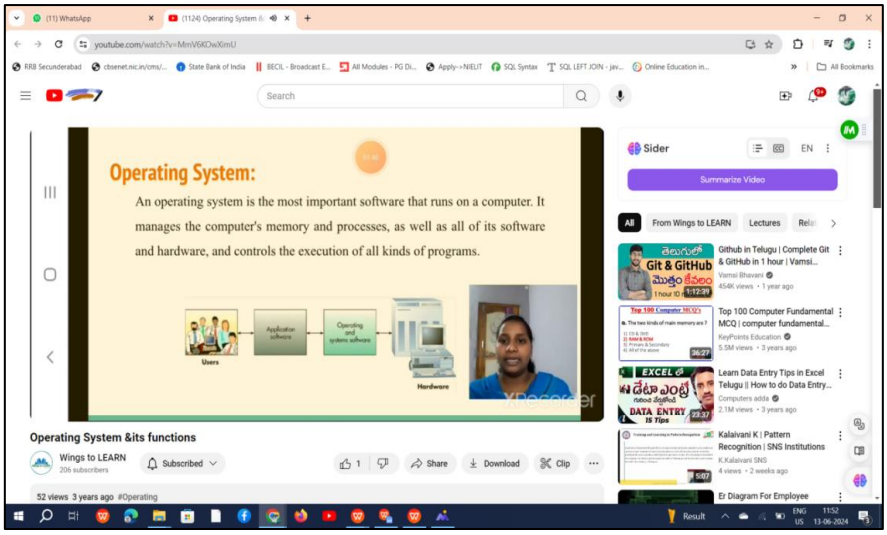
"Virtual Learning Hub: Navigating Education Online"

Date: May, 2021

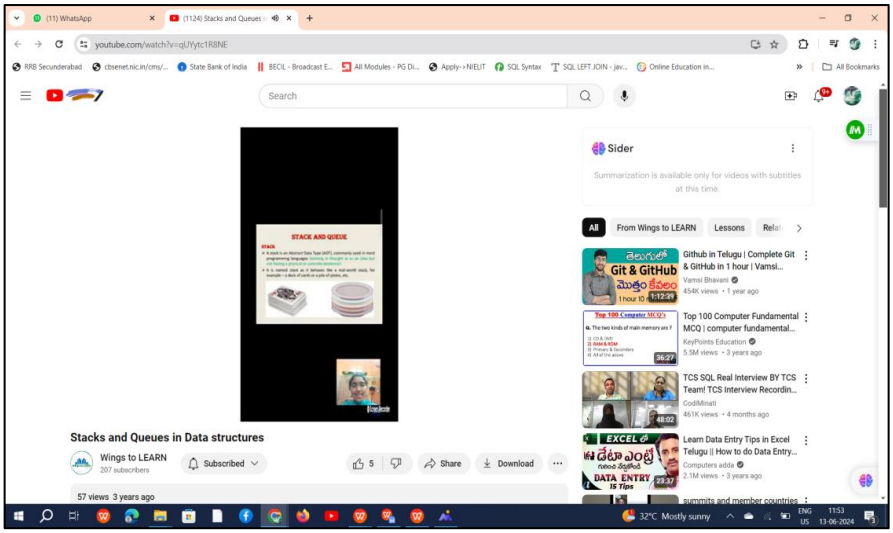
Objectives:

- To create a supportive and engaging virtual learning environment that enables students to thrive academically and personally despite the unique circumstances presented by online education during the pandemic.
- To empower Academic Growth.

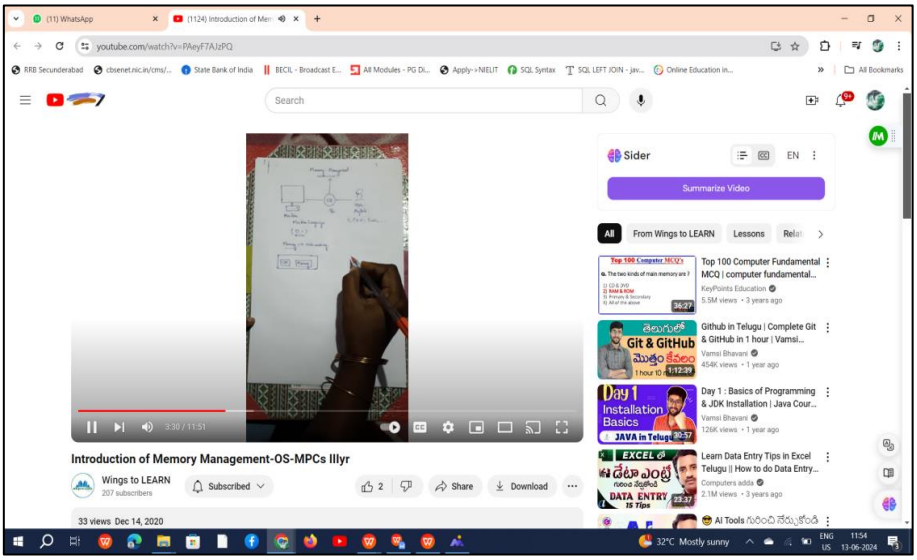
In response to the pandemic, the Department of Computer Science & Applications has taken an initiation to take online classes, including recorded lectures, PowerPoint presentations, and YouTube classes. These online resources offer a flexible learning platform that reaches a wide audience of students, particularly those facing barriers to traditional forms of education during the pandemic.



Link1 :https://youtu.be/MmV6KOwXimU?si=BGBuUmVS-N1Ol4_4



Link2: https://www.youtube.com/watch?v=qUYytc1R8NE



Link3: https://youtu.be/PAeyF7AJzPQ?si=TDSsf6iwMva1b1RE

In conclusion, "Virtual Learning Hub: Navigating Education Online" aims to provide a dynamic and inclusive platform for students to continue their educational journey a midst the challenges posed by the pandemic.

Through collaborative efforts and a commitment to excellence, we aspire to create a vibrant online community where students can connect, learn, and grow together. As we navigate these unprecedented times, the Virtual Learning Hub remains dedicated to fostering a supportive and enriching educational experience for all students, regardless of their circumstances or background. Together, we will continue to adapt, innovate, and excel in the realm of online education.

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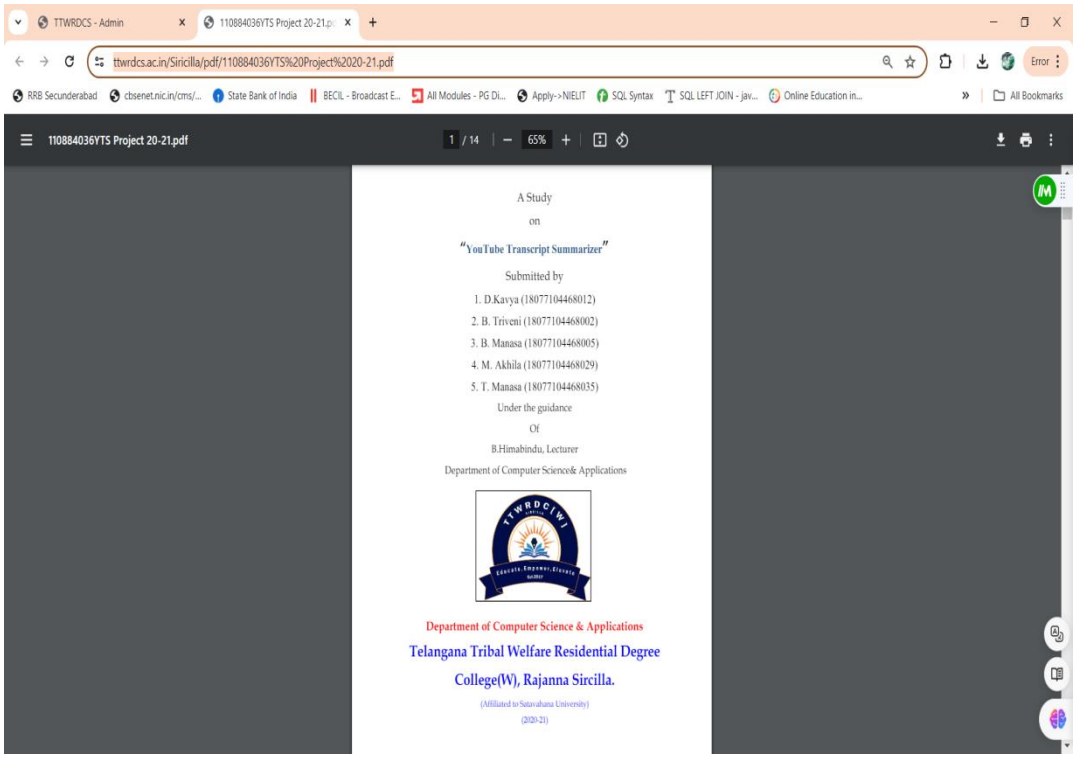
“Study Project: YouTube Transcript Summarizer”

Academic Year: 2020-21

Title of the Project: **"YouTube Transcript Summarizer"**

Study projects provide students with valuable hands-on learning experiences that deepen their understanding of concepts and promote critical thinking skills. Through collaboration and independent exploration, students develop teamwork, time management, and self-directed learning abilities. These projects often address real-world problems, enhancing their relevance and fostering creativity. By presenting their findings, students refine their communication skills and gain confidence. Overall, study projects offer a holistic approach to education, equipping students with essential skills for academic and professional success.



Overall, study projects offer a holistic learning experience that goes beyond traditional classroom instruction, equipping students with essential skills and preparing them for future academic and professional endeavors.

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Academic Year 2019-20

Title: “Student-Led Learning: Empowering Peers as Teachers"

Exploring C++ Programming

Date: 14th December, 2019

Presenters: M. Akhila, MPCs II Yr, N.Jyothi, B.Com(CA) II Yr & T.Sravani, B.Com(CA) II Yr

Introduction: The seminar on "Exploring C++ Programming" provided students with a comprehensive overview of the C++ programming language. Hosted by M.Akhila N.Jyothi & T.Sravani on 14th Dec’19 the seminar aimed to introduce students to the syntax, features, and best practices of C++ programming as .

Key Highlights:

Introduction to C++: The seminar began with an introduction to the C++ programming language, highlighting its history, features, and significance in the field of computer science.

Syntax and Basics: Akhila provided a detailed explanation of C++ syntax and basic concepts, covering topics such as variables, data types, operators, and control structures.

Object-Oriented Programming: The seminar delved into the principles of object-oriented programming (OOP) in C++, emphasizing concepts such as classes, objects, inheritance, polymorphism, and encapsulation.

Best Practices and Advanced Topics: The seminar concluded with a discussion of best practices for C++ programming.

Conclusion: The seminar on C++ programming concluded with a recapitulation of key concepts and a reflection on the importance of C++ as a versatile and powerful programming language. Students expressed gratitude for the comprehensive coverage of C++ fundamentals and the practical insights provided.

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Title: "Seminar on Programming in C"

Date: 11th March, 2020

Presenter: M. Mamatha, MPCs I Yr

Objectives:

- Introduce C Tokens
- Familiarize Attendees with Different Types of Tokens
- Introduce Common Keywords and Constants in C
- Discuss Operators and Precedence

The seminar aims to equip attendees with a solid foundation in C programming, covering essential concepts, Mamatha, a student from MPCs I Yr gave a seminar on C-Tokens from Programming in C.

The seminar begins with an explanation of what tokens are in the context of C programming. Tokens are the smallest units of a C program and include identifiers, keywords, constants, operators, and separators.

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By the end of the seminar, attendees can expect to:

- ❖ Develop a foundational understanding of C tokens and their significance in programming.
- ❖ Feel more confident in recognizing and working with different types of tokens in C code.
- ❖ Gain inspiration from the presenter's learning journey and be motivated to explore further aspects of C programming on their own.

Overall, this seminar provides an approachable and engaging introduction to C tokens, presented by mamatha, who shares the same learning journey as the audience, making it relatable and accessible for beginner programmers.

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"Contact Connect: Building an Android Contact App"

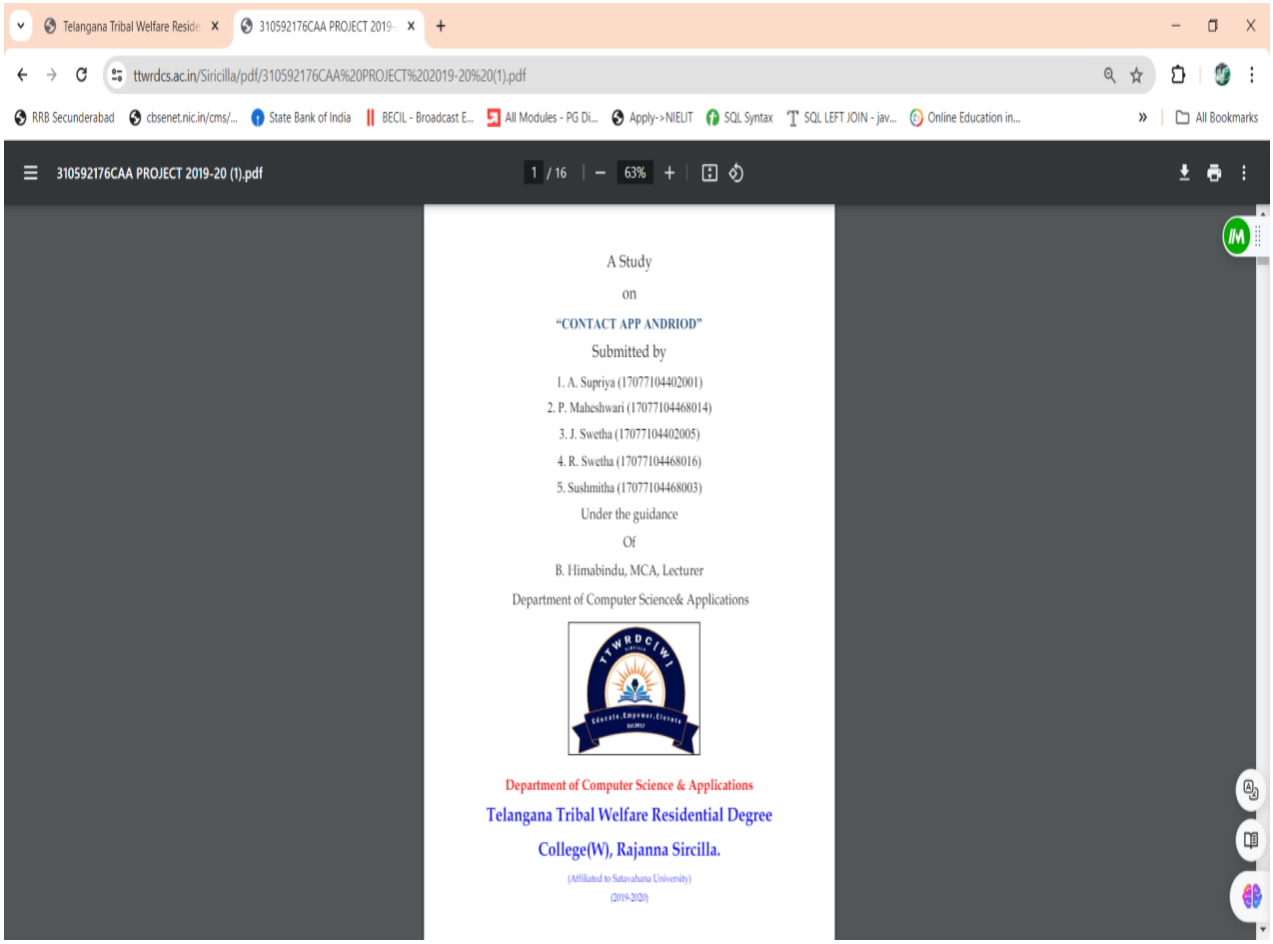
Academic Year: 2019-20

Title of the Project: **"CONTACT APP ANDRIOD"**

Engaging students in computer science study projects offers a plethora of benefits to students, enriching their academic journey and preparing them for future careers in the field.

Firstly, these projects provide practical application of theoretical concepts learned in classrooms, deepening students' understanding and retention of complex topics. Through hands-on exploration and experimentation, students develop problem-solving skills and learn to think critically when faced with challenges. Collaboration on projects fosters teamwork and communication abilities, essential for success in professional environments.

Furthermore, working with programming languages and software tools enhances technical proficiency, preparing students for the demands of the industry. Moreover, completing projects builds confidence and resilience, instilling a sense of accomplishment and encouraging further exploration and innovation. Ultimately, computer science study projects empower students with the knowledge, skills, and confidence needed to thrive in the dynamic and ever-evolving field of computer science.



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Academic Year 2018-19

"Algorithm Adventure: The Puzzle Quest"

Date: 5th February, 2019

Objectives:

- Reinforce Algorithmic Understanding
- Promote Collaboration
- Enhance Critical Thinking
- Develop Problem-Solving Skills
- Encourage Persistence and Resilience
- Assess Algorithmic Proficiency

Explanation:

A set of puzzle cards was prepared, each containing a small algorithm or sequence of steps written in pseudo code or a programming language. The class was divided into small groups or pairs, depending on the number of puzzle sets available. The puzzle cards were distributed to each group or pair. The students were explained that their task was to arrange the puzzle pieces in the correct order to form a complete algorithm that achieved a specific task (e.g., sorting an array, searching for an element, calculating the factorial of a number, etc.). The students were encouraged to discuss and collaborate with each other to figure out the correct sequence of steps. Once a group or pair believed they had solved the puzzle, they could raise their hand for their solution to be checked. The solution was validated, feedback was provided if needed, and the next puzzle was given if they were correct. The first group or pair to solve all the puzzles correctly won the game.

This activity challenges students to think critically, apply their understanding of algorithms, and collaborate with their peers to solve problems.

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