

Innovative mini-projects list 2015

Technologies :

1. [Touch screen \(Haptic\).](#)
2. [MEMS Accelerometer.](#)
3. [Tongue drives assistive technology.](#)
4. [Finger prints Authentication.](#)
5. [RFID/ Smart/Mifare card.](#)
6. [I-Button.](#)
7. [Global Positioning System \(GPS\) technology.](#)
8. [GSM technology.](#)
9. [Wireless technology.](#)
10. [Wired communication.](#)
11. [Heartbeat sensor.](#)
12. [ROBOTICS.](#)
13. [Non-Micro controller based.](#)
14. [555 Timer.](#)
15. [LM358 Comparator .](#)
16. [LM324 Comparator .](#)
17. [Touch plate.](#)
18. [Fast switching Transistors.](#)

Innovative mini-projects list

- SEM-346.** Automatic power failure indication system
- SEM-347.** Wireless power transmission
- SEM-348.** Design of low cost temp control system for solar cell lamination machine
- SEM-349.** Soil moisture & temperature based irrigation water pump controlling system.
- SEM-350.** Automatic active phase selector for 1 phase load from 3 phase using Logic gates
- SEM-351.** Design of an Inverter with battery low & over load indicator
- SEM-352.** Simple walking robot by coat hanger walker
- SEM-207.** RFID based automatic tollgate with balance reduction and recharge.
- SEM-327.** Design of Timer based industrial/Home Automation with time setting value using Taper POT and 555 Timer.
- SEM-329.** RF operated toll gate with vehicle counter.
- SEM-384.** Automatic Head light Intensity control for vehicles to avoid accidents
- SEM-136.** REALTIME PANTRY INFORMATION SYSTEM USING RS-232 (Can transmit information till 30Mtrs)
- SEM-295.** Hand cranked dynamo based energy generation system for emergency headlamp applications for mining employees who work under ground and dark conditions
- SEM-296.** Airport security Luggage scanner system with conveyor belt arrangement
- SEM-379.** Automatic low tire pressure alerting system.
- SEM-383.** Electronic Passport using RFID
- SEM-384.** GSM based smart information system for lost ATM card
- SEM-238.** Intruder detection and wireless alerting using RFID and Burglar Alarm
- SEM-377.** Students marks display on PC by accessing from Finger print module.
- SEM-259.** Wireless controlled Heavy duty robot for Army Applications
- SEM-226.** Traffic density acquisition by GSM with low, medium and high.
- SEM-230.** Joystick controlled wheel chair with Auto mode and obstacle sensor.
- SEM-227.** Cryptography using Zigbee and PC.
- SEM-380.** Wireless low tire pressure alerting system.

- SEM-225.** SMS based Electing systems.
- SEM-344.**Home security based on LASER lighting system.
- SEM-376.** Library Automation with user defined finger print accessing.
- SEM-378.** Dual security access control system based on finger print and Keypad
- SEM-374.** Authenticated device switching based on Fingerprint and Keypad
- SEM-248.** Image based calling system for heartbeat patients with heartbeat monitoring
- SEM-217.** Heartbeat monitoring and voice based alerting system for high and low heart rate.
- SEM-267.** MOTION SENSOR FOR SECURITY LIGHT
- SEM-275.** Green Wind Energy for rural electrification
- SEM-280.** Event driven advanced automation for industries.
- SEM-258.** Advanced Robot with 360Degrees
- SEM-232.** Library robot with display of Book Numbers.
- SEM-229.** Security management system with hall sensor for oil industries
- SEM-228.** Line follower robot.
- SEM-314.** LDR based device switching with intensity controlling
- SEM-315.** DC light dimmer controlling with 555 Timer
- SEM-316.** Design of metal detector using 555 Timer with buzzer alert
- SEM-317.** Speed control of DC motor by PWM using 555 Timers.
- SEM-319.** Touch based device switching with efficient transistor.
- SEM-233.** Power management system for high way lighting using RFID.
- SEM-235.** Zigbee based spy robot with LASER
- SEM-243.** Smart card based security control system
- SEM-244.** Industrial automation with Keypad and Smart card
- SEM-251.** Voice based obstacle detection alerts for blind
- SEM-257.** RF controlled Intelligent Buggy Robot
- SEM-309.** Solar fencing: to prevent crop damage by animals, gives mild electric shock, which is safe and can be demonstrated to students.

- SEM-310.** Design and construction of 100Watt efficient Inverter.
- SEM-213.** RFID based bus name announcement system
- SEM-215.** Breathe alcohol detector with automatic vehicle control to prevent drunken driving.
- SEM-221.** Electronic Nose
- SEM-222.** Flying object travel location data logger with 2GB MMCSd memory card using GPS for aeronautical application
- SEM-223.** Advanced automatic irrigation system with day and night sensing and Auto controlling of motor
- SEM-231.** Remote measurement and control for greenhouse using Zigbee
- SEM-234.** Low cost GSM based home automation with voice announcement.
- SEM-239.** Touch screen controlled wired robot with LCD
- SEM-249.** Motion based password authentication system.
- SEM-282.** Location based advertisement system with voice.
- SEM-167.** Hand Talk (HT).

- SEM-183.** Designing of Haptic interface Restaurant.
- SEM-184.** Haptic based speaking micro controller.
- SEM-185.** Designing of Haptic Keypad with magnetic door lock system
- SEM-182.** Electronic Touch home.
- SEM-181.** Hand gestured based Home automation.
- SEM-188.** Gestured controlled lamp dimmer (Useful for power conservation)
- SEM-160.** Gestures controlled speaking Microcontroller.
- SEM-23.** Micro Electro Mechanical Sensor (MEMS) Accelerometer/Gyroscope based self-balancing robot
- SEM-190.** Intelligent gestured controlled PC.
- SEM-05.** Image based password authentication for illiterates with Touch screen.
- SEM-186.** Home appliances controlling using 4-wire resistive touch screen.
- SEM-108.** Touch screen Controlled PC.
- SEM-11.** Touch screen based Nurse/attendant calling system for physically impaired.

- SEM-150.** Controlling of powered devices using Tongue motion.
- SEM-151.** Tongue controlled speaking Microcontroller.
- SEM-152.** Tongue controlled wheel chair.
- SEM-192.** PC controlling through tongue motion.
- SEM-137.** RF based child missing alert system.
- SEM-143.** Smart zone based Vehicle speed control system based on RF
- SEM-172.** I-Button and keypad based digital door lock system
- SEM-16.** Microcontroller based virtual boundary/fencing for Wild Animals.
- SEM-04.** Microcontroller based Wireless matchbox with digital lantern.
- SEM-26.** Live Human being detection wireless remote controlled Robot. (Useful for detection of terrorists hiding inside buildings).
- SEM-36.** Mobile phone controlled intelligent Robot.
- SEM-134.** Power management system in shopping malls with bidirectional visitor counter.
- SEM-180.** Feedback Controlled Devices with Advance Security using Mobile Phones
- SEM-87.** RFID based vehicle license plate registration and monitoring system. Very useful for Traffic police to identify stolen vehicles.
- SEM-198.** Mobile battery charge indicator with auto cutoff facility.
- SEM-196.** Anti-trespassing system for vehicles at traffic signal.
- SEM-131.** Design of Coffee Cup for Alerting Blind People.
- SEM-132.** Ultrasonic distance finder.
- SEM-158.** Missile detection and auto destroy system.
- SEM-148.** Obstacles detecting Robot with ultrasonic sensors.
- SEM-79.** Single phasing preventer for protection of three phase (3-ph) loads
- SEM-53.** Talking Energy meter. Alerts the user with voice messages in case of over power utilization.
- SEM-55.** Design and construction of Earth fault relay for single phase power system.
- SEM-45.** Hall- effect sensor based non-contact AC motor speed monitoring and display system with high and low speed alerts
- SEM-03.** Innovative keyboard construction that uses only one input pin of microcontroller

- SEM-06.** Speaking microcontroller for deaf and dumb.
- SEM-255.** MEMS based platform tilting with angle display for aeronautic and navy applications.
- SEM-256.** GSM based door Opening/Closing alerting system with Door magnetic sensor
- SEM-265.** Construction of digital Pedometer for energy expended.
- SEM-270.** Design of IR transmitter and IR receiver for Shopping malls using Comparator
- SEM-271.** IR based Home/Industrial automation using 555 Timer.
- SEM-328.** Electronic Ballast
- SEM-330.** Designing of High voltage ESP
- SEM-331.** Advanced home automation system.
- SEM-272.** Advanced Digital Remote Panic Alarm Button for Bank / industrial Application using RF
- SEM-276.** Mobile phone controlled live human detection and Bomb sensing Robot using DTMF technology.
- SEM-298.** IR based intelligent Automatic washbasin / mirror lamp controller
- SEM-279.** Automated student attendance monitoring system.
- SEM-306.** Sound operated baby cradle... switches on relay/motor when baby cries also the music
- SEM-307.** Coin operated water vending machine.
- SEM-308.** Automatic Water Tap for water saving.
- SEM-208.** Anti sleep alarm for students
- SEM-210.** Highly sensitive ear
- SEM-211.** Knock alarm with high efficient Amplifier
- SEM-212.** TV remote controlled robot with obstacle avoidance and night vision
- SEM-216.** Password protected door accessing system using stepper motor
- SEM-219.** RF based Station name display on LCD
- SEM-220.** RF based digital lantern using Encode and Decoder
- SEM-266.** Laptop audio amplifier.
- SEM-269.** Design and Construction of Ultrasonic sensor

- SEM-273.** Black/White Color Identification
- SEM-281.** Advanced EVM.
- SEM-284.** Mini UPS system.
- SEM-285.** Air craft cabin monitoring and alerting system.
- SEM-287.** Optimal power point tracking system for solar/PV cells.
- SEM-288.** Intelligent lighting system for railway platforms.
- SEM-292.** Solar based E-Uniform for soldiers who work at extreme high temperatures or extreme low temperatures (same uniform can be used to warm up or cool down body temperature)
- SEM-293.** Highly sensitive Alcohol sensor with auto car ignition disable feature.
- SEM-294.** Intelligent IR based automatic Roadway/Highway lighting system with day light sensor.
- SEM-311.** Controlling of Servo motor by using 555 Timer.
- SEM-312.** Effective light operated device switching with efficient transistor
- SEM-313.** Electronic eye for night device switching using 555 Timer
- SEM-318.** Controlling of digital device with digital input to 555 Timer
- SEM-320.** Design and construction of high precision Servo Motor driver.
- SEM-321.** Digital device switching with touch input for ON/OFF
- SEM-322.** Highly efficient Audio Amplifier.
- SEM-323.** Construction of emergency light with automatic switch ON/OFF and battery protection.
- SEM-324.** Implementation of artificial eye for intelligent line follower Robot.
- SEM-310.** Design of 100Watt efficient inverter
- SEM-325.** Mail box alerting system by using 555 Timer
- SEM-189.** Motion based password for device switching.
- SEM-191.** Hand movement based Fan speed controlling
- SEM-193.** Building Management System.
- SEM-133.** Checking and auto control of water level using wireless sensor.
- SEM-140.** Wireless 3-phase motor starter using RF technology.
- SEM-97.** RFID based farmhouse animal identification system.
- SEM-09.** Location driven car music player. (Plays devotional songs near temples, shuts at home etc.)

- SEM-10.** GPS based vehicle location tracking system.
- SEM-20.** GPS based border alert system for fishermen.
- SEM-22.** Travel assistant for blind with dynamic user input for location based alerts.
- SEM-034.** GPS based Speedometer for boat/ship with live speed display and speed limit alerts.
- SEM-173.** Magnetic door security system based on I-Button.
- SEM-02.** GSM based Irrigation Water Pump Controller for Illiterates (No SMS knowledge required).
- SEM-32.** Remote control of critical software applications with mobile phone.
- SEM-39.** Mobile phone controlled Street Light monitoring and control system with automatic day/night switchover.
- SEM-64.** Password protected GSM based Device control.
- SEM-81.** PIR and GSM based Home security system.
- SEM-84.** DTMF Based Remote appliance Control System using Mobile Phone.
- SEM-90.** PC Controlled Wireless robot.
- SEM-92.** RF Remote controlled Land Rover.
- SEM-95.** TV Remote Controlled PC.
- SEM-98.** Mobile phone DTMF technology controlled irrigation/ agricultural motor control system.
- SEM-101.** IR TV remote Controlled robot.
- SEM-116.** DTMF Mobile phone controlled PC.
- SEM-135.** RF based home security system.
- SEM-144.** Mobile phone based secure password door controlling system.
- SEM-149.** DTMF operated live human being detecting Robot.
- SEM-165.** Industrial device switching through RF technology.
- SEM-178.** DTMF controlled soil-moisture sensor.
- SEM-62.** PC Controlled Industrial Devices.
- SEM-75.** Micro controller based Heartbeat Monitor with display on PC.
- SEM-17.** RFID based security access control systems.
- SEM-85.** GPS Based Bus/Train station name announcement system using APR9600 based voice module.

- SEM-113.** GPS and Microcontroller based Geographical location Identification System.
- SEM-74.** Microcontroller based Heartbeat Monitor with LCD Display
- SEM-153.** Human body temperature and heart rate monitoring on LCD display.
- SEM-110.** Industrial and Home Security System based on smoke and Fire sensors.
- SEM-111.** Construction of cooking gas leakage sensor and alarming system.
- SEM-197.** Construction of alcohol detector.
- SEM-114.** Real-time burglar alarm system using PIR Sensor (Passive Infrared Sensor)
- SEM-115.** Micro controller based bank lockers safety system using digital key password with door access facility.
- SEM-117.** Automatic Door opening and Room Illumination Control system using IR and LDR sensors.
- SEM-118.** Object counter for Bottle filling industries with Alpha Numeric LCD display.
- SEM-121.** Highly sensitive LDR based power saver for street light control system.
- SEM-122.** Microcontroller based automatic active Phase selector for single phase load from three phase supply.
- SEM-126.** H-Bridge and PWM based DC Motor direction and speed control system
- SEM-127.** Real time Car battery monitoring and low voltage alert system
- SEM-125.** Interfacing High voltage device to Microcontroller using optical isolation technology.
- SEM-128.** Triac and zero crossing detector based lamp dimmer.
- SEM-130.** Solar cell based mobile phone battery charger.
- SEM-141.** PIR based intrusion detection system with letter box information.
- SEM-142.** Real Time Clock based automatic college bell ringing system along with temperature display.
- SEM-145.** Microcontroller based locker security system with auto alerting and punishing system.
- SEM-154.** Maximum demand controller and fault alerting for industries.
- SEM-156.** Solar Powered industrial boiler with temperature display.
- SEM-155.** Automatic Braking comfort using Ultrasonic sensors.
- SEM-168.** RADAR Simulation with Optical sensor.
- SEM-176.** A multi agent multi sensor based security system for intelligent building

- SEM-177.** Automatic LDR based window blinds control system.
- SEM-100.** Microcontroller based Visible Light follower robot
- SEM-103.** Real-time clock based automatic street light controlling system with LDR based backup control system
- SEM-104.** Automatic object counting system for conveyer belt system
- SEM-105.** Bi-directional visitors counter and display system with max capacity alarm
- SEM-78.** Micro controller based Multiple Device Control based on Change in Input Frequency
- SEM-80.** PIR Sensor based Intrusion Detection System.
- SEM-82.** Interfacing Microcontroller to Cell phone graphical display.
- SEM-93.** Temperature sensor driven automatic DC motor based fan speed controlling system.
- SEM-70.** Microcontroller based Solar Tracker with Stepper Motor Control.
- SEM-194.** Real-time clock based sensor less solar tracking system.
- SEM-195.** Solar based automatic water level sensing and water pumping system for next generation apartments.
- SEM-71.** Automatic Room Illumination Control.
- SEM-72.** Automatic Temperature Measurement and Control.
- SEM-67.** Digital Tachometer (Non-contact).
- SEM-59.** Frequency Locked Loop DC Motor speed monitoring and control system.
- SEM-60.** Microcontroller based Vehicle count and speed display system for high ways.
- SEM-52.** Voice enabled devices switching for visually impaired.
- SEM-46.** Liquid dispensing system with adjustable quantity for industrial use.
- SEM-56.** Transformer oil temperature monitoring with automatic Circuit Breaker operation.
- SEM-42.** Soil Moisture sensor based intelligent irrigation water pump controlling system.
- SEM-35.** Ultrasonic Sensor based travel assistant for blind people.
- SEM-37.** Automatic Intelligent Plant Watering System.
- SEM-40.** UPS battery monitoring system with automatic battery changeover.
- SEM-31.** PIR based energy conservation system for corporate Computers and lighting system.
- SEM-01.** High power LED based intelligent streetlight controlling system with automatic brightness and vehicle counter using vehicle presence sensor.

TOUCH SCREEN BASED PROJECTS

- SEM-183.** Designing of Haptic Restaurant.
- SEM-184.** Haptic based speaking micro controller.
- SEM-185.** Designing of Haptic Keypad with magnetic door lock system
- SEM-182.** Electronic Touch home.
- SEM-05.** Image based password authentication for Illiterates with Touch screen.
- SEM-08.** Touch screen based temperature monitoring and control system.
- SEM-186.** Home appliances controlling using resistive touch screen
- SEM-11.** Touch screen based Nurse/attendant calling system for physically impaired.
- SEM-187.** Bank locker accessing using touch screen
- SEM-18.** Touch screen operated liquid dispensing system
- SEM-29.** Touch screen controlled motor speed and direction controlling system.
- SEM-41.** Touch screen controlled lamp dimmer for next generation apartments.
- SEM-91.** 4-wire resistive Touch screen controlled Robot.
- SEM-108.** Touch screen Controlled PC

Finger prints Authentication projects

- SEM-377.** Students marks display on PC by accessing from Finger print module.
- SEM-374.** Authenticated device switching based on Fingerprint and Keypad
- SEM-378.** Dual security access control system based on finger print and Keypad
- SEM-373.** Finger print and PC based student attendance logging into notepad.
- SEM-375.** Car door and ignition unit accessing based Fingerprint.
- SEM-376.** Library Automation with user defined finger print accessing.
- SEM-372.** Finger authentication based Door opening and automatic closing system

RFID PROJECTS

- SEM-383.** Electronic Passport using RFID
- SEM-384.** GSM based smart information system for lost ATM card
- SEM-238.** Intruder detection and wireless alerting using RFID and Burglar Alarm
- SEM-17.** RFID based security access control systems
- SEM-86.** Microcontroller and RFID based Intrusion Avoidance Systems.
- SEM-87.** RFID based vehicle license plate registration and monitoring system. Very useful for Traffic police to identify stolen vehicles.
- SEM-88.** RFID based vehicle access control system.
- SEM-97.** RFID based farmhouse animal identification system.

I-Button Projects

- SEM-172.** I-Button and keypad based digital door lock system
- SEM-173.** Magnetic door security system based on I-Button.
- SEM-174.** Bank locker security system using I-Button.
- SEM-175.** Vehicle access control system based on I-Button

GPS BASED PROJECTS

- SEM-09.** Location driven car music player. (Plays devotional songs near temples, shuts at home etc.)
- SEM-10.** GPS based vehicle location tracking system.
- SEM-13.** GPS based universal clock. Gets the time from satellites and displays on LCD.
- SEM-16.** Microcontroller based virtual boundary/fencing for Wild Animals.
- SEM-20.** GPS based border alert system for fishermen.
- SEM-22.** Travel assistant for blind with dynamic user input for location based alerts
- SEM-24.** GPS based station name announcement and display system for Trains/buses
- SEM-25.** Microcontroller and voice based alerting system for blind people with GPS enabled location identification.

SEM-33. GPS based Virtual distance measuring tape with LCD. Very useful for roads and buildings department. One man operable and works on anywhere on earth.

SEM-34. GPS based Speedometer for boat/ship with live speed display and speed limit alerts.

SEM-85. GPS Based Bus/Train Stop announcement system using APR9600 based voice module

SEM-113. GPS and Microcontroller based Geographical location Identification System.

MEMS accelerometer projects

SEM-28. MEMS Accelerometer controller Wheel chair

SEM-23. Micro Electro Mechanical Sensor (MEMS) Accelerometer/Gyroscope based self-balancing robot

SEM-167. Hand Talk (HT).

SEM-181. Hand gestured based Home automation.

SEM-188. Gestured controlled lamp dimmer (Useful for power conservation)

SEM-07. Virtual dancing bells for classical dancers.

SEM-160. Gestures controlled speaking Microcontroller

SEM-161. Controlling of powered devices through gestures.

SEM-189. Motion based password for device switching.

SEM-190. Intelligent gestured controlled PC.

SEM-191. Hand movement based Fan speed controlling.

SEM-21. MEMS Accelerometer based digital photo frame with automatic position/view adjustment system (similar to digital cameras)

Tongue Drives Assistive technology

SEM-150. Controlling of powered devices using Tongue motion.

SEM-151. Tongue controlled speaking Microcontroller.

SEM-152. Tongue controlled wheel chair.

SEM-192. PC controlling through tongue motion.

WIRELESS TECHNOLOGY PROJECTS

SEM-02. GSM based Irrigation Water Pump Controller for Illiterates (No SMS knowledge required).

SEM-04. Microcontroller based Wireless matchbox with digital lantern

SEM-12. Mobile phone controlled four-legged walking robot with speed and direction control.

SEM-19. Infrared (IR) remote controlled Muscle Stimulator with duration and intensity control

SEM-26. Live Human being detection wireless remote controlled Robot. (Useful for detection of terrorists hiding inside buildings).

SEM-30. SMS based digital Notice board with display on Monitor or LCD display.

SEM-32. Remote control of critical software applications with mobile phone.

SEM-36. Mobile phone controlled intelligent Robot.

SEM-38. DC Motor Speed and direction controller using mobile phone.

SEM-39. Mobile phone controlled Street Light monitoring and control system with automatic day/night switchover.

SEM-43. DTMF mobile phone controlled dam water gates controlling system with high-level protection.

SEM-44. Motor Speed and direction control system using Infrared Light sensor.

SEM-54. RF transceiver based energy meter monitoring system. (Energy Meter reading on PC over wireless comm.).

SEM-63. DS1307 and Microcontroller based TV remote controlled Digital Clock.

SEM-64. Password protected GSM based Device control.

SEM-65. Wireless TV Remote controlled password protected dual Stepper Motors Controlling system

SEM-66. RC5 IR Based Remote Device Switching for Industrial purpose.

SEM-68. Wireless Digital Frequency Meter with display on PC.

- SEM-73.** RF Control of Induction/DC/Stepper Motor & Other Industrial Loads.
- SEM-81.** PIR and GSM based Home security system.
- SEM-83.** Radio Frequency based wireless remote controlled digital camera with high power focus LED.
- SEM-84.** DTMF Based Remote appliance Control System using Mobile Phone
- SEM-90.** PC Controlled Wireless robot.
- SEM-92.** RF Remote controlled Land Rover.
- SEM-95.** TV Remote Controlled PC
- SEM-98.** Mobile phone DTMF technology controlled irrigation/ agricultural motor control system
- SEM-101.** IR TV remote Controlled robot.
- SEM-116.** DTMF Mobile phone controlled PC.
- SEM-133.** Checking and auto control of water level using wireless sensor.
- SEM-135.** RF based home security system.
- SEM-137.** RF based child missing alert system.
- SEM-140.** Wireless 3-phase motor starter using RF technology.
- SEM-143.** Smart zone based Vehicle speed control system based on RF
- SEM-144.** Mobile phone based secure password door controlling system.
- SEM-149.** DTMF operated live human being detecting Robot.
- SEM-162.** IR TV remote based device switching
- SEM-164.** Toll gate operating system using RF technology.
- SEM-165.** Industrial device switching through RF technology.
- SEM-166.** Wireless speed and direction control of DC motor through RF technology
- SEM-169.** RF remote based toll gate operating system
- SEM-170.** Industrial device switching through RF technology.
- SEM-171.** RF technology based digital locker system
- SEM-178.** DTMF controlled soil-moisture sensor.
- SEM-180.** Feedback Controlled Devices with Advance Security using Mobile Phones

ROBOTIC PROJECTS

- SEM-232.** Library robot with display of Book Numbers.
- SEM-229.** Security management system with hall sensor for oil industries
- SEM-298.** IR based intelligent Automatic washbasin / mirror lamp controller
- SEM-152.** Tongue controlled wheel chair.
- SEM-28.** MEMS Accelerometer controller Wheel chair
- SEM-23.** Micro Electro Mechanical Sensor (MEMS) Accelerometer/Gyroscope based self-balancing robot
- SEM-89.** PC controlled wired robot
- SEM-163.** AUTONOMOUS SURVEILLANCE ROBOT
- SEM-149.** DTMF operated live human being detecting Robot.
- SEM-143.** Smart zone based Vehicle speed control system based on RF
- SEM-101.** IR TV remote Controlled robot.
- SEM-92.** RF Remote controlled Land Rover
- SEM-91.** 4-wire resistive Touch screen controlled Robot.
- SEM-90.** PC Controlled Wireless robot.
- SEM-36.** Mobile phone controlled intelligent Robot.
- SEM-102.** Automatic Metal Detection and alerting Robot
- SEM-26.** Live Human being detection wireless remote controlled Robot. (Useful for detection of terrorists hiding inside buildings).
- SEM-12.** Mobile phone controlled four-legged walking robot with speed and direction control.
- SEM-27.** Autonomous Robot with artificial vision for obstacle detection.

Heartbeat sensor projects

SEM-248. Image based calling system for heartbeat patients with heartbeat monitoring

SEM-74. Microcontroller based Heartbeat Monitor with LCD Display

SEM-153. Human body temperature and heart rate monitoring on LCD display.

SEM-75. Micro controller based Heartbeat Monitor with display on PC.

Wired communication

SEM-51. High voltage fuse blown indicator with display on PC with optical isolation between PC and HV bus bars

SEM-62. PC Controlled Industrial Devices.

SEM-75. Micro controller based Heartbeat Monitor with display on PC.

SEM-89. PC controlled wired robot.

SEM-106. Microcontroller PC driven moving message display on alpha-numeric LCD.

SEM-123. PC Based stepper motor control for robotic applications

SEM-108. Touchscreen Controlled PC

SEM-190. Intelligent gestured controlled PC.

SEM-192. PC controlling through tongue motion.

Other embedded projects

SEM-14. Digital vehicle speedometer with speed limit setting.

SEM-15. Microcontroller based digital clock with LCD

SEM-48. Energy Meter monitoring system with automatic tariff calculation.

SEM-49. Energy meter per-day average, Max and Min Load display on LCD

SEM-50. High voltage fuse blown indicator with Voice based announcement system

SEM-57. Timer based Electrical Oven temperature monitoring and control for Metal Industries

SEM-58. Timer based automatic power cutoff for industrial sealing/packaging machines.

- SEM-61.** Microcontroller based refrigeration control system.
- SEM-69.** Construction of Digital Voltage and Current meter with High and low level alerts
- SEM-76.** Micro controller based Wireless Temperature Measurement
- SEM-77.** Micro controller based Closed Loop Temperature Control
- SEM-94.** Pulse steel method AC motor speed control using Triac and optically isolated diac
- SEM-96.** Industrial High Voltage Transformer protection against overheating of transformer oil
- SEM-99.** Construction of Prepaid Energy (KWH) Meter
- SEM-107.** LDR based automatic lamp illumination controller with High Power/Intensity LED lighting (PWM control)
- SEM-109.** Automatic washing machine motor control system
- SEM-112.** Microcontroller based temperature driven automatic 230V Fan speed controlling system
- SEM-118.** Object counter for Bottle filling industries with Alpha Numeric LCD display
- SEM-119.** AC 230V over and under Voltage Protection for High Voltage Electrical Appliances
- SEM-124.** Microcontroller based Three Phase Load safety implementation with phase fault detector
- SEM-126.** H-Bridge and PWM based DC Motor direction and speed control system
- SEM-129.** Infrared sensor based intelligent Hand dryer with hot air blower
- SEM-136.** REALTIME PANTRY INFORMATION SYSTEM USING RS-232 (Can transmit information till 30Mtrs)
- SEM-138.** Microcontroller based multiple devices controlling using one switch
- SEM-139.** Microcontroller based Thermometer
- SEM-141.** PIR based intrusion detection system with letter box information
- SEM-142.** Real Time Clock based automatic college bell ringing system along with temperature display
- SEM-145.** Microcontroller based locker security system with auto alerting and punishing system
- SEM-146.** Microcontroller based Robot controlled through PC with head lamp vision
- SEM-147.** Industrial vehicle counter and automatic gate opening system
- SEM-148.** Obstacles detecting Robot with ultrasonic sensors
- SEM-157.** Automatic Railway gate operating system
- SEM-159.** Automatic bus information announcement and display system

Non-Micro controller projects (555 Timer, LM358, LM386, LM324)

- SEM-327.** Design of Timer based industrial/Home Automation with time setting value using Taper POT using 555 Timer.
- SEM-345.** RF controller wireless Lamp Dimmer in 16-Steps with TRIAC
- SEM-346.** Automatic power failure indication system
- SEM-347.** Wireless power transmission
- SEM-348.** Design of low cost temp control system for solar cell lamination machine
- SEM-349.** Soil moisture& temperature based irrigation water pump controlling system.
- SEM-350.** Automatic active phase selector for 1 phase load from 3 phase using Logic gates
- SEM-351.** Design of an Inverter with battery low & over load indicator
- SEM-352.** Simple walking robot by coat hanger walker
- SEM-326.** Joystick controlled wheel chair.
- SEM-300.** TRIAC based four step touch dimmer
- SEM-295.** Hand cranked dynamo based energy generation system for emergency headlamp applications for mining workers and engineers who work under ground and dark conditions
- SEM-210.** Highly sensitive ear.
- SEM-344.** Home security based on LASER lighting system.
- SEM-345.** RF controller wireless Lamp Dimmer in 16-Steps with TRIAC
- SEM-215.** Alcohol detector with automatic vehicle (DC motor) controlling
- SEM-251.** Voice based obstacle detection alerts for blind
- SEM-221.** Electronic Nose.
- SEM-323.** Construction of emergency light with automatic switch ON/OFF and battery protection.
- SEM-324.** Implementation of artificial eye for intelligent line following Robot Application.
- SEM-130.** Solar cell based mobile phone battery charger
- SEM-223.** Advanced automatic irrigation system with day and night sensing and Auto controlling of motor
- SEM-321.** Digital device switching with touch input for ON/OFF

- SEM-257.** RF controlled Intelligent Baggy Robot
- SEM-220.** RF based digital lantern using Encode and Decoder
- SEM-267.** MOTION SENSOR FOR SECURITY LIGHT
- SEM-309.** Solar fencing: to prevent crop damage by animals, gives mild electric shock, which is safe and can be demonstrated to students.
- SEM-310.** Design of 100Watt efficient inverter
- SEM-315.** DC light dimmer controlling with 555 Timer
- SEM-316.** Design of metal detector using 555 Timer with buzzer alert
- SEM-317.** Speed controlling of DC motor by PWM using 555 Timer.
- SEM-340.** Construction of wireless match box for digital lantern using RF technology.
- SEM-341.** Construction of Cooking gas leakage sensor and alarming system
- SEM-342.** Industrial and Home Security System based on smoke and Fire sensors
- SEM-343.** PIR based intrusion detection system with letter box information using comparator
- SEM-338.** PIR Sensor based Intrusion Detection System
- SEM-337.** Automatic Room Illumination Control
- SEM-334.** Ultrasonic Sensor based travel assistant for blind people
- SEM-333.** PIR based energy conservation system using comparator
- SEM-332.** Speaking device for deaf and dumb.
- SEM-211.** Knock alarm with High efficient Amplifier
- SEM-270.** Design of IR transmitter and IR receiver for Shopping malls using Comparator
- SEM-272.** Advanced Digital Remote Panic Alarm Button for Bank / industrial Application using RF
- SEM-325.** Mail box alerting system by using 555 Timer
- SEM-320.** Servo motor testing and direction controlling.
- SEM-266.** LAPTOP AUDIO AMPLIFIER
- SEM-269.** Design and Construction of Ultrasonic sensor
- SEM-271.** IR based Home/Industrial Automation using 555 Timer
- SEM-273.** Black Color Identification

- SEM-275.** Green Wind Energy for rural electrification
- SEM-284.** Mini UPS system
- SEM-292.** Solar based E-Uniform for soldiers who work at extreme high temperature or extreme low temperature (same uniform can be used to warm up or cool down body temperature)
- SEM-294.** Intelligent IR based automatic highway lighting system with day / night sensor
- SEM-298.** IR based intelligent Automatic washbasin / mirror lamp controller
- SEM-306.** Sound operated baby cradle... switches on relay/motor when baby cries also the music
- SEM-308.** Automatic Water Tap for water saving... IR obstacle with cooler motor
- SEM-311.** Controlling of Servo motor by using 555 Timer.
- SEM-312.** Effective light operated device switching with efficient transistor
- SEM-313.** Electronic eye for night device switching using 555 Timer
- SEM-314.** LDR based device switching with intensity controlling
- SEM-293.** High sensitive Alcohol sensor with auto car ignition disables function
- SEM-319.** Touch based device switching with efficient transistor.
- SEM-318.** Controlling of digital device with digital input to 555 Timer
- SEM-322.** Highly efficient Audio Amplifier.
- SEM-339.** Real-time burglar alarm system using PIR Sensor (Passive Infrared Sensor)
- SEM-176.** A multi agent multi sensor based security system for intelligent building
- SEM-336.** Soil Moisture sensor based intelligent irrigation water pump using comparator.
- SEM-335.** Automatic Intelligent Plant Watering System using Comparator