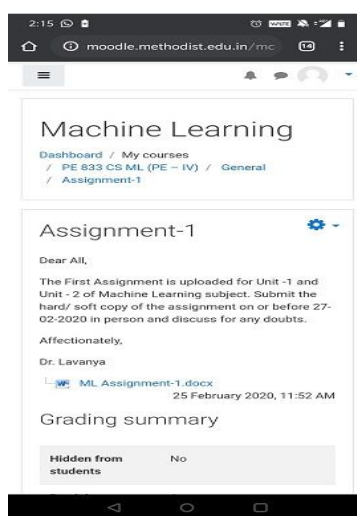


Innovations by the Faculty in Teaching and Learning

The following processes have been instituted by the faculty of Department of Computer Science and Engineering for the improvement of teaching-learning process.

1. Moodle Tool

Faculty Members use this tool for lab assessments, assignments grading and discussions. They use this tool to assess student performance in assignments and quizzes on the go. Every student is provided with their own login ID. Students have to upload their lab programs into their account in every lab session. Those programs will be available for them throughout the semester.



2. Workshops on new technologies/Tools.

Department conducts workshops and seminars by internal faculty and external resource persons for students and staff from time to time to acquire skills in new technologies/tools. This will enable them to be in touch with current trends in the computer world.



3. Content beyond Syllabus for smart learners. Faculty identifies smart learners in every class and they give extra focused assignments to those smart learners which may help them in

competitive exams and placements. This in turn will help them in getting internships in industry.

4. Technical Apps /websites

Faculty encourages students to develop mobile/desktop applications, so that the students get motivated technically and they show interest to learn about Application development software. Sample Applications are:



5. Train the Trainers

Faculty members who are new to the subject and interested to learn a particular subject or would like to enhance their teaching by learning from a faculty who is an expert in that subject are facilitated through this programme. Trainee faculty imparts new technologies to other faculty.

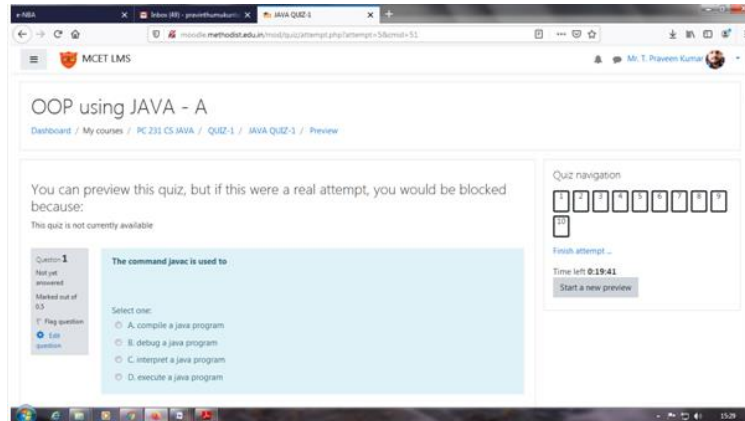
Course Name	Trainee Faculty	Faculty Got Trained	Duration
CISCO Networking Academy	1.Tauqeerullah (Assistant Profeseor) 2.Mr.D. Rajshekar (Assistant Professor) 3.Mrs.Unnati Kanapurkar (Assistant Profeseor) 4.Mr L. Thirupathi (Assistant Profeseor)	1.Mrs.B. Sowjanya (Assistant Profeseor) 2.Mr.R. Sandeep (Assistant Profeseor) 3.Mr.T. Praveen Kumar (Assistant Profeseor)	10 hrs

6. Coding contests

Faculty regularly conduct coding contests to encourage and enhance the programming skills of students both in programming languages and development tools to make them industry ready.

7. Technical Quiz

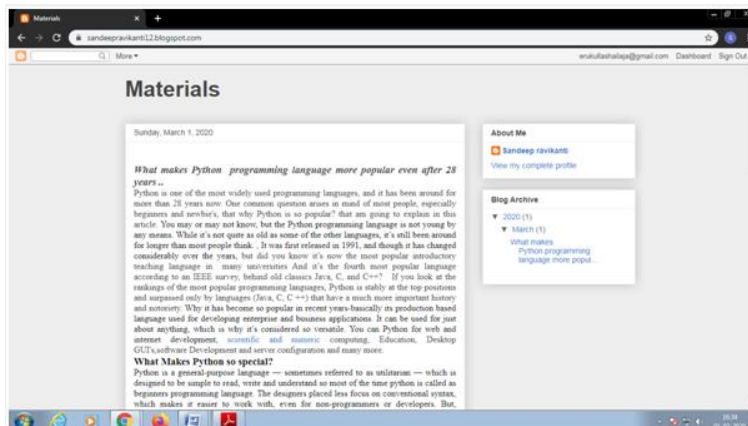
Faculty conduct technical quizzes in their respective subjects which will improve the quality of student learning. A tool called moodle as discussed in 1, is being used to conduct such type of quizzes.



8. Faculty Blog

Faculty maintain blogs to provide lecture notes for students. They make the blog link public to all the students to access lecture notes.

Blog page of our faculty Mr. Sandeep.R



9. NPTEL Lectures

Department of Computer Science and Engineering is integrating NPTEL lectures with classroom sessions using URL:192.168.10.5.10/NPTELVIDEOS Faculty encourages students to register themselves in NPTEL online courses for learning extra content beyond syllabus.

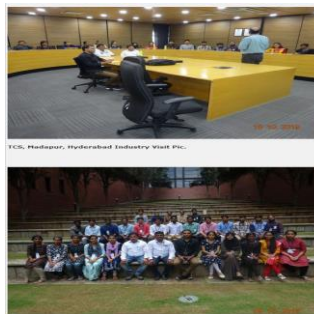


10. Mentoring / Counselling students who are slow / fast learners.

Each faculty is assigned a group of students for counselling. They counsel students in all aspects. Faculty mentor students in taking exams like GRE /TOFEL/ GATE/ IELTS/CAT.

11. Industrial Visits

Department organizes industrial visits to Multinational Companies for students to make them aware of the best practices followed in the industry.



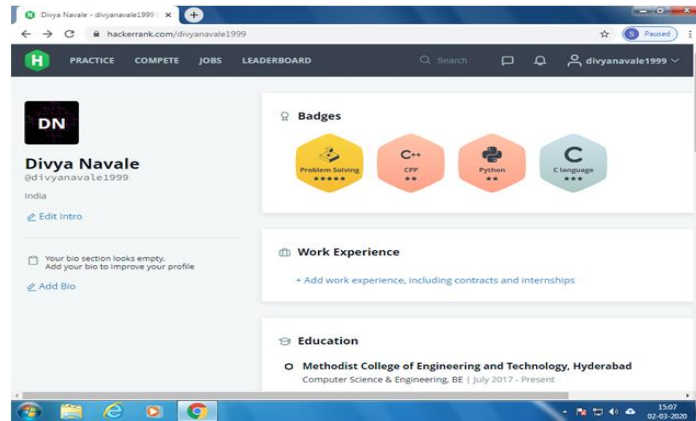
12. Hackathon / Codeathon

A **hackathon** is a design sprint-like event in which students were given a problems on which students has to Project their ideas for solving them. The department encourages students to participate in Hackathon, Codeathon so that students get motivated.



13. Practice Based Learning

Students were encouraged to register in sites like Hacker earth & Hacker rank to solve different types of problems such that the solutions given by them have to pass different types of test cases. These sites encourage the students to solve different level of problems using different programming languages.



14. Pro and Con Strategy

Prior information about the topic will be given to the students in the class and next day students will give the advantages and disadvantages about the said topic.

Topics discussed under this Strategy:

- 8085 and 8086 microprocessors difference
- 8257, 8255, 8253 chips

Basis for Comparison	8085	8086
Microprocessor type	8-bit	16-bit
Size of data bus	8-bit	16-bit
size of address bus	16-bit	20-bit
Supportable memory capacity	64 KB	1 MB
Operating frequency	3 MHz	5 MHz
Number of flags present	5	9
Number of transistors	Less (around 6500)	More (around 29000)
Operating mode	Only one	Two (minimum and maximum mode)
Pipelining	Unsupportable	Supportable
Cost	Low	Comparitively high
Memory segmentation	Unsupportable	Supportable
Instruction queue	Absent	Present
Addressing mode	5	9

15. Just-in-time

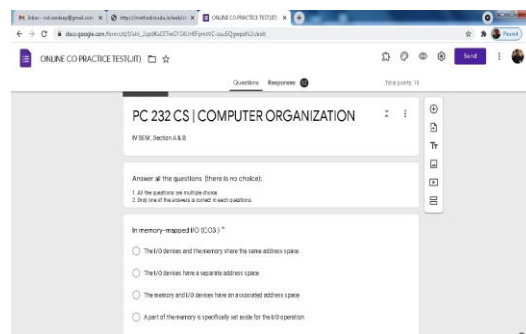
Just-in-time teaching actively involves students in the learning process through a two-step series of learning activities.

Step1: students Use the phablets/Phones to submit the content using the internet.

Step2: Faculty will evaluate the points which will be used to identify the understanding levels of the students about given topic.

Link:

https://docs.google.com/forms/d/e/1FAIpQLSe8MdadPvg2TA96rJGggI45SxY8OVMLELKdQPO47zBy0ddbvw/viewform?usp=sf_link

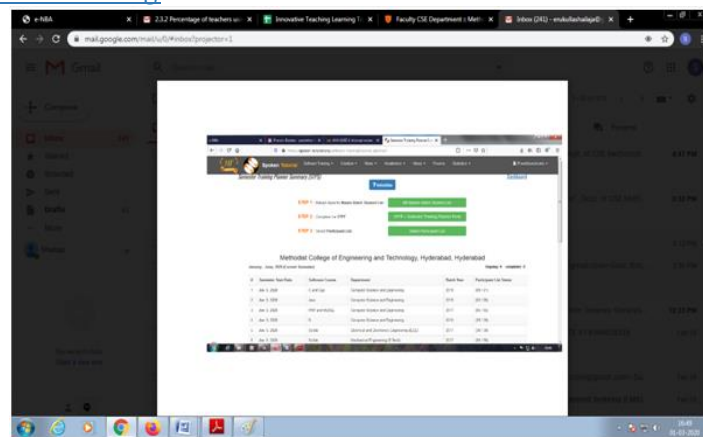


Online exam

16. Spoken Tutorials

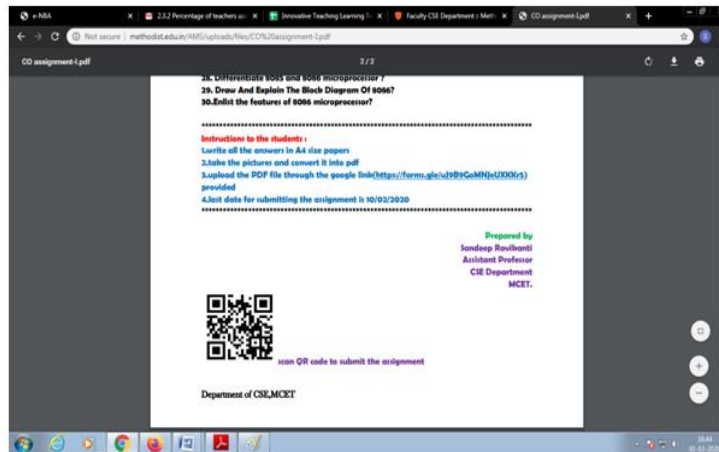
Faculty members can avail spoken tutorials conducted by IIT Bombay (spoken-tutorial.org) and MOOCS such as www.coursera.org, edX.org etc. to enhance the learning of the students beyond curriculum. Students learn activities in a more efficient way and get involved in the activity.

URL: www.spoken-tutorial.org



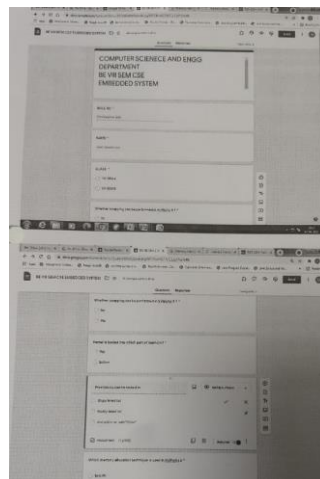
17. Assignment Submission Using QR-Code

All the Hand written Assignments will be uploaded to Google cloud by scanning Quick response code.



18. Flipped class:

A flipped classroom is the reverse of the more common practice of introducing new content at institution, then assigning homework and projects to complete by the students independently at home.



In this blended learning approach, face-to-face interaction is mixed with independent study—usually via technology. In a common Flipped Classroom scenario, students might watch pre-recorded videos at home, and then come to institution to do the homework armed with questions and at least some background knowledge