



LJ Group of Institutes

organized

LJ Innovation Village-2016



About LJ Group of Institutes

It is run by Lok Jagruti Kendra (LJK) is a charitable Trust and registered society. It was founded in the year 1980 by eminent academicians, professionals and distinguished personalities from across the society.

L.J. stands for '**Lok**' (people) and '**Jagruti**' (awareness). L.J firmly believes in bringing about overall development of people.

L.J. aims to develop its students into complete citizens who not only have the subject knowledge & skill but also have the empathy towards various social, cultural, environmental and other such issues affecting our society. L.J. philosophy is firmly grounded in values such as honesty, transparency, camaraderie, solidarity and unity. LJ is committed to provide quality and value-based training with professional satisfaction in a very friendly, learning and research environment, matching the best international standards. Well-qualified experienced professional trainers train the participants with easy-to-use step-by-step hands-on training.

LJ Group of Institutes runs nineteen institutes offering diverse range of programmes like diploma courses, undergraduate, postgraduate and professional courses. It functions from two campuses in Ahmedabad, with over 500 well-qualified and experienced faculties to train over 10000 students.

LJ Group of Institutes feels proud for associating with Industry to conduct Corporate & Skilled Training to bridge the existing gap between formal system and the realistic modern skills requirements of the Industry.

LJ Group of Institutes has signed MOUs with Ford Motors, Toyota Motors and Intas Pharma to provide them trained skilled manpower. LJ Group associates with leading national & multinational companies for placement. LJ Group of Institutes is Nodal Agency of Start-up Innovation Scheme of Government of Gujarat.

About LJ Innovation Village

Skill is an ability acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carryout complex activities or job functions involving cognitive skills, technical skills and interpersonal skills. To nurture these skills of youth, LJ Group of Institutes organizes LJ Innovation Village every year. It improve their skills and enhance performance by focusing on overall professional development.

LJ Innovation Village was launched in 2013 to showcase innovative technical projects/models made by students. The object was to keep out creative & technical talent of students and whatever projects/products they make, will be commercialized.

For this students visit some places and look into the social problems, then find out solutions by their innovative ideas and make projects/products.

LJ Innovation Village provides the platform to work on innovation, make products and do commercialize them.

LJ Innovation Village-2013

It was organized on Friday, March 8, 2013, from 10am to 6pm at LJ Campus and inaugurated by Hiranmay Mahanta; Director GTU Innovation Council along with All Directors of LJ Group of Institutes, Faculty Members, other Staff and Students.

40 Technical Projects/Models and more than 100 Technical Posters were showcased by the more than 150 Students of LJ Polytechnic. More than 2000 visitors including students & faculties of different colleges, parents, professionals and engineers visited the exhibition.

Vice-President; LJK, Directors and Faculty Members of LJ Group of Institutes motivated participants for their effort and hardworking. Hiranmay Mahanta interacted with all participated groups one by one. He discussed various things related to their projects. He also assured to them for patenting their projects.



LJ Innovation Village-2014

It was organized on Friday, February 24, 2014, from 11am to 5pm at LJ Campus and inaugurated by Dr. Arvind Patel (MD Sahajanand Laser) along with All Directors of LJ Group of Institutes, Faculty Members, other Staff and Students.

More than 60 Technical Projects/Models and more than 50 Technical Posters were displayed by the Students of LJ Polytechnic. More than 2500 visitors including students & faculties of different colleges, parents, professionals and engineers visited the exhibition.

Dr. G. P. Vadodaria; I/c Registrar GTU Shri. Hiranmay Mahanta; GTU Innovation Council, Dr. Manishbhai Shah; Vice-President, LJK, Faculty Members of LJ Group of Institutes also visited exhibition. Technical Projects/Models have also evaluated, motivated and encouraged by Industrialists Shri Sandeep Dave, Shri Prag Takttawala and Shri Indu Gajjar.



LJ Innovation Village-2015

It was organized on Monday, January 19, 2014, from 11am to 5pm at LJ Campus and inaugurated Mr. Harkesh Mittal Advisor & Head, National Science & Technology Entrepreneurship Development Board along with Vice-President, Trustees, Directors, Faculties, Staff, Students of LJK and Invitees Guests. More than 200 Technical Projects/Models and Technical Posters were showcased by the Students of various disciplines.

Mr. Harkesh Mittal visited all projects. He interacted and motivated participants for their effort and hardworking. At the end of his visit, he gave his speech. He was very impressed. Mr. Mahesh Salkar; Senior VP, Toyota Kirloskar Motors (TKM), Mr. Padmanabha; VP, TKM, Mr. Ajit Mehta; Dealer Principal, Infinium Toyota and other TKM Management also visited LJ Innovation Village. Projects were evaluated by industry mentors. Showcased on all major Electronic & Print Media.



LJ Innovation Village-2015



LJ Innovation Village-2016

- Organized on Saturday, 30th January, 2016 from 10am to 5pm at LJ Campus and inaugurated by Smt. Anandiben Patel; Honourable Chief Minister, Gujarat, Hiranmay Mahanta; Director GIC, Prof. B. M. Pirzada; President, LJK, Dr. Manish Shah; Vice-President, LJK, Trustees & Directors of LJ Group of Institutes, Faculty Members, other Staff and Students.



- Inauguration Ceremony anchored by Prof. Viral Shah (Principal, New LJ Commerce College).



LJ Innovation Village-2016

- Welcoming Smt. Anandiben Patel with Tulsi Pot by Dr. Manish Shah (VP-LJK)



- Welcome Speech by Prof. B. M. Pirzada; President LJK



LJ Innovation Village-2016

- LJK... at a Glance by Dr. Manish Shah (Vice-President, LJK).



- Start-up Gujarat Speech by Mr. Hiranmay Mahanta (Chairman GTU Innovation Council).



LJ Innovation Village-2016

- Smt. Anandiben Patel felicitated Startups and Students of Smart Village Project.



LJ Innovation Village-2016

- Smt. Anandiben Patel launched a Women Entrepreneurship Souvenir started by LJ Group Institutes.



- Smt. Anandiben Patel felicitated Bhargavi Dave (DDO Gujarat) and Team.



LJ Innovation Village-2016

- Motivational Speech by Smt. Anandiben Patel (Honourable Chief Minister Gujarat)



- Smt. Anandiben Patel said that first time in the history after the formation of Gujarat as a state, any college has organized such Programme of Innovation. She said, she has never seen such a programme (innovation) which has been conducted either by government or any other organization.



LJ Innovation Village-2016

- On this occasion, Smt. Anandiben Patel took up an opportunity to congratulate LJ Group for providing youth a necessary platform to showcase their unique talent which will give a boost to innovation and prepare youth to become entrepreneurs.



- Smt. Anandiben Patel urged students to come up with innovative solutions for several challenges faced by farmers like waste management and animal husbandry.



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- Vote of thanks Vote of Thanks by Mr. Mahesh Kumar Kella



- Inauguration Ceremony attended by Ms. Anar Patel, Shri. Shyambhai Tibrewal, Shri. Jagdishbhai Tibrewal, Shri. Shaunakbhai, Trustees of LJK, Directors of All Institutes of LJK, Faculties, Invitee Guests, Electronic & Print Journalists, Students and Other Staff.



Smt. Anandiben Patel Visited Projects

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- She was delighted to know that 1000 students traveled to over 200 villages to understand the issues faced by villagers. Mr. Kaushal Madhu and Ms. Yakuta Karkhanawala briefed about this smart village project.



- Smt. Anandiben Patel congratulated LJ administration for taking up initiative to conduct Skill Development Training and LJ Software Factory. Mr. Mahesh Kella briefed about Skill & Corporate Training of Ford, Toyota and Intas Pharma. Ms. Dipti Chudagar briefed about LJ Software Factory.



- Smt. Anandiben Patel congratulated LJ administration for taking up initiative for Start-up. She also interacted with Start-ups.

LJ Innovation Village
.....Powered by Antrapreneur, The Business Incubator

Start up Gujarat, Stand up Gujarat

A large group of people, including men in suits and women in traditional Indian attire, are standing in front of a large blue banner. The banner features the text 'LJ Innovation Village' and 'Start up Gujarat, Stand up Gujarat'. There are also some small icons on the banner. The people are smiling and posing for a group photo.

Innovation Village-2016

- Smt. Anandiben Patel visited projects and motivated students. She also interacted with students. She liked some projects, which are made for social cause.
- Smt. Anandiben Patel mentioned, 'Looking at the Projects and confidence of the students affirm my belief that Gujarat's Youth is prepared to compete with the world and with proper skill and talent they can achieve the incredible'.
- Smt. Anandiben Patel said that the meticulous details have been considered in the projects and models is really a wonderful thing and all this has been done successfully.
- Smt. Anandiben Patel said that the young generation of Gujarat can show their potential in the world with their strength and capability.



Innovation Village-2016



**Industry Mentors,
Directors, Faculties, Staff of
LJ Group of Institutes &
Guests Visited Projects and
Motivated Participants**

Innovation Village-2016

- More than 450 Technical Projects/Models were showcased by the more than 1550 Students of LJ Engineering, LJ Polytechnic, LJMCA and LJ Pharmacy. More than 200 faculties guided these projects. Technical Projects/Models have evaluated Industry Mentors.



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- Industry Mentors evaluated all projects and ranked best projects institute wise and branch wise. They encouraged and motivated students as well as their project guides.



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Innovation Village-2016



Innovation Village-2016



Best Projects Ranked by Industry Mentors

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Data Management along with Post Analysis and Data Retrieval Facility for Negative Neutral Beam Development

Group Members:

Aakansha Saxena
(PG in Computer Engineering-Sem4)

Faculty Guide: Prof. Krunal Panchal

Evaluated by: Mr. Sarthak Dudhara

Abstract: NNBD (Negative neutral beam development) is a research community in IPR (Institute for Plasma Research) involved in development of high energy neutral beams for heating the plasma in order to achieve fusion temperatures in magnetic confinement reactors called as tokamak. It includes three research set ups- 1] Robin: 1RF driver, 100kw power, 1MHz –ve ion source 2] Twin source: 2 RF driver, 200kw power, 1MHz –ve ion source. 3] INTF:8RF driver, 800kw power, beam duration-3600s. These systems are operated by indigenously developed Data Acquisition and Control system (DACS). These facilities operate in pulsed mode in which they operate for a fixed duration. The data acquired for each of this experimental pulses (or shots) is stored separately. A huge amount of database will be generated from these facilities which is an important asset for the research community. The aim of this research work is to initially take the all these database and develop a prototype facility with a mature user interface which facilitates post data analysis, data visualization and also decide an appropriate database for storing the generated data and then develop program for data retrieval as per user requirements. This facility must also include a secure web based data access facility to facilitate the data access to any other experimentalist from remote location for analysis purpose.



Secured Real-Time Video Transmission with Significant Improvement in Privacy Preservation



Group Members:

Karishma Chaudhary
(PG in Computer Engineering-Sem4)

Faculty Guide: Prof. Gayatri Jain

Evaluated by: Mr. Sarthak Dudhara

Abstract: Encryption methods and representative video algorithms were presented, with respect not only to their encryption speed but also their security level and stream size, by investigating the novelty of secure data, for e.g. Multimedia data Transmission using cryptographic techniques. Over the last few years several encryption

algorithms have been applied to secure video transmission. Comparison between Symmetric and Asymmetric methods and representative video algorithms were presented. After comparison it was found out that The International Data Encryption Algorithm, a Symmetric Block Cipher gives better result than the previously used algorithms. The IDEA Algorithm makes secure video encryption feasible for real-time applications without any extra dedicated hard-ware.

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Reconstruction of Shredded Document Using Image Mosaicking Technique

Group Members:

Bhavisha Patel

(PG in Computer Engineering-Sem4)

Faculty Guide: Prof. Jay Amin

Evaluated by: Mr. Sarthak Dudhara

Abstract: Documents are shredded for a variety of reasons, but the basic reason is to destroy the information on the document and documents get worse due to insects, moisture, temperature, humidity, constant handling, and obliteration and shredding. Mosaicking is one of the techniques of Image processing which is useful for tiling digital images. Document mosaicking is a process that stitches multiple, overlapping snapshot images of a document together in order to produce one large, high resolution composite. The aim of document image mosaicking is to gain the lost information from shredded pieces or torn document.



Reconstruction of torn documents is extremely important to import information which has wide application in forensic sciences, art conservation, corporation, and archaeology. Shredding can be performed by machine or by hand. Manual reconstruction of shredded document is a time consuming job and needs hard work of experienced personnel. Digitization makes the job easier. Automation of reconstruction through image processing algorithms yields effective solution. Automatic mosaic construction has been applied in many fields such as photogrammetric, computer vision, image processing and computer graphics. Document image analysis requires mosaicking when Ripped-up or shredded document is there. Reconstruction of shredded documents remains a significant challenge. So our task is find out the method that can efficiently and quickly reconstruct shredded documents.

Trendsetters



Group Members:

Mishita Shah, Vidhi Raval,

Shruti Vaghasia, Khevna Patel

(B.E. in Computer Engineering-Sem8)

Faculty Guide: Prof. Shruti Rava

Evaluated by: Mr. Mitesh Shethwala

Abstract: This is a smart online clothes buying system which offers choices of clothes according to customer needs. System offers choices according to their previous buy/sell, wish list or searches. Admin i.e. seller is able to manage products using his/her dashboard. The choices of customer

are calculated using artificial intelligence. The system helps seller to earn more money as the customer will feel the shopping as physical one. Moreover, customer can visualize their choices so that they can reduce their efforts for choices.

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H4H- Save Life

Group Members:

Thakkar Mehul

(B.E. in Computer Engineering-Sem6)

Faculty Guide: Prof. Vandana Halani

Evaluated by: Mr. Mitesh Shethwala

Abstract: In Today's Fast & hard life many people die due to road accident or lack of proper treatment. By seeing this one thought comes to mind; what if we are next?? Help for health is an Emergency Service & Online Medical Document Storage System.

This system provides a unique number to every user while registering themselves. Users will provide their personal, medical report, medical profile and in emergency doctor can view all the documents of patient and diagnose him faster. This system can save life of many, which is worth of million rupees. The system is very user friendly because every operation is easy to understand and perform. There's also a live chat option by which user can interact with experts for any help. The website is responsive; if any user doesn't have application so they can easily work in website by their mobile or tablet.



Showcasa



Group Members:

Harsh Pandya, Kushal Dave,

Bhaumik Patel, Patel Tirth

(B.E. in Computer Engineering-Sem8)

Faculty Guide: Prof. Ajay Upadhyaya

Evaluated by: Mr. Mitesh Shethwala

Abstract: Movie Ticket Booking and Analysis System is made to obviate the hazards caused in the online transaction while paying for movie tickets, and also enable the user to book the tickets offline (through SMS). The system will give user a facility to book the movie ticket online or offline with

the Showcasa wallet and enjoy a cashless visit to the multiplexe. Also the frequent movie watcher will be encouraged with the exciting wallet cashback offers. Showcasa will have its own money wallet from which the bookings can be done, also having movie reviews, trailers and some extra features like: user can book the beverages and food while buying the ticket to which the discount (Showcasa wallet cashback) will be given. Also the movie reviews from friends of various social media accounts like google+, twitter and Facebook will be fetched and shown first.

The tweets, Facebook post with the particular Hashtags (#) regarding the movie which is followed or for which once the ticket has been booked will be shown in a particular section. The payments can be done through Credit /Debit cards and Net-banking as well.

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Enhanced Data Speeding

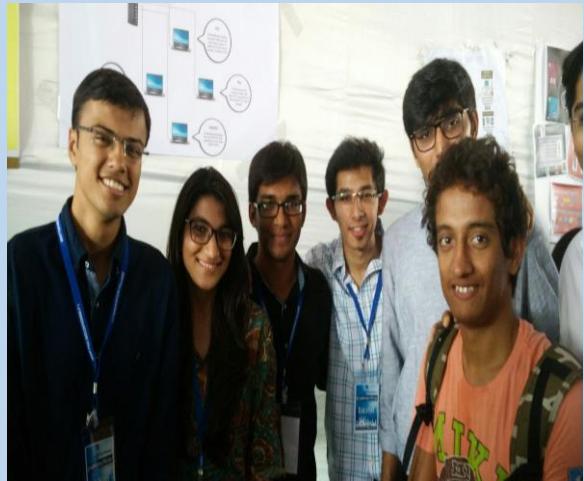
Group Members:

Meghal Shah, Anuj Thula,
Shah Miti, Mehta Devanshu
(B.E. in Computer Engineering-Sem8)

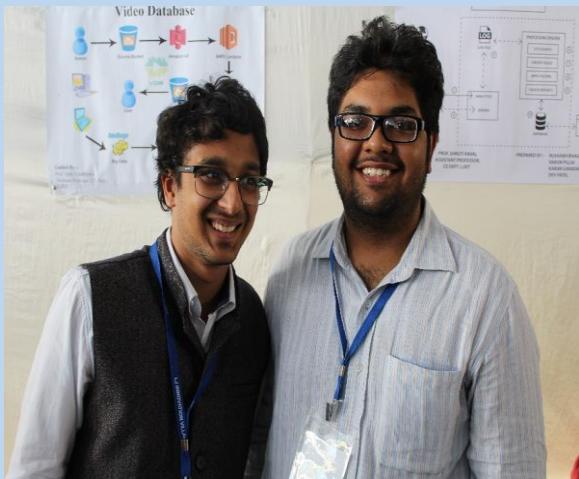
Faculty Guide: Prof. Ajay Upadhyaya

Evaluated by: Mr. Mitesh Shethwala

Abstract: Capturing data from two hardware namely PLC and VME bus; simultaneously transferring the data into the Admin PC. Checking the speed at which this data has been transferred. Till now, this data has been transferred at 10Hz per second. Goal is to design a software that transfers the data at minimum speed of 10 kHz per second and achieving the maximum possible output up to 50 kHz per second.



Video Database (VDb)



Group Members:

Lay Shah, Bhumit Sheth,
Jay Bhimani, Parth Contractor
(B.E. in Computer Engineering-Sem8)

Faculty Guide: Prof. Ajay Upadhyaya

Evaluated by: Mr. Mitesh Shethwala

Abstract: The media (High resolution) uploaded into cloud input bucket will be converted to a number of different links, each link will have a format of the video. Each link will be again converted into different resolutions. The user can access the uploaded data through their application or website. The website or application will fetch the user bandwidth information and figure out the format and the resolution most appropriate for them and feed it back cloud to bucket from where application or website will fetch it and stream it for user to enjoy.

website. The website or application will fetch the user bandwidth information and figure out the format and the resolution most appropriate for them and feed it back cloud to bucket from where application or website will fetch it and stream it for user to enjoy.

Users can enjoy various functionalities of this project like, liking the video, commenting and rating the video, and also a feature where user can view a video offline. Also some basic features like playing, pausing and fast-forwarding the video will be available to user. User will create an account in the application or the website which can be linked to the various platforms like Facebook & Google. Also users will get trending recommendations based on data mining. The users will also be provided with personalized recommendations based on their previous actions or visits to a particular video or series. Description of each video will be provided in the page. Users can share the videos on various social media websites like Facebook, twitter, Google plus etc.

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Learn Gujarati Easily - iOS

Group Members:

Thakkar Mehul

(B.E. in Computer Engineering-Sem6)

Faculty Guide: Prof. Vandana Halani

Evaluated by: Mr. Mitesh Shethwala

Abstract: The project title is Learn Gujarati. People can know about Gujarati language which is very useful for them. People can easily talk in Gujarati after referring this application. There's no need to refer any books so it saves time, money, effort and gives satisfaction to the people. There are many application in market like Learn English, Learn Spanish, Learn French but not Learn Gujarati. There are many people who want to Learn Gujarati but there is no application available which can teach Gujarati from beginner level, and this application provides exactly that.

The purpose of the application is that people don't need to refer any Book or Tutor, no need to pay money for it. The application is available in iTunes Store to get the knowledge of Gujarati Language which is very useful for people. The scope of the application is mostly required by Non Gujarati's and Tourist people. It can be useful in K.G. Schools.



Check Dam with Plastic Bottle Waste



Group Members:

Dahisaria Suryanshu K

(B.E. in Civil Engineering-Sem6)

Faculty Guide: Prof. Shaikh Zuned

Evaluated by: Mr. Jay Patel

Abstract: A Check dam serves one or more of three functions, they can control water, conserve soil, and stores water on temporary basis. Although these tasks may appear at first glance to be relatively straight forward, but there are actually a number of fascinating subtleties and that makes them quite complex. Be they be located in channel bottoms or on gentle hill slopes, check dams regardless of the materials which they are made, impede or literally "check" the flow of water. Obstacles placed across the direction of flow dissipate the energy of flowing water and once slowed, flowing water is easily managed or controlled than rapidly flowing water.

Now, what we have tried to innovate here is put in plastic bottles in order to reduce the amount of concrete used in check dams. How exactly this helps the project on reality prospects are, there is "24.46% of reduction" in the use of concrete. And plastic bottles having longer life span and again easily available around the world are very subtle to find, the interesting part in this is, these bottles are then filled in with soil in order to increase its compressive strength.

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Development of Composite Brick for Enhancement of Desired Properties

Group Members:

Rajkumar Atulkumar Chhatbar
(B.E. in Civil Engineering-Sem6)

Faculty Guide: Prof. Parth Sinroza

Evaluated by: Mr. Jay Patel

Abstract: In the method of development of composite bricks for enhancement of desired properties, efforts to develop new composite material(s) for bricks shall be made. More than 20% bricks are damaged during transportation. Moreover, conventional bricks have limited strength.



The main objective is to recycle wastage material(s) since a —sustainable construction material— is considered to be a viable solution, not only for pollution but also an economical option for design of construction. In view of utilization of industrial and agricultural waste material for developing sustainable construction material, various waste materials in different compositions can be added to the raw material at different levels to develop waste-create bricks. This research is useful to design and develop the sustainable building construction material. It also helps in developing a property-composition relationship.

Sustainable Slab



Group Members:

Darshan Panchal
(B.E. in Civil Engineering-Sem8)

Faculty Guide: Prof. Parth Sinroza

Evaluated by: Mr. Jay Patel

Abstract: The Sustainable slab (SS) is a floor (roof) system and it is a revolutionary method of virtually eliminating the concrete from the middle of conventional slab. This concrete does not perform any structural function there by reducing structural dead weight by spherical ball and steel directly. SS uses hollow spherical ball made by recycled plastic. SS has two dimensional arrangements of voids within the slab to reduce self-weight.

This method, reduces material consumption and enables faster construction. The SS allows longer span between supports. Concrete dead weight decrease by 30 - 35 % of total slab weight which reduces CO₂ emissions and energy. This is also beneficial for cost and construction. This method is best for the earthquake resistance building. This new prefabricated construction technology is applied in many industrial projects across the world.

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Parking Solution of LJ Campus

Group Members:

Vismay Shah

(B.E. in Civil Engineering-Sem8)

Faculty Guide: Prof. Mayank Bhatt

Evaluated by: Mr. Jay Patel

Abstract: Project is on floating city. We got this idea from the current situation of the land crisis and population explosion. We are planning to develop whole city in the sea which is energy efficient and eco-friendly. We have also planned to use advance construction materials to decrease the cost and increase the life span of the city and resistance from the natural factors. We have planned to develop healthy life style by providing proper town planning, solar energy, wind energy. The city has everything from farm to industries and bus to plane service for development.



Effect of Cable Arrangement for CSB



Group Members:

Dahisaria Suryanshu K

(B.E. in Civil Engineering-Sem6)

Faculty Guide: Prof. Farhan Vahora

Evaluated by: Mr. Jay Patel

Abstract: Cable stayed bridges have good stability, optimum use of structural materials, aesthetic features, relatively low design and maintenance costs and efficient structural characteristics. Therefore, this type of bridges are becoming more and more popular and are usually preferred for long span crossings compared to suspension bridges.

A cable stayed bridge consist of one or more towers with cables supporting the bridge deck. In terms of cable arrangements, the most common type of cable stayed bridges are fan, harp & semi fan bridges. Because of their large size and nonlinear structural behavior, the analysis of these types of bridges is more complicated than conventional bridges. In these bridges, the cables are main source of nonlinearity.

Obtaining the optimum distribution of post-tensioning cable forces is an important task and plays a major role in optimizing the design of cable stayed bridges. An optimum design of a cable stayed bridge with minimum cost while achieving strength and serviceability requirements is a challenging task. In the present study, nonlinear static analysis of cable stayed bridge will be carried out for different span lengths & cable arrangements. Linear static & nonlinear static analysis will be done using this software SAP2000. Results of cable tension, deck deflection, base shear is compared for the study of behavior of cable stayed bridge.

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Piston Free Engine

Group Members:

Mansuri Mohd. Kaif

(B.E. in Mechanical Engineering-Sem6)

Faculty Guide: Prof. Pavan Bhavsar

Evaluated by: Mr. Pinal Shah

Abstract: The main concept of piston free engine is to remove the load of crankshaft from the piston due to which unbalancing movement reduces. Combustion of fuel on one side is responsible for maximum compression of fuel on other side, due to which mean and maximum pressure of cycle increases eventually efficiency increases. Due to the high exhaust pressure small size engine can run large size turbine. This can be used in automobile by using the linear generator.



4-Stroke Hydrogen-Petrol Engine



Exhaust Pollution Has Considerable Contribution In Today's Overall Pollution Levels.

Group Members:

Sanket H Aalagiya

(B.E. in Mechanical Engineering –Sem8)

Faculty Guide: Prof. Suresh Tank

Evaluated by: Mr. Pinal Shah

Abstract: Energy Sector Is Presently Facing Two Major Problems-Future Energy Crisis And Environmental Degradation. To Combat the Above Mentioned Difficulties, use Of Hydrogen as an energy carrier may be a strategic plan in near future. Hydrogen Gas Has Been considered as the Best alternative To Gasoline In Case Of Si Engine. Automobile

The Best Suitable Alternative Fuels Such As Hydrogen Reduces Critical Pollution Levels. Hydrogen Combustion Produces Very Clean Exhaust Due To Its Desirable Characteristics. When Hydrogen Works On Various Si Engines At Various Parametric Levels It Reduces Pollution Levels Drastically Compared To That Of Si Engine Which Runs Purely On Petrol. Hydrogen Burning Lowers The Hc, Co, Co₂ And Nox Levels. It's Possible To Control Hydrogen Supply Precisely. The Work Made on Performance and Emissions Behavior of Hydrogen Fuelled Si Engine and it's Safe for Use.

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Innovative Tricycle

Group Members:

Apurva, Jaimin, Sulay, Ajay
(B.E. in Mechanical Engineering-Sem6)

Faculty Guide: Prof. Rahul Thakkar

Evaluated by: Mr. Pinal Shah

Abstract: A basic objective of this invention of 'INNOVATIVE TRICYCLE' is to provide a more stable and efficient arm propelled and arm steerable tricycle that can be safely be used by any person. Our aim is to make tricycle in which the steering as well as the accelerating function is done with the help of only one handlebar (steering rod). So that the person can accelerate the tricycle as well as he can give the proper direction with the help of only one hand. Our aim is to make a tricycle that can be driven in a forward as well as reverse direction.



In normal handicapped cycle the chain mechanism is used for accelerating purpose. But we don't use that mechanism, we accelerate the Tricycle by use of steering rod with help of lever (connecting road) and pedal. Pedal is mounted on the rear axle. Chain is not used so no problems exist, related to chain.

Semi-Autonomous Tank

Group Members:

Pathan Rameezkhan
(B.E. in Mechanical Engineering –Sem4)

Faculty Guide: Prof. Deep Patel

Evaluated by: Mr. Paras Solanki



Abstract: National Security is one of the prime aspects of any country. Massive amount of youth throng to serve the nation risking their lives for the security of their fellow beings. As Engineers, and as citizens of India, we can assist these soldiers, by helping them through the technology that we possess. In accordance with this, day in day out new technologies are booming to upgrade the army and thus its cadre at large.

Semi-Autonomous Tank is one such equipment which can robotically select the target, by sensing it through the coding done through MATLAB or a suitable sibling software and thereby eliminating the target. The shooting device (gun) is attached to the tank and the code transcribed by humans intelligently captures the image and thereby fires at the target.

This project if implemented can save a lot of lives at the Line of Control and thereby not only assist the defense sector but also improve the nation's security at large, thus turning India into a super power.

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Electromagnetic Fan

Group Members:

Yash Shah

(B.E. in Mechanical Engineering-Sem4)

Faculty Guide: Prof. Amit Patel

Evaluated by: Mr. Paras Solanki

Abstract: Energy, Power are few terms that are the need of the hour. Engineers are trying to find ways and means to transform energy from every source possible, especially the non-conventional sources. As the natural sources are depleting, these very energy sources i.e. Tidal, Wind, Solar and many more are the hope for the future generations.



The main aim of this work is to produce power with the help of magnets are their basic laws. A fan is mounted which consist of a magnet, which in turn rotates another magnet of the opposite pole and thus turns on the fan (exhaust fan in the kitchen). This fan can in turn be connected to a motor which can produce sufficient power to illuminate the lights of the kitchen at night. In, nutshell, using the concepts of magnetic energy and their basic laws, one can generate power by transforming energy and thus produce current for small scale applications.

A Modified Solar Bicycle

Abstract: We have enhanced solar bicycle with solar power from the solar panels to motors which drive the wheel. For the initial speed of 0 to X speed, motors will be powered by battery. Once the required torque is overcome by motor, they will run on direct supply from solar panel.

Group Members:

Yash, Ovais, Hitesh, Akshay

(B.E. in Mechanical Engineering-Sem8)

Faculty Guide: Prof. Vaibhav Shah

Evaluated by: Mr. Pinal Shah



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Hovercraft

Group Members:

Soham Kishor Kotak

(B.E. in Mechanical Engineering-Sem4)

Faculty Guide: Prof. Sagar Choksi

Evaluated by: Mr. Paras Solanki

Abstract: A hovercraft, also known as an air-cushion vehicle or ACV, is a craft capable of travelling over land, water, mud or ice and other surfaces. Hovercraft are hybrid vessels operated by a pilot as an aircraft rather than a captain as a marine vessel.



Touch Screen Switchboard

Abstract: A novel concept of touch screen electricity board for smooth operation of domestic appliances with speed control for FAN & intensity control for illumination

Group Members:

Harsh Patel, Rahul Agarwal, Suchi Modi
(B.E. in EC Engineering-Sem4)

Faculty Guide: Prof. Mosam Pandya

Evaluated by: Mr. Ankit Patel



Innovation Village-2016

Auditorium Automation System

Group Members:

Zishan Hakim

(B.E. in EC Engineering-Sem8)

Faculty Guide: Prof. Sneh Soni

Evaluated by: Mr. Ankit Patel



Abstract: The main aim of this project is to make smart auditorium. Generally auditoriums are big halls which require more man power to organize or to handle any event. The co-ordination between people is also required to handle any event. The man power is required for security purpose in parking, to guide people for their seats, to handle light and other electrical equipment from back stage. This also increase the cost and maintenance of the auditorium as the man power increase. This project will give parking solution, seating arrangement solution, save electricity, reduces man power, low maintenance, more comfortable and convenient to organize any event.

Wireless Switching System



Group Members:

Premal Bhadesia, Pratik Zaveri

(B.E. in EC Engineering-Sem4)

Faculty Guide: Prof. Mosam Pandya

Evaluated by: Mr. Ankit Patel

Abstract: Remote operation of locks with security measures for domestic & industrial application in user friendly way.

Innovation Village-2016

Blue Chat and Snap Doodle

Group Members:

Param Dave

(B.E. in Information Technology-Sem6)

Faculty Guide: Prof. Bhautik Trivedi

Evaluated by: Mr. Apurva Doshi

Abstract (Blue Chat): Chatting Application without internet. As the name suggests, it includes Bluetooth Transfer of Data. Using this application, connecting end will act as server and other as client. Both modules are implemented on same UI.



Abstract (Snap Doodle): This project relates with the well-known application in the market called "SNAPCHAT". I haven't reached till that extent but tried to start with the self-developed framework in which we can take a snap, make a doodle with 3 primary colors (more color variants will be possible soon).

Ongoing Version:

Working on sharing where you would be able to share the snaps.

Working on more color variants.

Working on modifying the doodle once created.

Automated Consultancy System



Group Members:

Khilaumi Patel

(B.E. in Information Technology-Sem8)

Faculty Guide: Prof. Pankaj Kamani

Evaluated by: Mr. Apurva Doshi

Abstract: Automated consultancy system is the application designed to keep track of end-to-end recruitment process. To track the daily work of the employees working in management consultancy.

The application will track the details of all the candidates that are being called for job openings in various companies by management consultant every day. Also it maintains the joining details of candidates as well as concern companies. It also gives the report of work done by every employee within the management consultant. Makes employee's job faster with no data loss.

Innovation Village-2016

Virtual Mouse

Group Members:

Vrushabh Kaushik, Brijesh Yadav
(B.E. in Information Technology-Sem8)

Faculty Guide: Prof. Saurin Dave

Evaluated by: Mr. Apurva Doshi

Abstract: Virtual mouse is a program that enables you to control the mouse pointer on your computer screen just by moving your head or any other markers with the help of Webcam.



Online Transcript Issuance System

Abstract: Online Transcript Issuance System is visited by Student, Institute/College and Admin .The system will issue the transcript to student on his/her request after verification by the institute. The verified transcript can be collected by the student from Institute or it can be dispatched by post.

Group Members:

Het Kansara, Kirtan D. Gajjar, Jay R
(MCA-Sem6)

Faculty Guide:
Prof. Dipti Chudgar, Prof. Alok Manke,
Prof. Sonal Patel

Evaluated by: Mr. Jayesh Mehta



Innovation Village-2016

Bell Reminder

Group Members:

Chokshi Aakash, Neve Mayur, Divyank
Munjapara, Mehta Ruchi, Bindya Bhanderi,
Bhumi Bhanderi
(MCA-Sem3)

Faculty Guide: Prof. Dipti Chudgar

Evaluated by: Mr. Jayesh Mehta

Abstract: This system is used in regular academic sessions and during any kind of examination. The schedule of ringing bell is configured by the admin and then this system will facilitate the ringing of bell according to the schedule.



Silent Happiness

Abstract: Our System focuses on helping the poor and needy people. This help will be provided by collecting donations from people and then buying the things which are a part of necessities to the organizations we will visit. The system also provides a map facility to reach to the destination where the event has to be carried out. The users will be able to pay online and see the details of the event carried out every month.

Group Members:

Het Kansara, Kirtan D. Gajjar, Jay R
(MCA-Sem6)

Faculty Guide: Meetu Joshi

Evaluated by: Mr. Jayesh Mehta



Innovation Village-2016

Joy of Giving

Group Members:

Vadher Amit Mansukhbhai
(MCA-Sem6)

Faculty Guide: Prof. Alok Manke

Evaluated by: Mr. Jayesh Mehta

Abstract: This site is actually for charity. The main scope of "LJ the Joy of Giving" is to give and get. Which means, if you have some unused item which might be useful for other person then you can upload its photo on this site. Afterwards, you will get request for that particular item. You can contact the requester in your convenient time and if you realize that person is actually needy then you give that item and after you have given that item you will delete that item on your account in this site.



Online Software Order Management System

Abstract: This site provides services like web application development, mobile applications, window based application and provide support of project. It has all the major components which make ordering a software easy. Also provides software tracking, registration of customer and project allocation.

Group Members:

Mehul Rakholiya, Hardik Bosheera
(MCA-Sem6)

Faculty Guide: Alok Manke

Evaluated by: Mr. Jayesh Mehta



Innovation Village-2016

Pharmaplus

Group Members:

**Sampann Tannk, Ripal Suthar, Ashish Patel
(M.Pharm Sem-II)**

Faculty Guide: Dr. Shreeraj Shah

Evaluated by: Mr. Ketan Patel

Abstract: PHARMAPLUS APP is an Innovative Platform for Pharma Aspirants. It currently hosts free GPAT/NIPER and other Pharma Exam MCQ papers & NOTES compiled by all India Rankers. We aim to add more features in the coming days. We Aim to connect the Entire Pharma Community through our App medium. Currently we have more than 2000 downloads and 187 Ratings. Rated as the Top PHARMA Learning APP on the GOOGLE PLAY STORE. The App has some amazing features you can check it out at <https://play.google.com/store/apps/details?id=com.gpatpharmacplus>



Electronic - Nose: A New Artificial Olfactory Sensor

Group Members:

**Gandhi Noopur K., Gheewala Jinal A., Patel
Hetal N., Jain Sandhya S., Patel Vishva S.
(M.Pharm Sem-II)**

Faculty Guide: Prof. Paresh Patel

Evaluated by: Mr. Ketan Patel



Abstract: Electronic-nose devices have received considerable attention in the field of sensor technology during the past twenty years, largely due to the discovery of numerous applications derived from research in diverse fields of applied sciences. Recent applications of electronic nose technologies have come through advances in sensor design, material improvements, software innovations and progress in micro circuitry design and systems integration. The stages of the recognition processing electronic nose are similar to human olfactory and are performed for identification, comparison, quantification and other applications.

Electronic noses have provided a plethora of benefits to a variety of commercial industries, including the agricultural, Bio-medical, cosmetics, environmental, food, manufacturing, military, pharmaceutical, regulatory, and various scientific research fields. Advances have improved product attributes, uniformity, and consistency along with increases in quality control capabilities afforded by electronic-nose monitoring of all ISSN 2229 -5054 International Journal of Drug Formulation & Research. The main motivation for electronic noses is the development of qualitative, low-cost, real-time, and portable methods to perform reliable, objective, and reproducible measures of volatile compounds and odors. Electronic noses are comprised of (i) chemical sensors that are used to measure smell or flavor, (ii) electronic system controls, and (iii) information processing systems for smell or flavor identification.

Innovation Village-2016

Drug Delivery through e - cigarette

Group Members:

Jignasha Panchal, Pragati Vanavi, Shrutay Mehta, Setu Patel, Siddhi Shah
(M.Pharm Sem-II)

Faculty Guide: Dr. Shreeraj Shah

Evaluated by: Mr. Ketan Patel

Abstract: This project focuses on the inhalation of various drug through a single device. The drug directly shows effect on the lungs and the disease can be cured rapidly. E-cigarettes are used for this purpose. By using e-cigarettes, minimum dose is required as a result, maximum therapeutic effect can be obtained. E-cigarette is portable, easy to use and fulfills the need of patient compliance.



Ventilator



Group Members:

Apal Dave, Juhi Sharma, Pinki Rajput, Komal Patel
(B.Pharm-Sem8)

Faculty Guide: Dr. Aashish Panchal

Evaluated by: Mr. Ketan Patel

Abstract: This is a prototype which is mainly used as the ventilation unit for the rat and mice and but is very much cost effective and different than the original one and it is very much use full for the people experimenting on the rat and mice.

Modified Rapid Mixture Granulator

Group Members:

Nowman Malik, Pooja Shah, Pratish Mallya
(B.Pharm-Sem8)

Faculty Guide: Prof. Shital Trivedi

Evaluated by: Mr. Ketan Patel

Abstract: In pharmaceutical industries there are basically three different operation carried out in three different machines: Granulation done in RMG (Rapid Mixture Granulator), Drying done in FBD (Fluidized bed Dryer), and sieving done with help of sieves. Our Modified RMG consists all the three functions in one.



Innovation Village-2016

Handicap Support Device

Group Members:

Mudaliar Sumanth, Bhatt Vishrut,
Dave Kaushal, Joshi Ashay
(Diploma in Mechanical Engineering Sem-6)

Faculty Guide: Prof. Harshul Brahmbhatt

Evaluated by: Mr. Sheelesh Vaishnav

Abstract: This is a vehicle designed for a handicap person with disability in legs, this handicapped vehicle can be propelled by wiggling the front steering wheel which is attached to two pivoting wheels touching the ground.

It harnesses the natural forces of inertia, centrifugal force, gravity, and friction in order to drive the car forward and backward. It does not require a power source such as batteries, fuel, pedals, or gears - it simply runs on the Person's ability to wiggle the steering wheel. It can be operated indoors and/or outdoors, though it works best on a smooth, flat surface.



The aerodynamic shape of it gives better speed. It's comfortable for handicap person to sit on it because it has less ground clearance distance. Children can also ride on it for fun and sitting is made of plywood for good sitting surface. This device is also comparatively cheaper and durable than other handicap vehicles and wheel chair.

Human Weight Auto Flush System

Group Members:

Pandya Kunj, Patel Harshil, Patel Harshit,
Parmar Jayraj, Parikh Aakash
(Diploma in Mechanical Engineering Sem-6)

Faculty Guide: Prof. Parth Suryavanshi

Evaluated by: Mr. Sheelesh Vaishnav



Abstract: Our project is based on embedded system, "HUMAN WEIGHT AUTO FLUSH SYSTEM". It gives automatic flow of water without use of any electric system and sensors. The concept is specially developed to make the public toilets more hygienic. Apart from hygiene, reducing the loss of electricity and water are the main objectives. It is tough task to maintain public toilets as it is used by a lots people in a day. Many times it is seen that after using a urinal people forget to flush. This destroys the hygienic atmosphere of the toilet which is not a good sign for the health of an individual.

The main purpose of the project is to improve the toilet systems. It is also eco-friendly as it doesn't use any power source. This can be considered as big advantages of this system. Its maintenance is less as it uses a simple mechanism. It uses lever and spring mechanism.

Innovation Village-2016

DIY Wheel Chair

Group Members:

Mudaliar Sumanth, Bhatt Vishrut,
Dave Kaushal, Joshi Ashay, Nayee Dhaval
(Diploma in Mechanical Engineering Sem-6)

Faculty Guide: Prof. Harshul Brahmbhatt

Evaluated by: Mr. Sheelesh Vaishnav

Abstract: As the name of the project (DIY Wheelchair) suggests this wheelchair is self-constructible. There are different types of wheelchair available in the market but this wheelchair is very different from those based on design as well as application. It has basically two main applications. As we know the handicap people are always neglected in terms of sports and other physical activities but this wheelchair provides them an opportunity to eliminate this difficulty and take part in daily activities.

Apart from this it is completely detachable and easily portable, so it can be carried easily anywhere. It is also very light in weight due to the use of MDF (Medium Density Fiber) material in its frame and other body work. Other parts are like supporting frame is made of aluminum which reduces the entire weight of the device. In this type of wheel chair both the wheels of the wheelchair are inclined at a certain angle which is customizable; this inclination of the wheel provides it high speed and easy and swift moves so that it can be used for sports purpose. Our basic motto to manufacture this kind of wheel chair is to teach each handicap person to make his own wheel chair for himself by providing them the complete steps and dimensions to manufacture it.

Handmade Interior Lamps



Group Members:

Mahitar Mohammed Ali Aslam, Shaikh Mo Ubead M, Siddiqui Rahil, Devmurari Parth, Kavaiya Yash, Pathan Mohibkhan
(Diploma in Architecture Assistantship Sem-4)

Faculty Guide: Prof. Stuti Parikh

Evaluated by: Mr. Tushar Bose



Abstract: We are going to make different types of handmade lamps using different techniques for interior decoration.

As we have seen that such elements are normally implemented by richer group of the society but we are making our lamps using waste and cheaper materials so that even the other society people can afford it easily and upgrade their lifestyle. Even though they are made up of waste materials the final look will be royal and will create better living environment.

Innovation Village-2016

FM Transmitter

Group Members:

Soni Riya, Darji Mansi, Dave Purva,
Patel Raimeen, Shah Rajvi
(Diploma in Architecture Assistantship Sem-4)

Faculty Guide: Prof. Ramesh Kumar

Evaluated by: Mr. Tushar Bose

Abstract: This is the most important single transistor FM wireless transmitter circuit. In telecommunication field, with the help of this circuit we can make FM radio station at any place. Frequency modulation (FM) transmits information by changing the frequency of a carrier wave according to message signal. FM uses VHF radio frequencies usually 87.5 – 108.0 MHz to transmit and receive the FM signals. The performance and working of a wireless audio transmitter circuit mainly depends on inductor coil specification and the value of variable capacitor.



Best Out Of Waste

Abstract: Creativity is the mirror of our soul.

Best out of waste is a thing from which one can make different things from waste materials. There are many materials used in this process. Students are going to create a twisted tower kept on the cross road. Cardboards, newspapers, cans etc. will be used as material for this model.

Group Members:

Patel Nidhi Jatinbhai, Shaikh Faiz Hussaini,
Gajjar Rajal Harshadbhai,
Pujara Ritu Swetalbhai
(Diploma in Architecture Assistantship Sem-2)

Faculty Guide: Prof. Nikita Arora

Evaluated by: Mr. Tushar Bose



Innovation Village-2016

Light Weight Concrete Block

Group Members:

Prajapati Avinash, Parikh Deep,
Patel Vishakh, Satapara Rignesh
(Diploma in Civil Engineering Sem-4)

Faculty Guide: Prof. Pavitra Bhatt

Evaluated by: Mr. Tushar Bose

Abstract: This type of aggregate contains light weight, strong and thermally insulating material. This type of aggregates are different from the normal aggregates as it is light in weight and having less density. We can compare the light weight aggregate to the normal aggregate by making the concrete block of it. This material is having high chemical resistance against acidic and alkaline. The concrete block is light in weight and has good advantages as compared to the normal concrete.



Ready Mix Concrete Plant

Group Members:

Bhatt Dhruv, Bhavsar Parth, Dave Dhruv,
Patel Pranav, Thakar Raghav
(Diploma in Civil Engineering Sem-6)

Faculty Guide: Prof. Akash Agrawal

Evaluated by: Mr. Tushar Bose

Abstract: In this project symbols from manufacturing are introduced to map resource flows in order to help distinguish traditional- from lean production processes.



These symbols are then applied to construction. Ready-mix concrete provides a prototypical example of a just-in-time construction process. Ready-mix concrete is a perishable commodity, batched to specifications upon customer demand. This makes just-in-time delivery necessary. The most common one is where the batch plant also delivers the mix to the contractor's project site. An alternative is for the contractor to haul the mix from the batch plant to the project site with their own revolving-drum trucks.

One alternative is favored over the other depending on the amount of control the contractor wants in terms of on-time site delivery of concrete and the variability in the contractor's demand for concrete project after project.

Innovation Village-2016

Pavement Design & Drainage System

Group Members:

Thakkar Gunjan, Varsani Dixit,
Supeda Pavan, Vagadiya Rajesh, Vara
Brijesh, Soni Sagar, Shah Shreykumar
(Diploma in Civil Engineering Sem-6)

Faculty Guide: Prof. Akash Agrawal

Evaluated by: Mr. Tushar Bose

Abstract: The road pavement is the actual surface on which the vehicle will travel. Its main purpose to provide friction for the vehicle and transfer normal stress to the underlying soil. Nowadays paver blocks are mostly preferred for designing of pavement.



Presently paver block is used in outdoor versatility application and also it is used in street road and other construction places. Paver block has low maintenance cost and easily replaces with a newer one at the time of breakage. Our project is concerned with designing a proper pavement in L.J campus.

After observation of pavement design, we concluded that there are many potholes due to rain water logging & heavy loads of trucks etc. on pavement because of drainage system & improper sub-base layer design. So we are trying to give the best possible result for the design of pavement & drainage system.

Home Automation



Group Members:

Chopada Kartik, Dubey Avinash,
Patel Digant
(Diploma in EC Engineering Sem-4)

Faculty Guide: Prof. Ashok Shah

Evaluated by: Mr. J. P. Joshi

Abstract: Home automation is the residential extension of building automation. It is automation of the home, housework or household activity. Home automation may include centralized control of lighting, HVAC (heating, ventilation and air conditioning), appliances, security locks of gates and doors and other systems, to provide improved convenience, comfort, energy efficiency and security. Home automation for the elderly and disabled can provide increased quality of life for persons who might otherwise require caregivers or institutional care.

The popularity of home automation has been increasing greatly in recent years due to much higher affordability and simplicity through smartphone and tablet connectivity. The concept of the "Internet of Things" has tied in closely with the popularization of home automation.

Innovation Village-2016

LED Bulb Street Light

Group Members:

Prakash Jha, Yogesh Macchar
(Diploma in EC Engineering Sem-4)

Faculty Guide: Prof. Ashok Shah

Evaluated by: Mr. J. P. Joshi

Abstract: An LED lamp is a light-emitting diode (LED) product that is assembled into a lamp (or light bulb) for use in lighting fixtures. LED lamps have a lifespan and electrical efficiency that is several times better than incandescent lamps, and significantly better than most fluorescent lamps, with some chips able to emit more than 100 lumens per watt. The LED lamp market is projected to grow by more than twelve-fold over the next decade.



Propeller Message Display

Group Members:

Nand Kishor, Sinha Pavan, Desai Meet
(Diploma in EC Engineering Sem-6)

Faculty Guide: Prof. Nirav Rajan

Evaluated by: Mr. J. P. Joshi



Abstract: This project comprises of circular display of a string of LEDs. Using a high speed motor and some mechanical assembly, LED string mounted on a printed circuit board are duly interfaced to a microcontroller.

An appropriate program while executed drives a pair of single line LEDs in space multiplexing mode. This displays some message and or a clock timing taking advantage of persistence of vision of human eye.

Without the single line of LEDs in space multiplexing mode if one would have to display a message, number of LEDs as high as 525 would have been used. Here the project uses only 20 LEDs. Thus material count, hardware requirement, brings the overall cost to very affordable price. The synchronization is to be implemented through software.

Innovation Village-2016

Automated Dynamo Operated Fuel Efficient Car

Group Members:

Panchal Sahil, Trivedi Dhruv,
Kadiya Nikhil, Sukhadia Akash,

Gobariya Harsh

(Diploma in Electrical Engineering Sem-2)

Faculty Guide: Prof. Japen Gor

Evaluated by: Mr. J. P. Joshi

Abstract: This project aims to develop a car which is self-powered once kept in motion. The car is equipped with couple of dynamos at their front and rear wheels and once the car is in motion those dynamos would be connected to produce power to drive car further. Hence this will reduce the fuel requirements for the car and can be developed as an environment friendly option. This car would only consume fuel to give it a head start and not for complete operation of it.



Solar PV MW Scale Power Plant Demonstration



Group Members:

Baloliya Mahamad, Chauhan Ashadulla,
Mansuri Avez, Shaikh Mohammed Kasim
(Diploma in Electrical Engineering Sem-4)

Faculty Guide: Prof. Sohel Patel

Evaluated by: Mr. J. P. Joshi

Abstract: Nowadays Solar PV technology is gaining momentum.

India has massive 40-60GigaWatt Plant until 2022 out of which 5GigaWatt is installed till now. The project revolves around demonstrating mini MW scale plant having inverter and transformer as seen in MW scale PV plants.

The project focuses on connections required for the solar PV panels and between all required to feed the inverter to give alternating current and voltage which is required for the step-up in transformer to give 11-33KV output voltage for grid connection. It also focuses on increasing efficiency of panels by giving proper tilt angles and keeping panel cool.

Innovation Village-2016

Automatic Railway Crossing on Solar Energy

Group Members:

Mahale Dipesh, Modi Bhavin,
Parekh Viren, Patel Rahul
(Diploma in Electrical Engineering Sem-4)

Faculty Guide: Prof. Japen Gor

Evaluated by: Mr. J. P. Joshi

Abstract: The railways meet many accidents daily, especially near railway crossings. People in India are infamous for not following traffic rules. We have come up with the idea that the crossings come up and down automatically depending on the railway traffic. A train is equipped with a sensor and has another counterpart at the crossing which triggers the sensors and closes the crossing on time before the train is about to reach the crossing.



Another set of such sensors are connected at the other end of railway crossing which detects the exit of train by a sensor attached at the end of the train and open the crossing ensuring the train is no longer a threat to people. The best part about this system is that it does not run on conventional energy rather to make it more lucrative we have equipped it with solar energy instruments and hence it will run on solar energy keeping energy crises and environmental damages in mind.

Remote Control Based Aeroplane

Group Members:

Panchal Sahil, Trivedi Dhruv, Kadiya Nikhil,
Sukhadia Akash, Gobariya Harsh
(Diploma in Electrical Engineering Sem-4)

Faculty Guide: Prof. Tushar Patel

Evaluated by: Mr. J. P. Joshi



Abstract: The project is about a small flying machine that is controlled remotely by an operator using a hand-held radio transmitter. The transmitter communicates with a receiver within the craft that sends signals to servomechanisms (servos) which move the control surfaces based on the position of joysticks on the transmitter. The control surfaces, in turn, affect the orientation of the plane. So the project is focuses on working and controlling of aero plane using Remote control.

Innovation Village-2016

Twin Track Bike & Zee Track

Group Members:

Raval Darshan, Upadhyay Param,
Shah Vibhav, Parmar Vishal, Panchal
Himanshu, Patel Deep, Adani Dhruv
(Diploma in Automobile Engineering Sem-6)

Faculty Guide:

Prof. Anant Songade, Prof. Raumil Maniar

Evaluated by: Mr. Abhiraj Jhala

Abstract: Twin Track Bike:

An all-purpose utility vehicle, which can be used on road as well as off road and can be used to transport people as well as goods around a campus having a big area.



Zee Track: To correct the parking positions of the 2 wheeler vehicles without lifting and pulling by man power.

Isolating Steering Mechanism Cycle

Group Members:

Chaudhary Milan, Ramani Harsh, Prajapati Damin, Shilpi Rupesh, Vanjara Naresh, Patel Yash, Prajapati Hardik, Patel Smit, Suthar Mayank, Prajapati Keyur, Patel Rahul, Gondaliya Navdeep
(Diploma in Automobile Engineering Sem-6)

Faculty Guide: Prof. Raumil Maniar

Evaluated by: Mr. Abhiraj Jhala



Abstract: The concept of the cycle is simple. Its works on isolating motion of steering mechanism which is joined with camshaft mechanism. When we isolate the motion the cycle goes ahead. The body of cycle is mounted on pad ester bearing.

Advantages:- easy to use, less effort, simple mechanism, rear wheel drive, cam shaft mechanism

Innovation Village-2016

Blind Person's Stick

Group Members:

Deval Shrimali, Vaibhav Khalasi,
Chetansingh Chauhan, Jay Halari, Kunal
Patel, Chirag Maheria, Maulik Soni
(Diploma in Automobile Engineering Sem-6)

Faculty Guide:

Prof. Raj Joshi, Prof. Hardik Patel

Evaluated by: Mr. Abhiraj Jhala

Abstract: A Blind Person's Stick' is an enhanced version of the conventional stick which a Blind uses, we have attached a proximity sensor to the stick which will beep and vibrate when the stick comes near any unexpected object. It also has GPS with Voice Command for better Navigation.



Steering Mechanism for Handless People

Abstract: Today there are innumerable people in the world that have lost their hands due to accidents. Their life has become very hard in this fast moving world, due to their incapacity of doing work and going anywhere.

This vehicle will be gear less to make it a free drive for the hand less people. The steering system will be controlled by foot.

Group Members:

Bagia Marmik, Patel Aashutosh,
Patel Dev, Patel Jay
(Diploma in Automobile Engineering Sem-6)

Faculty Guide: Prof. Himalay Patel

Evaluated by: Mr. Abhiraj Jhala



Innovation Village-2016

Car's Black Box

Group Members:

Chandresh Shah, Yash Shah,
Shantanu Shukla, Ronak Shyamsukha
(Diploma in Automobile Engineering Sem-6)

Faculty Guide: Prof. Himalay Patel

Evaluated by: Mr. Abhiraj Jhala

Abstract: Whenever two vehicles collide with each other none of the drivers take responsibility of collision and begin blaming each other without realizing their fault. So to find the real culprit in collision or accident this system is very helpful. The name of this system is CAR's BLACK BOX.



In this system we have used four components: they are two cameras and DVR with recorder. By this system the person whose fault was there in accident will be identified easily. In this system the cameras are fitted at front and rear windshield and the recorder with Dvr will be place near to driving seat. So, when the accident occurs the recording of voice through mic and through cameras will help to find the person responsible for accident. Due to this system the car driving will be safer. And accidents will also be reduce by this system.

BRTS

Group Members:

Keshav Pandey, Chauhan Hanumansingh,
Trivedi Priyam
(Diploma in Computer Engineering Sem-4)

Faculty Guide: Prof. Rahul Pancholi

Evaluated by: Mr. Dinesh Kajale



Abstract: The main purpose behind "BRTS CROSSING" is to stop the entrance of unwanted vehicles except BRTS buses. Crossing opens if it identifies and authenticates the permitted parameters of BRTS buses.

In this project we are going to design the BRTS bus and BRTS station in such a manner that when only BRTS bus arrives the crossing will be opened otherwise it will remain close and the height the crossing will be kept in such a way so that the vehicles with lower ground clearance can also be stopped. Another functionality that will be implemented is that if any vehicle tries to do Tail-gating with BRTS bus can also be stopped. After implementation of this smart system the accidents that are caused on BRTS track can be reduced or can be totally eliminated as only BRTS buses will only be allowed to go from the BRTS corridor.

Innovation Village-2016

Skill India

Group Members:

Dave Dimple, Parth Jethwa, Shah Virag
(Diploma in Computer Engineering Sem-6)

Faculty Guide: Prof. Rahul Pancholi

Evaluated by: Mr. Dinesh Kajale

Abstract: Need Any Local Service? Contact Us.

Skill India is a service provided by us to solve out your daily problems or we can say routine problems like finding a plumber, or an electrician or any such people. Our website will provide all such kind of workers and will give an easy access towards to solution of your daily problems and will save your time as there's no need to go out and finding out the concerned person needed.

In current system(manual/existing), there are many problems like finding the concerned person manually, and maybe sometimes the person prove to be unreliable also, and it wastes the time of both the customer and worker. Thus our System will overcome all such problems like it will be easy to find your nearby concerned person easily and quickly, the concerned person will also be reliable as he/she would be authenticated by our system.



Car Pooling



Group Members:

Nirmit Shah, Parshwa Shah, Mohit Vyas
(Diploma in Computer Engineering Sem-4)

Faculty Guide: Prof. Ankit Limkar

Evaluated by: Mr. Dinesh Kajale

Abstract: Every city of the world is facing numerous problems now-a-days and cities in India are not an exception. Air pollution and Traffic jams can be considered as two major ones among them. These problems arise due to migration of large number of people from villages to cities. According to survey 60% of the population of India will be residing in cities till 2030. This will add the fuel into the fire of above mentioned problems.

Online Car-Pooling is the project which unites the poolers who have space in their vehicles to accommodate more people and needy people who are looking for the paid ride. Online Car-Pooling lets the poolers enter their journey details like daily/one-time, source, destination, vehicle details and number of people that can be accommodated. Needy people search the pullers meeting their travel requirements and agree with the puller for the paid ride. Thus, Online Car-Pooling helps to reduce the traffic burden as well as contributes to minimizing the air pollution. This can be a revolutionary system if it can be implemented with the help of government.

Innovation Village-2016

Sahyog

Group Members:

**Dhruvin Maniar, Patel Mitanshu, Aal Paras
(Diploma in Computer Engineering Sem-6)**

Faculty Guide:

**Prof. Rahul Pancholi,
Prof. Manali Kavade**

Evaluated by: Mr. Dinesh Kajale

Abstract: “Sahyog” is a web based application. The primary concern of our project is to create a pool cum common platform to facilitate both “Contributors” and “Necessitous”.



The basic problem with Contributor is that they are not aware about the worthy target audience of Necessitous. The biggest problem that all Necessitous' are facing now a days is that they don't have any idea regarding the genuine Contributors who are eagerly willing to help them in all dimensions with all accountabilities. SAHYOG will connect All Contributors (like NGOs, CSR Companies, Trusts or an individual) with necessitous (needy people or any entity).With the help of SAHYOG contributors can easily contribute according to their contribution domain and Necessitous will be benefited according to their genuine requirements.

VANET



Group Members:

**Patel Krina, Khatri Hemali,
Patangiya Hala, Aishwarya Rajput
(Diploma in Computer Engineering Sem-4)**

Faculty Guide: Prof. Shyju Raju

Evaluated by: Mr. Dinesh Kajale

Abstract: “VANET is abbreviation of Vehicular Ad Hoc Networks. Ad hoc network is a collection of two or more devices equipped with wireless communications and networking capability, such devices can communicate with another node immediately within their radio range or to the one that is outside their radio range using intermediate node(s). Vehicular Ad hoc Network (VANET) is a new communication paradigm that enables the communication between vehicles on the road network which falls in two categories: 1) Vehicle to Vehicle (V2V) and (2) Vehicle to Infrastructure (V2I). VANET has the potential in improving road safety and providing travelers comfort.

Components of VANET includes On Board Unit (OBU), Road Side Unit (RSU), and Radio Transceivers for message exchange, Global Positioning System (GPS). Applications of VANET includes:

1. Vehicle collision warning.
2. Security distance warning.
3. Driver assistance.
4. Cooperative driving.

Media Coverage of LJ Innovation Village-2016

Innovation Village-2016

LJ Innovation Village has been showcased by leading electronic, print and web media.



Innovation Village-2016

Smt. Anandiben Patel also Tweeted about LJ Innovation Village-2016.

CHANGE WITH VARIATIONS

The Innovation Village at LJ Campus has a display of a mindboggling 400 innovations created by students of the college. Ranging from water-fuelled vehicles to auto flushing urinals, Niya Rana profiles a select few innovations

PRODUCT: URINAL WITH AUTO FLUSH SYSTEM
PROJECT TEAM: JAYRAJ PARMAR, KASSI PAREKH, ANANDIBEN PATEL
COURSE: DIPLOMA IN MECHANICAL ENGG

PRODUCT: HYDROGEN FUELLED MOTORBIKE
PROJECT TEAM: NIRAV PANCHAL, SANJEEV KHEDEKAR, KUNAL CHAUHAN
COURSE: DIPLOMA IN MECHANICAL ENGG

PRODUCT: WEATHER PROTECTOR FOR 2-WHEELERS
PROJECT TEAM: YASHI PRASADPA, AUM PARMAR, PANDYA AUM
COURSE: DIPLOMA IN AUTOMOBILE ENGG

PRODUCT: CAR FOR PHYSICALLY IMPAIRED
PROJECT TEAM: SHUBHAM PATEL, PARSHOTTAM PATEL, PARSHOTTAM PAREKHA, DIVYANG PRAMAPATI
COURSE: DIPLOMA IN MECHANICAL ENGG

PRODUCT: RIVERSIDE FOUNTAIN BRIDGE
PROJECT TEAM: RAJDEEP KAVYA, KANISHKA PATEL, VIKANT MEHTA
COURSE: DIPLOMA IN CIVIL ENGG

PRODUCT: BRTS SENSORS
PROJECT TEAM: KESHAV PANDIT, PAVYAN TRIVEDI, RAJ CHAHAL
COURSE: DIPLOMA IN COMPUTER ENGG

Anandiben Patel @anandibenpatel 5h I was glad to know that nearly 1000 students traveled to over 200 villages of Ahmedabad dist. to understand the issues faced by villagers.

Anandiben Patel @anandibenpatel 5h Was more than delighted to visit L J Innovation Village organized by L J Group of Institutes in Ahmedabad

Anandiben Patel @anandibenpatel 5h After going thru the projects, I ascertained that youth of Gujarat & India with proper guidance, skill and talent can achieve unthinkable.

Anandiben Patel @anandibenpatel 5h With 434 proj made by 1563 students, L J Innovation Village had some innovative solutions to several day-to-day problems existing in society

Anandiben Patel @anandibenpatel 5h I was glad to know that nearly 1000 students traveled to over 200 villages of Ahmedabad dist. to understand the issues faced by villagers.

Anandiben Patel @anandibenpatel 5h Was more than delighted to visit L J Innovation Village organized by L J

Innovation Awards

- On 13th March, 2016, LJ Polytechnic Students won Gandhian Young Technological Innovation (GYTI) Award-2016 at President House Delhi. 2363 Nominations, 26 States, 2 Union Territories, 272 Universities, 125 Jury Members and 43 Awards & Appreciations. Only one Diploma College has been appreciated.

