Marwadi University
Marwadi Chandarana Group

Competitive Programming Club

Student Club by

Department of Information and Communication Technology
Faculty of Technology
Marwadi University

Club Mentor
Prof. Nishith Kotak
(Location: MA157)
nishith.kotak@marwadieducation.edu.in

Club Objective

Marwadi University
Marwadi Chandarana Group

- The competitive programming club has been established to create the awareness about the importance of programming and to explore the areas where programming is used.
- Students will be trained in different aspects like learning to develop logic, building optimized algorithms, prepare for placements, exploring the concepts taught in class even further.
- Student does not need to be an expert in any field, they can start from wherever they are and keep improving. .

Club Outcomes

Marwadi University
Marwadi Chandarana Group

1. To provide platform to the students and community to learn, shape, and network, bringing them together with industry experts and allowing them to engage in healthy competition.

2. Swift exchange of ideas, information, and knowledge pertaining to Programming among club members that equips the students for the professional skills and tools.

3. Ensure that every student is continuously learning and growing in the domain of programming and is able to apply the skills on online coding contests.

4. To provide hands-on experience through, discussion, events, and guest speakers in the area of programming.

5. To help students to grasp the different concepts of programming and is able to use it wherever necessary without any difficulty.

Club Activities (1/2)

Marwadi University
Marwadi Chandarana Group

- Fundamentals of programming
- Fundamentals of Objected Oriented Programming
- Pattern Programming
- How to deal with different types of errors
- Introduction to Git and Github
- Fastest finger first type quiz
- Code Tracing
- Different types of coding and algorithm paradigms
- Coding using MVC Architecture
- Role-playing data structure operations activity
- How to build Chrome Extensions
- Solving data structure problems

Club Activities (2/2)

Marwadi University
Marwadi Chandarana Group

- Relay Coding activity
- Google Kickstart and other national/international level code participation and building logic
- How to create backend restful APIs.

And many more…

NOTE: Atleast 10 activities will be carried out based on the targeted students and their current level of learning of curriculum.

Benefits to the Members

Marwadi University
Marwadi Chandarana Group

1. Workshops and Hands-On training Sessions
2. Mentoring
3. Hackathon/Competition Supports
4. Interactions with the experts
5. Industry Visits
6. Placement Support to the Members

And many more…

Skills to Master

Marwadi University
Marwadi Chandarana Group

- Fundamentals of programming
- Logic Designing
- Object-Oriented Programming
- Data Structures
- Algorithms
- Relay Coding
- Code Debugging
- Different types of programming paradigms
- Adapt to different languages easily
- Reading documentation

And Many More……

Club Activity Rules (1/2)

Marwadi University
Marwadi Chandarana Group

1. There should be plan-out of atleast 12 hands-on training sessions with 4+ expert talks and hackathon event within the club as well as through-out the university, in a year.
2. The club should conduct the assessments, training activities in-consultation with the industries.
3. The club should engage and coordinate with the industries to design the training sessions, assessments, design problem statements based on the industrial requirements, etc. to give the students an exposure to the industrial requirements and make them placement-ready.
4. There should be planned expert-talks from alumni, industries or leading academicians that can motivate the students.
5. Regular engagement of the students should be done by the core committee of the club.
6. The role of the pseudo committee will be to support the core committee in the engagement process of the events planned for the students.
7. The annual membership fee of the student in a club is **Rs. 100**, which needs to be utilized for the club activities only, and the proof needs to be transparent among the participants.
8. The positions will be on the rolling basis, which will be done every six months depending on the sincerity, dedication and work ethics of the candidate.

Club Activity Rules (2/2)

Marwadi University
Marwadi Chandarana Group

9. The club should extend their hands in guiding the students and motivate them in taking parts in different competitions and fellowship exams.
10. The Running Trophy will be given to the “best performer” from each club, every month.
11. Issuing the Digital Badge, Certificate and physical Sticker of the best performer will be given to the student.
12. Winner from the major competition may be awarded with the trophies.
13. Digital Certificate of the participation in Data Science Club, will be issued to each of the members based on their regularity in the activities.
14. The final decision lies in the hands of Faculty Coordinator, Overall Club coordinator and Head of Department.

Marwadi University
Marwadi Chandarana Group

Competitive Coding (CP) Club

Club Agenda

This club is formed to help it's members get a good grip on their programming skills. No matter whatever the skill-set that the member currently has, they can start from wherever they are and do their best from there.

Club Event Details

1. Introduction to the CP Club 13/10/2022

This event was the introductory session of the CP club. The club members were introduced to the club and about what they will be benefited by the club. Seniors shared their experience of coding and motivated the club members.

Participants: All CP Club Members

Event Outcome: All members got to know about the club and were motivated for learning

2. Data Structure Session 1 14/10/2022

This session was organized so that the participants can get a good grip on the Data Structure topics as well as the subject. In this event basics of linked list and insertion operation was covered.

Participants: All 3rd semester ICT Students

Event Outcome: At the end of the session students were more clear about the pointer and linked list topic.


3. 365 Days of Programming **18/10/2022**

This is an ongoing session for 365 days where the student solves one programming question everyday and submits it to the canvas.

Participants: All club members

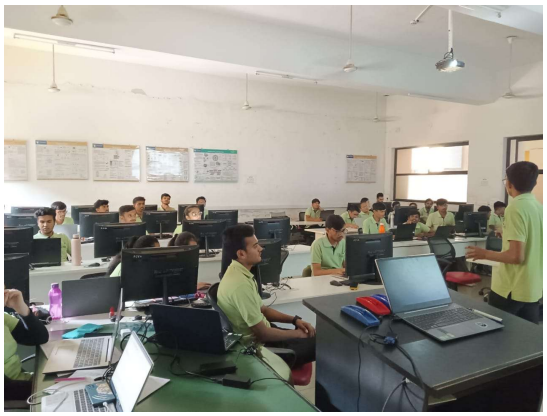
Event Outcome: With this exercise students are able to maintain consistency with programming as well as develop logical skills.

4. Data Structure Session 2 **21/10/2022**

This session is the continuation of the previous data structure session. Update and Deletion operation were taught in the session.

Participants: All 3rd semester ICT Students

Event Outcome: After the session students were more clear about the operations on linked list.



5. Data Structure Session 3 **28/10/2022**

This session is the continuation of the previous data structure session. Insertion, Update and Deletion (all at a particular index) operations were taught in the session.

Participants: All 3rd semester ICT Students

Event Outcome: Students were more confident over their knowledge on the linked list and data structure topic.

6. Long Hour Coding Session **06/11/2022**

This session was organized online where the students attempted to crack the online Competitive coding questions.

Participants: All 3rd semester ICT Students

Event Outcome: Participants were able to crack the questions as well as gained more self confidence.

7. Introduction to C Language **06/11/2022**

This session was organized to make the concepts of basic programming strong for the first semester students

Participants: All 1st semester ICT Students

Event Outcome: The first semester students were able to understand the basic concepts of programming more clearly.

8. Competitive Coding Guidance **29/12/2022**

This session was organized to make the 1st Semester students aware about the competitive coding and teach them how to use the online competitive platforms available .

Participants: All 1st semester ICT Students

Event Outcome: 1st Semester students learned about the competitive coding environment as well as able to get comfortable with the online platforms.

9. Expert talk on Google Summer Of Code **13/01/2023**

This expert talk was conducted with speaker Rahul Khinchi, who introduced the Google Summer of Code and Open Source Community to the students.

Participants:

4th Semester: Meet Butani, Dahra Koriya, Niva Rathod, Rutik Parmar, Ankit Raj

6th Semester: Mayurdhvajsinh Jadeja, Pratham Buddhadev, Dhanrajsinh Parmar, Pushti Depani, Dhruvi Dobariya, Vasu Bhalodi, Tapan Khokhariya, Binti Bhatt

Event Outcome: Students understood the importance of open source community.

10. Coding task on MVC Architecture **13/01/2023**

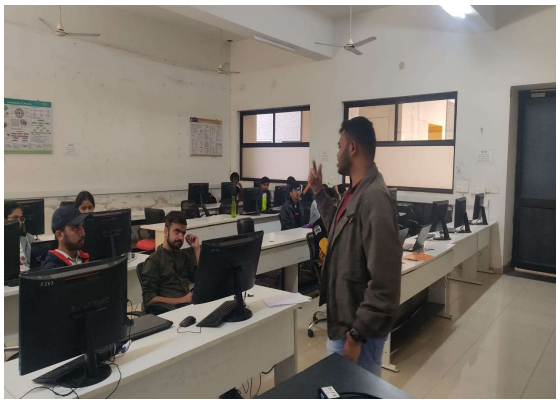
This session was organized to make the students aware about the MVC architecture. MVC architecture is used in the companies while working on any project.

Participants:

4th Semester: Meet Butani, Dahra Koriya, Niva Rathod, Rutik Parmar, Ankit Raj

6th Semester: Mayurdhvajsinh Jadeja, Pratham Buddhadev, Dhanrajsinh Parmar, Pushti Depani, Dhruvi Dobariya, Vasu Bhalodi, Tapan Khokhariya, Binti Bhatt

Event Outcome: Students were able to solve the task in the given time, which was to implement linked list using the MVC architecture.



Event-11

CodeCrack Challenge 1.0

Date: 24-07-2023

By

Competitive Programming Club

Information and Communication Technology

Faculty of Technology

Marwadi University, Rajkot

Club Mentor:

Prof. Nishith Kotak

Assistant Professor,

ICT Dept., MU

COMPETITIVE PROGRAMMING CLUB

Organises

"CodeCrack Challenge 1.0"

Event Description :

CodeCrack Challenge 1.0 is an exciting programming competition designed to challenge and enhance the programming skills of students. This event is being organized by the Competitive Programming Club on March 24 (this Friday). The event consists of three rounds that will test the problem-solving abilities of the teams.

In the first round, teams will be presented with multiple-choice questions related to programming scenarios. The teams will have to solve the problems and provide their approach to the judges.

The second round will involve a code tracing exercise. Teams will be given a code snippet that they need to trace and identify the output. The teams will have to work together to identify any errors in the code and provide an explanation for their solution.

The final round will be the most challenging. The teams will be given a task with medium difficulty related to data structure problem. The teams will need to use their creativity and problem-solving skills to complete the task within a given time frame. They don’t need to write the whole code, one representative from the team will need to explain the logic with boardwork.

The event will be conducted in teams of 3-4 participants. Participants can either be from the same department or from different department. The teams will be judged on their accuracy, creativity, and communication skills.

The winning teams will be awarded with exciting prizes and certificates. Participants will also receive certificates of participation. This

event is a great opportunity for students to showcase their programming skills and learn from each other. We encourage all programming enthusiasts to participate and join us for a fun-filled and challenging event!

Based on the description you have provided, I would suggest the name "CodeCrack Challenge 1.0" for the event. Here are some suggested rules and outcomes:

Rules:

NOTE : The team which is ready to answer earliest will be given the first chance in each round, as this will be on a first come first serve basis. So, we encourage all teams to be ready and well prepared to participate actively in each round.

1. The event will be conducted in teams of 3-4 participants.
2. The first round will consist of multiple-choice questions related to programming scenarios. The teams will have to solve the problems and provide the approach.
3. In the second round, the teams will be given a code snippet that they need to trace and identify its output.
4. The third round will involve a task with medium difficulty related to data structure that the teams need to solve using their programming skills.
5. Each team will be given a fixed amount of time to complete each round.
6. Any form of cheating or misconduct will lead to immediate disqualification.

Outcomes:

1. The event will help participants to enhance their problem-solving skills.
2. Participants will learn how to work in a team and improve their communication skills.
3. All participants will receive certificates of participation.

Event Brief:

1st Round (Logical Puzzles):

In this round each group were given a common logical questions typically asked in interviews and the group which solved first would be awarded points.

2nd Round (Code Tracing):

In this round a C++ code snippet was shown on the projector and the group which guessed the output correctly and explained it well were awarded with points.

3rd Round (Having fun with data structures):

In this round each group were given a DS question like inserting in a stack, tree etc.. One person would be writing the algorithm on the board and based on the code the rest of the teammates need to arrange themselves in a particular order (considering themselves as a object created in the program).

All the points were aggregated and the winning team was chosen.

Event Photographs:

All Participants

Winning Team:

Student Coordinators:

Kaushal Faldu

Renish Surani

Belvinraja Nadar

Darshan Padia

Yash Vara

Mustafa Bharmal

DATE: 05-08-2023

Marwadi University
Marwadi Chandarana Group

COMPETITIVE PROGRAMMING CLUB

INTRODUCTION TO LINUX AND UBUNTU

INFORMATION AND COMMUNICATION TECHNOLOGY

FACULTY OF TECHNOLOGY MARWADI UNIVERSITY, RAJKOT

CLUB MENTOR:

PROF. NISHITH KOTAK

ASSISTANT PROFESSOR,

ICT DEPT., MU

1. Introduction:

The event was conducted on Aug 5th 2023. The event was specially conducted for diploma students to introduce them with linux and basics of OS. The venue was MB314

2. Event Overview:

1.) A presentation was presented which gave a brief about linux , ubuntu , kernel, difference between windows and linux , difference between kernel and OS.
2.) Gave step to step tutorial on how to install ubuntu in virtualbox.
3.) Taught basics of ubuntu.
4.) Taught basics of CLI including bash commands.
5.) Solved doubts

3. Attendance and Participants:

The event had a total of **67 students** in attendance, all of whom were participants. These participants consisted exclusively of diploma students. The enthusiastic engagement and active participation of these students contributed to the success of the event.

4. Achievements and Outcomes:

1. **Hands-on Linux and VirtualBox Setup:** The event facilitated successful Linux Ubuntu and VirtualBox installations, equipping participants with practical expertise in creating and managing a Linux environment through virtualization.

2. **Command Line Proficiency:** Attendees acquired essential skills in using the Command Line Interface (CLI), empowering them to efficiently navigate the system, manipulate files, and perform various tasks with confidence.

3. **Community and Awareness:** The event encouraged collaboration and knowledge sharing among participants, potentially leading to the formation of a supportive learning community. Participants gained a heightened

appreciation for open-source software and its flexibility, possibly kindling a lasting interest in these technologies.

5. Challenges:

1. **Error Resolution - "Not in a Hypervisor Partition":** Some participants encountered the "Not in a Hypervisor Partition" error during VirtualBox setup, typically due to inactive virtualization settings in BIOS. Our experienced team promptly assisted students in accessing BIOS settings, enabling virtualization, and effectively resolving the error.

2. **Internet Access Setup:** Another common hurdle was enabling internet access in VirtualBox. We guided students through configuring the virtual machine's network adapter settings, ensuring a proper connection for a seamless online experience during Ubuntu installation.

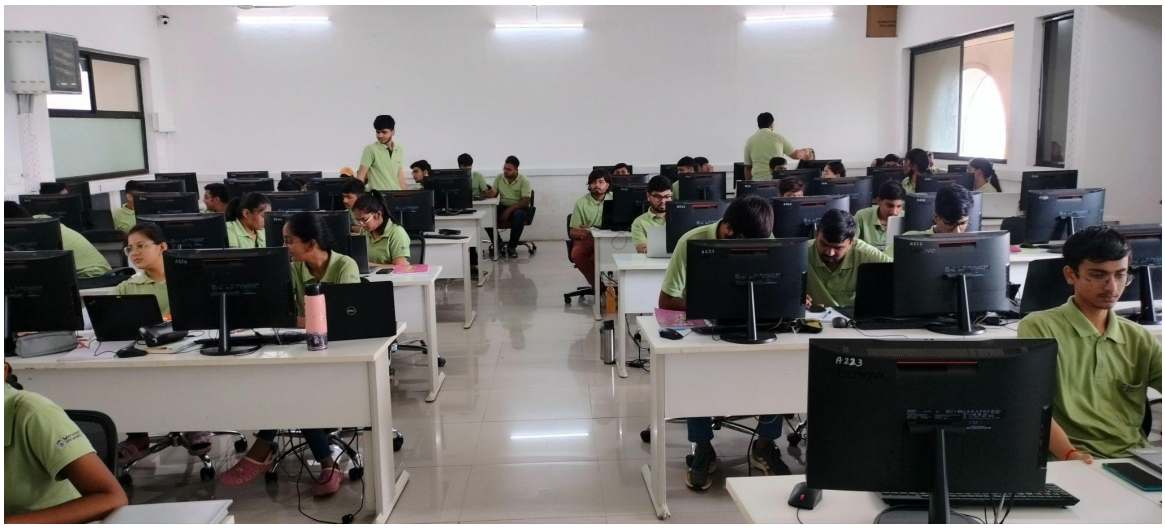
6. Feedback and Evaluation:

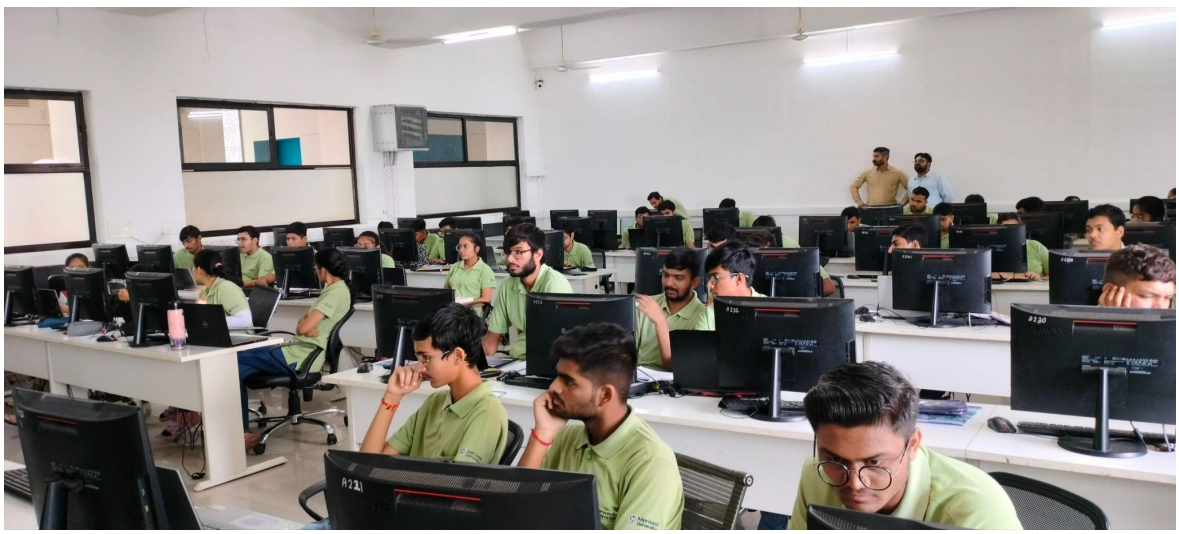
The feedback received from attendees and participants was overwhelmingly positive. Many praised the informative nature of the event and its relevance to their studies. Constructive suggestions for improvement included more hands-on activities and extending the duration of certain segments to allow for more in-depth discussions.

7. Conclusion:

In conclusion, the event held on August 5th, 2023, was a successful endeavor aimed at introducing diploma students to Linux and the basics of operating systems. The event featured a comprehensive presentation covering topics such as Linux, Ubuntu, kernels, and the distinctions between Windows and Linux. Practical aspects were emphasized through a step-by-step tutorial on installing Ubuntu in VirtualBox, teaching Ubuntu basics, and imparting command-line skills. The event encouraged a sense of community and knowledge sharing, potentially sparking enduring interest in open-source technologies among participants. Notable achievements included facilitating Linux installations, developing command-line proficiency, and promoting collaboration within the learning community.

8. Attachments:





DATE: 12-08-2023

Marwadi University
Marwadi Chandarana Group

COMPETITIVE PROGRAMMING CLUB

STEM TRAINING OVER PROGRAMMING USING SCRATCH

INFORMATION AND COMMUNICATION TECHNOLOGY

FACULTY OF TECHNOLOGY MARWADI UNIVERSITY, RAJKOT

CLUB MENTOR:

PROF. NISHITH KOTAK

ASSISTANT PROFESSOR,

ICT DEPT., MU

1. Introduction:

The event held at the Marwadi University - ICT Department for Shakti School aimed at developing interest for various domains within students. The event aimed to provide students a brief insight as to how games can be developed with the help of the “Scratch” offline editor.

2. Event Overview:

On 12th August, 2023 CP Club held an event at **MA-115** Lab of ICT-Department, Marwadi University. The Event spanned for approximately **4 hours** and included a hands-on introduction to “Scratch” Offline Editor. The session consisted of the following topic :-

1) Introduction to CP Club.
2) Introduction to Scratch.
3) Hands on Implementation of Game Movement Logic.
4) Session Conclusion.

3. Attendance and Participants:

The event saw great interest from the students of Shakti School. Approximately **120 students** from Shakti School participated in the event. The students were from the 9th and 10th standard.

4. Achievements and Outcomes:

Participants actively engaged in discussions, hands-on implementation, and interactive sessions that enhanced their creativity and thinking. Students were able to explore new domains and gain insights into the world of game development. Although the introduction of the platform was short due to time constraints, it has developed an interest in the mind of the students.

6. Feedback and Evaluation:

Feedback from participants was overwhelmingly positive. There were a high number of students who had active participation throughout the event. The event's success was also evident in the increased engagement and enthusiasm observed among the participants.

5. Challenges:

While the event was successful, we did face a few challenges along the way. The tight timeline for planning and execution required the collective effort of all the team members.

6. Conclusion:

In conclusion, the event held at Marwadi University's ICT Department for Shakti School proved to be a success in achieving its objectives. With active participation from approximately 120 students of the 9th and 10th standard, the event provided a hands-on introduction to the "Scratch" Offline Editor and ignited curiosity within the young minds about the world of game development. Despite facing challenges in planning and execution, the event's positive outcomes were evident through enthusiastic engagement, interactive learning, and the newfound interest ignited among the participants.

7. Attachments:

DATE: 28-08-2023

Marwadi University
Marwadi Chandarana Group

COMPETITIVE PROGRAMMING CLUB

Introduction to App Development Using MIT App Inventor

INFORMATION AND COMMUNICATION TECHNOLOGY

FACULTY OF TECHNOLOGY MARWADI UNIVERSITY, RAJKOT

CLUB MENTOR:

PROF. NISHITH KOTAK
ASSISTANT PROFESSOR,
ICT DEPT., MU

1. Introduction:

The event was conducted on Aug 28th 2023. The event was specially conducted for students of 9th & 10th of Nirmala School. Introduced them with MIT App Inventor Tool and basics of App Development. The venue was MA102

2. Event Overview:

1.) Introduction to Club and University.
2.) The overview of App Development.
3.) How to make apps using MIT App Inventor.
4.) How the development took place in Industry.
5.) Displayed the developed apps .

3. Attendance and Participants:

The event had a total of **90 students** in attendance, all of whom were participants. These participants consisted of 9th and 10th Std Girls of Nirmala School. The enthusiastic engagement and active participation of these students contributed to the success of the event.

4. Achievements and Outcomes:

1. **Introduction to The Basics Of App Development:** In the events students got the chance to make their own app themselves using MIT App inventor.

2. **Hands-on Projects :** We created a simple app where you type in a sentence and then hit a button to see it on the screen. It might sound basic, but it turned out to be a valuable experience for the students. They had fun while gaining hands-on knowledge. Plus, they learned extra stuff not usually taught in their regular classes.

5. Challenges:

There were some challenges like sound problem and internet issues
As the lab was large so the voice was not completely audible for all students. Also the number of students was more than the number of computers in the first session.

6. Feedback and Evaluation:

The Feedback Received from The Students and Faculty Members are good. Due to a shortage of time we couldn't go into much detail . Some students faced difficulties due to network issues . But Overall Feedback Is Good.

7. Conclusion:

In conclusion, the event held on August 28th, 2023, was a successful endeavor aimed at introducing High school students to the world of software development. The event featured a Hands on Project of Making Simple App On the MIT App Inventor Platform. Practical aspects were emphasized through a step-by-step tutorial on App Development On MIT App Inventor Website Through Drag and Drop Blocks . The event encouraged a sense of community and knowledge sharing, potentially sparking enduring interest in open-source technologies among participants.

Attachments:

DATE: 28-08-2023

Marwadi University
Marwadi Chandarana Group

COMPETITIVE PROGRAMMING CLUB

STEM TRAINING OVER PROGRAMMING USING SCRATCH

INFORMATION AND COMMUNICATION TECHNOLOGY

FACULTY OF TECHNOLOGY MARWADI UNIVERSITY, RAJKOT

CLUB MENTOR:

PROF. NISHITH KOTAK
ASSISTANT PROFESSOR,
ICT DEPT., MU

1. Introduction:

The event held at the Marwadi University - ICT Department for Nirmala School aimed at developing interest for various domains within students. The event aimed to provide students a brief insight as to how games can be developed with the help of the “Scratch” offline editor and Additionally, there was a quiz designed to assess and enhance the participants' knowledge. The quiz likely aimed to test the participants' understanding of the concepts covered during the Academic and logical question.

2. Event Overview:

On 28th August, 2023 CP Club held an event at **MA-115** Lab of ICT-Department, Marwadi University. The Event spanned for approximately **4 hours** and included a hands-on introduction to “Scratch” Offline Editor and Quiz. The session consisted of the following topic :-

1) Introduction to CP Club.
2) Introduction to Scratch.
3) Hands on Implementation of Game Movement Logic.
4) Quiz
5) Price and goodies distribution.
6) Session conclusion

3. Attendance and Participants:

The event saw great interest from the students of Nirmala School. Approximately **90 students** from Nirmala School participated in the event. The students were from the 9th and 10th standard.

4. Achievements and Outcomes:

Participants actively engaged in discussions, hands-on implementation, and interactive sessions that enhanced their creativity and thinking. Students were able to explore new domains and gain insights into the world of game development. Although the introduction of the platform was short due to time constraints, it has developed an interest in the mind of the students.

5. Feedback and Evaluation:

It's wonderful to hear that the event garnered such positive feedback and successfully engaged the participants. Although it's important to acknowledge a minor hurdle we encountered in effectively communicating with all students, as the reach of the voice didn't quite extend to the very last row, overall feedback was good.

6. Challenges:

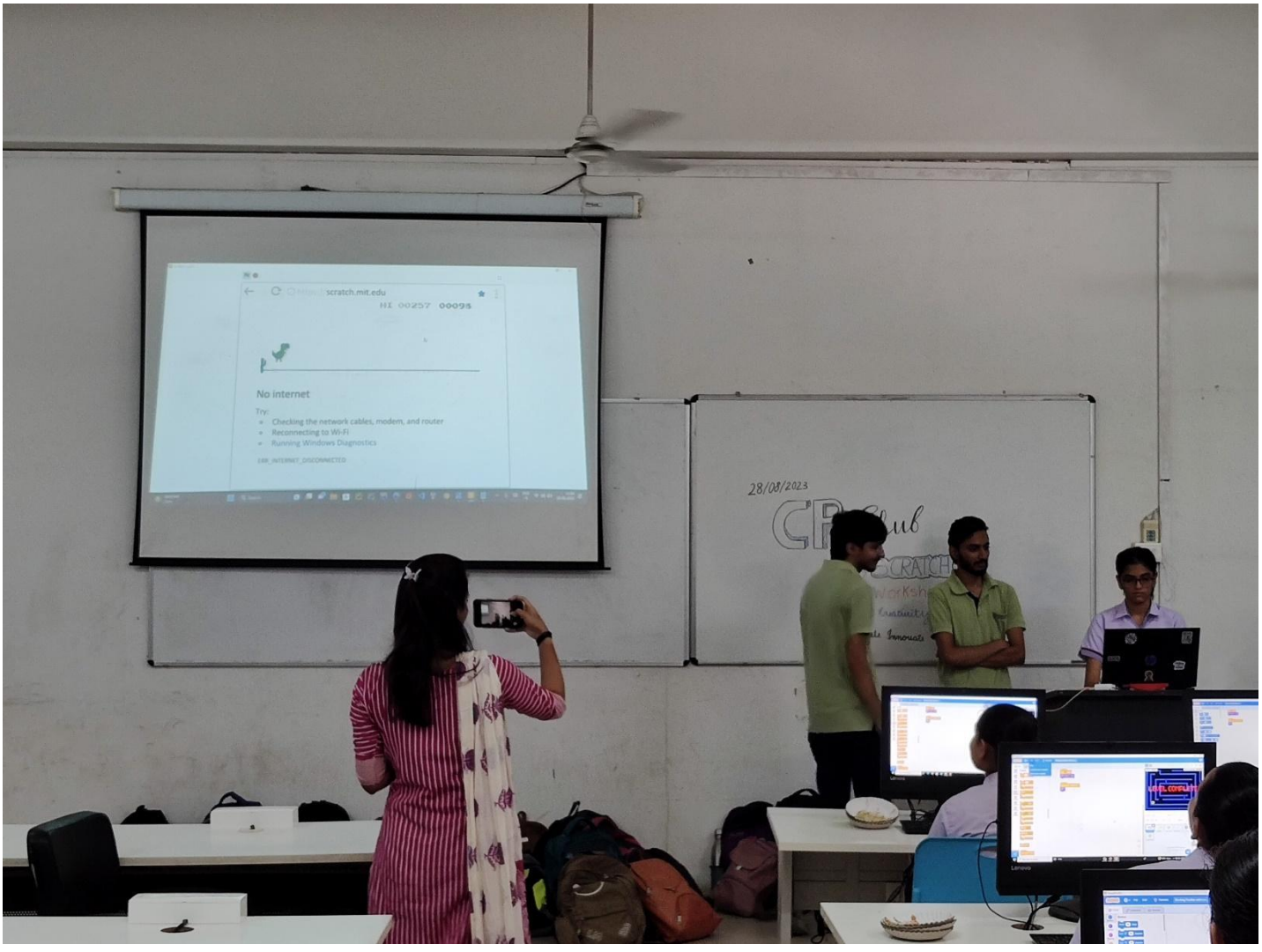
While the event was successful, we did face a few challenges along the way : Having a limited timeframe for planning and executing the event and a limited number of PCs.

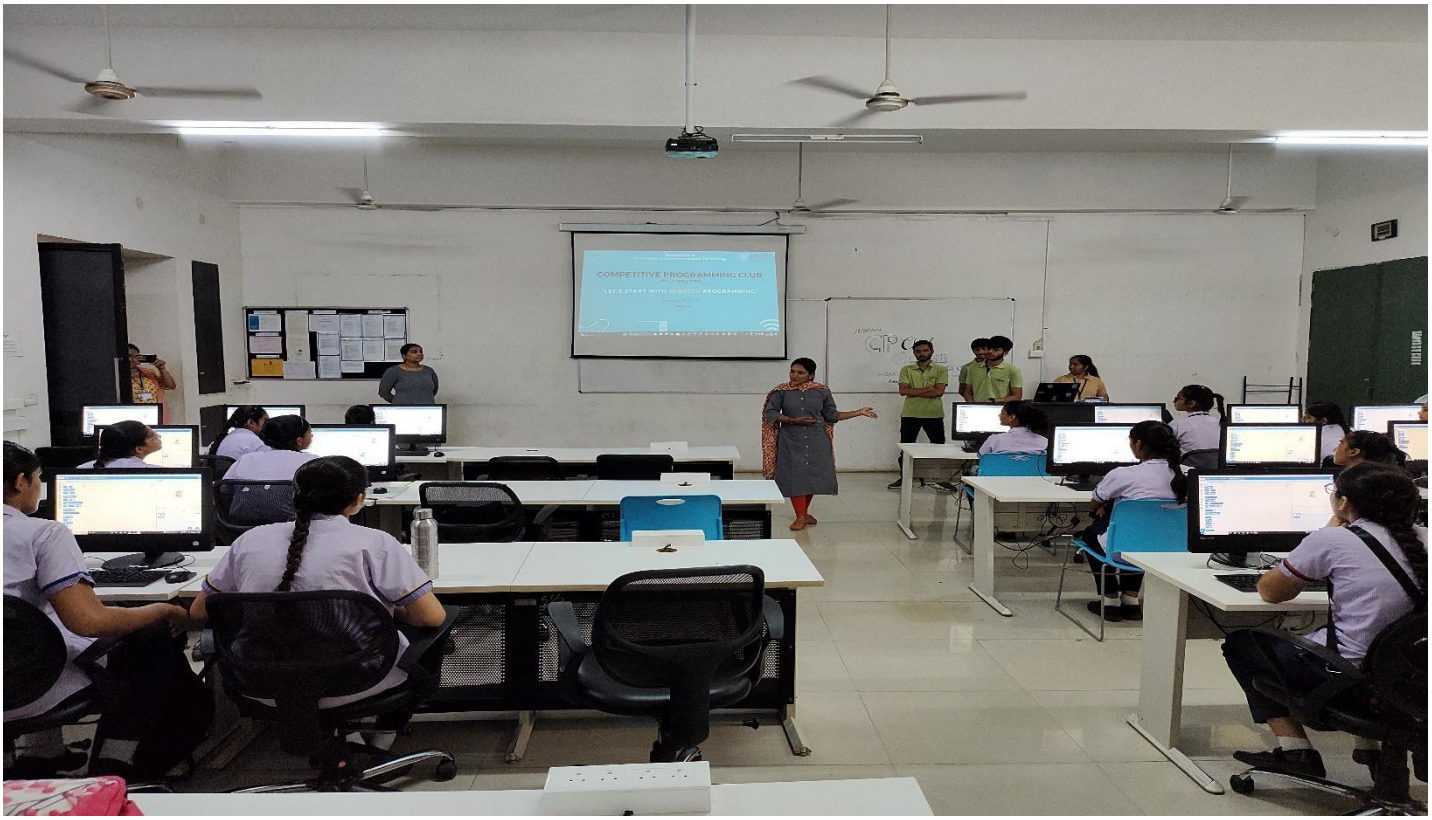
7. Conclusion:

In conclusion, the event held at Marwadi University's ICT Department for Nirmala School proved to be a success in achieving its objectives. With active participation from approximately 90 students of the 9th and 10th standard, the event provided a hands-on introduction to the "Scratch" Offline Editor, Quiz and ignited curiosity within the young minds about the world of game development. Despite facing challenges in planning and execution, the event's positive outcomes were evident through enthusiastic engagement, interactive learning, and the newfound interest ignited among the participants, establishing a positive precedent for forthcoming educational endeavors. Lastly, recognizing and rewarding the top performers through a quiz result-based gift distribution further underlines the event's dedication to both learning and celebration.

8. Attachments:


28/08/2023


scratch.mit.edu
No internet
Try:
Checking the network cables, modem, and router
Reconnecting to Wi-Fi
Running Windows Diagnostics
28/08/2023


COMPETITIVE PROGRAMMING CLUB
PROGRAMMING


Names
Score
Accuracy
Q1 35%
Q2 88%
Q3 91%
Q4 62%
1 Krisha A 12960 75% (15 / 20 pts)
2 tri 12880 75% (15 / 20 pts)
3 Preksha 12690 75% (15 / 20 pts)
4 Manishka 12420 75% (15 / 20 pts)
5 vani 12190 70% (14 / 20 pts)
6 Vedanshi 12120 80% (16 / 20 pts)
7 Kavya 12100 70% (14 / 20 pts)
8 Drashya 11830 70% (14 / 20 pts)
28/08/2023