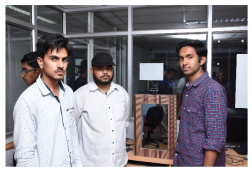
## COLOUR BY VOICE: VOICE CONTROLLED HOME APPLIANCE.

We would all like to have to a lamp at our desk but it would be way cooler if it changed colours. This project represents a lamp which changes colour according to our intuition. The user gives a mood or color of his choice and see the lamp change its colors This is also a project implementing home automation.
The lamp changes colour smoothly. These lamps are used to help create a specific ambiance within the room as a means of making the space more attractive and welcoming in some manner.
This is a project for controlling the color of a lamp using voice command or button clicks. The lamp can also be controlled by ambient light.
In today's modern technology world, where most electronic devices and appliances can be remotely controlled, we have brought this project which would help an individual to control lights, fans etc. by just talking to them.
"*It was great experience working as a team for this project. It helped us develop individual as well as team performance. We got an opportunity to know about the trending technologies, the problems being faces, and ways to come up with optimal solutions for* them. It helped us improve technical skills."

## SMART MIRROR: GET SMART!



Our project has been developed within the context of a time where every day we see more and more connected devices. The Internet transformed our lives by connecting us more easily to information and other people in the virtual world. Mobile phones then became smartphones and since then this concept has erupted and morphed into the Internet of Things, things which connect us to everyday objects. The device designed is called "Smart Mirror".
It is a wall mounted mirror which displays relevant items to the user such as weather, scheduling, messages and other fields of interest With this as the basis, the mirror can be advanced to provide a natural means of interaction through which the users can control smart appliances and access services through APIs via voice commands.
"*There were a myriad of things we learned while working on this project. Handling the front and back end part of our project helped us hone our coding skills and apply them in real world scenarios. Most importantly it showed us the value of cooperation in how we shared the workload among us and in how we quickly resolved conflicting views*".

## MJ SKILLSET- YOUR PROJECT TAGGER

MJCET students have exhibited their skills and have proved their talentthrough a wide range of remarkable and excellent projects and MJSKILLSET provides them the right platform to showcase their talentsDesigned as a website, SKILLSET categorizes various projects accordingto their field of implementation and gives its users an access to have quick look into these projects . The website aims at storingvarious project abstracts, video for demonstration with a very precise information about implementation strategies used.
The actual implementation (source code) is not really available to the users. The aim was to help the students for their upcoming projects by providing a convenient way to lookout for information regarding previously done projects, platforms on which they were implemented and other relevant details. Skillset was successful in proficiently recording the various projects displayed at Innovatia Panoply and has thereby partially achieved its objective. Students had fun explaining their projects as it was being stored and later displayed in the website as a pride to Computer Science and Engineering Department.

"*The making of project has given us an experience with html,css while designing the front end and PHP while making the back end and dealing with databases. The scope of this project can be further extended to make the experience of selecting projects a simple one.*"

## SAFE HOME: A SAFER FUTURE

One of the biggest concerns that property owners and renters have is the safety of their family and their assets. Until recently, home safety was not an electronic affair; doors were locked mechanically with bolts and keys. In today's world where almost everything is phone accessible, carrying around a separate key and dealing with the worry of lost and damaged keys is rather taxing.
With our project "Safe Home", we aim to provide a more secure and convenient alternative to manual locking. SafeHome provides a user friendly setup. Our project Safe Home is a gen-next approach for providing the users with the highest level of comfort in the form of security. It has a keypad to allow manual entry as well as a GSM module that enables the owner to send and reply SMS to the device. With this feature the user can remotely open the lock, be alerted when the wrong password is entered and change the password or retrieve the password incase the password is forgotten.

"*The event 'Innovatia Panoply' organized by Computer Science and Engineering Department in collaboration with CSI has made me and my team thrive harder to make our wish of winning prize come true. Even though the outcome of the event was surprising but it made us realize our shortcomings and had left us motivated to work harder to overcome our faults and aspire towards a better future.*"



MUFFAKHAM JAH COLLEGE OF ENGINEERING AND TECHNOLOGY

# INNOVATIA PANOPLY

COPUTER SCIENCE AND ENGINERING DEPARTMENT

## INNOVATIA PANOPLY'18: WHERE INNOVATION MEETS TECHNOLOGY

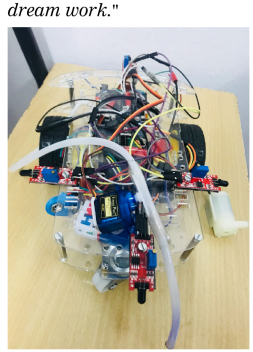
The much-awaited annual mini project presentation contest "Innovatia Panoply "organized by the Computer Science Department in collaboration with Computer Society of India(CSI,MJCET) held on the 7th of April 2018 gained extensive appreciation and recognition.
Innovatia Panoply is its true essence is an exhibition of art wherein the students display an array of innovative and ingenious technological proposals which will benefit the society and make this world a better place.
Since its inception, Innovatia Panoply has actively enabled students to nurture their technical capabilities by promoting them to explore their boundaries and create revolutionary projects.
Each and every year the students of Computer Science Department under the inestimable guidance of our Head of Department, Dr. Ahmed Abdul Moiz Qyser, leave no stone unturned in displaying a plethora of path breaking and out of the box projects which adds to the unparalled beauty of Innovatia Panoply'18.
Innovatia Panoply was an invitation to all the students to showcase their creativity and originality. The main motive of the contest was to encourage the students to exhibit their innovative and inventive ideas and take them to the next level.
The entire competition was keenly judged and evaluated by Dr. Syed Shabbeer Ahmed, Dr. Mohammed Umar Farooq and Dr. Mohammed Mahmood Ali. During the competition, the students were asked various conceptual questions to check their fundamental understanding about their project. The respected judges also discussed various advancements and improvements with the team members which the students found exceedingly captivating and informative.
Innovatia Panoply is an exceptional platform for all the students to strengthen their technical excellence and envision innovative ideas for a bright and promising future.

## SEBASTIAN:THE VIRTUAL VOICE ASSISTANT OF THE WEB.

Sebastian is a voice controlled personal assistant that lives on the web. While most competitor voice assistant software are more than capable and efficient, they lack a critical ability. Almost all current widely used voice assistants are platform specific. This is the aspect where Sebastian truly shines. Sebastian unlike others is deployed on the web and can be accessed at any place and at any time using a device with web browser.
Sebastian strives to provide a personalized experience by allowing users to sign up and login to their accounts. Once logged in, Users can perform various different tasks through Sebastian. Users can use their voice to ask for information, update social networks, get weather updates, movies information restaurant suggestions, writing a note and set reminders and more.Sebastian is completely open-source so users can add further functionality to Sebastian if they wish.
"*Working in a team is always a delightful experience. The mini project truly helped us understand the truth behind "Team work makes the Dream work." Overall it was fun and very informing.*"

## "FIREMAN'S AID"- A FIRE FIGHTING BOT

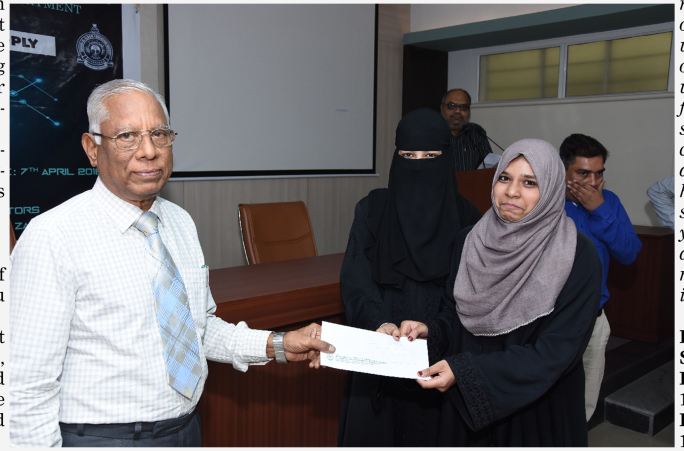
Fireman's Aid is a fire fighting robot which detects, alerts and puts fire off. The problem we had tried to solve was to prevent the fire fighters from indulging in hazardous situations and further prevent them risking their precious lives. We tried putting our creativity and imagination by innovating a Robot with an amalgam of coding.
This working model of ours has a unique feature of sending an email as well as a notification to the owner via an App. A common database hosted online makes it easier in conducting surveys, formulating causes and preventing it from further occurrences.Panoply provided us with an opportunity to learn something apart from conventional academic syllabus. It served us with a platform for creativity and helped us to be Application oriented. "*Team work and dedication had made our dream work.*"



# DRIFT: DRIFT YOUR WAY TO VICTORY!!

"Drift" is a car racing game that you absolutely cannot miss. This classic game has all what the racing enthusiasts want to have: from nobody to the most wanted, you will use your excellent driving skills to beat "tom"(our AI car) and bag the coveted first position.
Here I will solemnly introduce you to the biggest features of this game:

- Realistic graphics.
- Smooth Car Controls.
- Select from a bunch of different cars that you would like to drive.
- Three different tracks: Forest Offset, Winter Wonderland and Seaside Feat. Choose whichever you like and start driving!
- Set your username and try to beat your own high score to see your name on the top of leaderboard.



*"We found the entire process of developing this game very riveting. We have learned two very valuable lessons throughout the making of this game. First is that one must always work on things he feels intrigued about regardless of what others say.Because when you spend time on things you enjoy working on, you don't feel tedious and will be satisfied with the outcome at the end of the day. And Second, the harder you work for something, the greater you'll feel when you achieve it. All the late nights & early mornings does pay off."*

**Developers-**
**Syeda Haneefa Fathima**:
1604-15-733-064
**Firdous Samreen**:
1604-15-733-080

## SMART PARKING SYSTEM: A GEN-NEXT PARKING METHODOLOGY

Smart Parking System is an IoT based project that facilitates the idea of remotely connecting and monitoring of cars in a parking lot using the Internet.
This project primarily focused to make the entire process of a driver from the entrance to the exit smarter, reliable and automated in a parking lot.
The advantage of using this system over the similar kinds of existing systems is firstly that a driver can be guided to the closest available slot with the help of arrows and graphical layout of the parking lot and secondly a driver doesn't need to receive a slip at the entrance as his number plate will be read using Optical Character Recognition (OCR).
At the exit, the number plate would be read again and the charges will be calculated automatically using IN & OUT timings.

For the prototype, we developed a Raspberry Pi managed system which is connected to the Wifi and interfaced IR Sensors, Ultrasonic Sensors, PiCam, Servo Motor and Light Emitting Diode (LED).
*"Our experience of Innovatia Panoply was thrilling as the competition was fierce and neck to neck. This opportunity was inspiring and motivated us to develop better projects in the upcoming year."*

**Developers-**
**Khizir Rizvi** 1604-15-733-102
**Sohail Ahmed** 1604-15-733-103
**Farhan Ahmad Iftakhar** 1604-15-733-092

## AUTOMATED PLANT WATERING SYSTEM: GO GREEN OR GO HOME

Automated Plant Watering System is an IOT based project which enables people to monitor there plants when they are away from there home. The project is designed primarily to check and determine the moisture content of the soil.
All this is possible by incorporating sensors which have a fixed value also know as threshold value to begin with.If the measured moisture contents falls before the threshold value, a pump gets activated which in turn releases water for the plants.
Our basic aim was the development of an IOT system which will inturn be beneficial for our Society.
The idea revolves around building a IOT system where in one can easily take care of their plants by following our new and unique approach.

*"All in all its was an extremely thrilling and unique experience. At last we felt very happy as we were able to solve a real time problem by using low cost and robust components.*
*Innovatia Panoply gave us an opportunity to gain a hands on experience on different sensors, new Hardwares etc because of which we came to know about several new technologies around the world"*

**Developers:**
**Mohd Salman Omer Shareef:**
1604-15-733-301
**Syed Manzoor Ahmed:**
1604-15-733-303
**Mohd Hasnath Hyder:**
1604-15-733-309





## ATTENDANCE USING FACIAL RECOGNITION: A FUTURISTIC APPROACH

Face recognition is an important application of Image processing owing to its use in many fields. Identification of individuals in an organization for the purpose of attendance is one such application of face recognition. Maintenance and monitoring of attendance records plays a vital role in the analysis of performance of any organization or university or college. The purpose of developing attendance management system is to computerize the traditional way of taking attendance.
Automated Attendance Management System performs the daily activities of attendance marking and analysis with reduced human intervention. The system integrates techniques such as image contrasts, integral images, colour features and cascading classifier for feature detection and faces are recognized using Euclidean distance and k-nearest neighbour algorithms.
*"Talking about the panoply conducted by CSED In collaboration with CSI , it has given us a delightful platform to not only showcase our projects but also to learn new things from others . The spirit of competition has driven us to work relentlessly to come up with the finest projects but also to share our experience with the others."*

## HOME AUTOMATION: SWITCH TO A SMART HOME

Home automation has been around for several years, with systems that let you control the lighting, temperature, door locks, appliances and much more. The home automation system of light using Arduino has been experimentally proven to work satisfactorily by using LED lights.
The project which we have implemented is low cost,reliable,scalable and flexible. is platform independent and easily adaptable to the environment. The advantages of our project are

- It provides security and will automatically alert and turn on the lights when someone tries to enter the room thereby providing safety.
- It saves time,money which is a huge factor.

- It provides convenience.

*"With the help of this project we came to know many new components which were unknown to us till that time-such as soldering, wiring the circuit and other tools that we have used for this project and were able to work together as a team during this project. Our project was build from scratch and was designed to be flexible and extensible so that adding new components and additional features is very simple without rebuild*ing and redesigning the entire project."

## STUDENT PORTAL: THE STUDENT GUIDE

Student portal project acts as an online portal between students and the admin. The system is designed for various branches of Engineering. It contains an admin who can enter details of students and maintain the page effectively. Students can then login using provided user id(roll number) and password . Now admin can add details of Students marks as well as attendance. Every department has all the four years students details ,every year covering 2 semesters . When students login they can see their own marks, attendance, subject information details. Students also get a helpdesk to assist them and also a download page where students may download pdf format ebooks,notes, previous year papers from the web system.
Apart from these there is separate section where you can find ways to sell or buy books.
A separate feedback page has also been added which helps you to give any suggestions about the portal.

*"During this project development we learnt a lot of personal skills like team work, perfection,hardwork,dedication. This project has also made us to learn a lot of software terms and languages .We've used HTML5,CSS3,SQL, JAVASCRIPT and PHP languages for our portal.*
*We would like to thank HOD sir and our Project incharge Mrs. Afreen Sultana ma'am for always supporting and encouraging us to do this project and giving us the Consolation prize for the panoply ."*

## MULTI CONSOLE RETROBOX: A GAMING REVOLUTION!

Video games have been developed since the 70's, the early games developed where hardware dependent i.e., we can't play cross platform games (In video games, cross-platform play or cross-play is a term used to describe the ability for players using a game on a specific video game console to play alongside a player on a different hardware platform such as another console or a computer.). So we decided to get rid of this problem by creating a machine which can imitate different types of gaming units since this machine possess the ability of different consoles we named it as **MULTI CONSOLE RETROBOX.**
**OBJECTIVE:**

- The main purpose of this project is to reduce hardware wastage due to manufacturing of extra gaming units.
- Ability to play cross platform games.
- To reduce money wasted on buying different game consoles.
- To create a generic machine that can support each and every console in existence.

*"There was times we thought that it could take more than a year to complete while going parallel with our academics since we were facing the problems of interfacing the components to balance the power and clock speed of the machine.*
*Despite all the odds we kept our nerve calm and we are glad that we did it."*