

Embedded System Project

BES Pvt. Ltd.

RFID BASED PROJECT

- 1. RFID BASED ATTENDANCE CARD SYSTEM*
- 2. RFID BASED VEHICLE NUMBER TRACKING AND TRAFFIC MONITORING*
- 3. RFID BASED TRAIN IDENTIFICATION AND RAILWAY CROSSING SYSTEM*
- 4. RFID BASED UNMANNED AUTOMATED ELECTRIC POWER TARIFF CALCULATION BY THE REMOTE EB STATION*
- 5. LOCATION BASED HUMAN IDENTIFICATION AND TRACKING SYSTEM USING RFID*
- 6. RFID BASED HUMAN / VEHICLE DETECTION AND MONITORING SYSTEM*
- 7. LUGGAGE TRACKING SYSTEM USING RFID*
- 8. LOCATION-BASED SYSTEM FOR MOBILE DEVICES USING RFID*
- 9. ROUTING, GUIDING, OBSTACLE DETECTING AND CONTROLLING OF VEHICLE USING ACTIVE RFID TECHNOLOGY*
- 10. AUTOMATED AND UNMANNED VEHICLE TOLL COLLECTION / PARKING SYSTEM USING RFID TECHNOLOGY*
- 11. RFID Based Attendance System (AT89S52 + RFID)*
- 12. RFID Based Security System (AT89S52 + RFID)*

GSM Based Projects:

- 1. GSM BASED VEHICLE LOCATION TRACKING SYSTEM*
- 2. GSM-BASED WIRELESS HOME APPLIANCES MONITORING & CONTROL SYSTEM*
- 3. CONTROLLING THE DIRECTION OF A ROBOT AND FIRE ALERT USING GSM MODEM*
- 4. HOME SECURITY USING GSM*
- 5. TAMPERING DETECTION OF ENERGY METER WITH GSM MODEM*
- 6. HOME SECURITY SYSTEM WITH AUTO DIALLING (MISSED CALL OR SMS ALERT USING GSM MODEM)*
- 7. SMS BASED WEATHER REPORT*
- 8. AUTOMATIC DC MOTOR SPEED CONTROL WITH AUTOMATIC FEEDBACK VIA SMS USING PWM TECHNOLOGY*
- 9. SMS based Device Switching*
- 10. SMS through Telephone*
- 11. CELLPHONE TO CELLPHONE APPLIANCE CONTROL SYSTEM*
- 12. REMOTE PROCESS MONITORING THROUGH SMS*

ROBOTICS

1. *FIRE-FIGHTING ROBOT*
2. *VOICE BASED PATH CONTROL OF ROBOT VIA THE PC USING RF COMMUNICATION TECHNOLOGY*
3. *COMPUTER CONTROLLED MOBILE ROBOT*
4. *GAS DETECTION ROBOT FOR ATOMIC POWER STATION*
5. *SOLAR OPERATED ROBOT*
6. *DESIGN AND DEVELOPMENT OF OBSTACLE SENSING AND OBJECT GUIDING ROBOT*
7. *PC Based Robot (AT89C2051)*
8. *Fire Fighting Robot (AT89S52)*
9. *Line Follower*
10. *Path finder*
11. *Depth finder*
12. *Obstacle avoidance*
13. *Lakshman Rekha Robot*

Others

1. MICROCONTROLLER AT-89C51 BASED METRO TRAIN PROTOTYPE USING LCD:

The project shows resemblance as you are traveling in metro train. It will display Two station at LCD and a stepper motor to rotate clock or anti-clock wise.(with or without vehicle)

2. MICROCONTROLLER AT-89C51 BASED VOTING MACHINE:

The voting system for four candidates with memory backup to restore the results to be viewed with password.

3. MICROCONTROLLER AT-89C51 BASED TEXT EDITOR CUM MOVING MESSAGE DISPLAY:

The project comprises 30 keys to edit any message in English. One can restore the message in memory IC. The 16 characters at a time can be view in running mode.

4. MICROCONTROLLER AT-89C51 BASED FULL FUNCTION STEPPER MOTOR CONTROLLER :

The project will operate the stepper motor in almost all modes viz. clock, anticlock, speed and frequency control with time duration for both directions.

5. MICROCONTROLLER AT-89C51 BASED WATER LEVEL CONTROLLER CUM MOTOR PROTECTOR:

It can indicates the level and control the water pump at top level filling.

5. MICROCONTROLLER AT-89C51 BASED FASTEST FINGER FIRST:
Useful for Quiz games, dumb charades. It display the player no. along with the beep for seven players.
6. MICROCONTROLLER AT-89C51 BASED TEMPERATURE METER:
It will display the room temperature on LCD and one can set the desired value to indicate the alarm or control at a desired temperature. It uses an ADC to interface with LM-35 sensor.
7. MICROCONTROLLER AT-89C51 BASED INFRARED REMOTE CONTROLLED SWITCH BOARD: (4APPLIANCES):
One can operate (on/off) four electrical devices with TV remote synchronized with circuit independently.
8. MICROCONTROLLER AT-89C51 BASED RANK DISPLAY SYSTEM FOR RACE & QUIZ COMPETITION WITH LCD:
It can resolve the time difference (may be few milliseconds) and indicate the correct ranking between the individuals denoted A to H
9. MICROCONTROLLER AT-89C51 BASED AUTO GEAR SHIFTING SYSTEM:
The circuit shows the demo of auto shifting of gears using stepper motor with the change in speed of vehicle. One can change the speed of DC motor as actual vehicle running wheel.
10. MICROCONTROLLER AT-89C51 BASED AUTO SPEED LIMITER/GOVERNER WITH AUTO BREAKING:
The project is to read the rpm of a automobile and according to that it limits the speed as Speed Governor. One can change the speed with variable control.
11. MICROCONTROLLER AT-89C51 BASED LINE FOLLOWER ROBOT:
A Robotic car that follows the black line at the floor area based on IR sensors with transmitters and receivers.
12. MICROCONTROLLER AT-89C51 BASED 'YES MASTER' FOLLOWER :
A robotic car that follows his master who is sending an IR transmission always.
13. MICROCONTROLLER AT-89C51 BASED VOLTAGE/ POWER FACTOR / FREQUENCY METER:
The project checks the electrical input factors as multifunction meter.
14. MICROCONTROLLER AT-89C51 BASED TELEREMOTESWITCH:
The project can is to remotely control four electrical devices using a landline or mobile to be connected with the circuit.

15. MICROCONTROLLER AT-89C51 BASED RFID ATTENDENCE MONITOR:
The project will show the names of person who had pressed the RFID key on LCD. One can use DATA encoder/decoder circuit.
16. MICROCONTROLLER AT-89C2051 BASED FREQUENCY COUNTER USING LCD:
The project will check the unknown frequency input up to 200KHz. and display at LCD.
17. TRAFFIC SIGNAL CONTROL TRAFFIC MAN:
It can actually control traffic with lights and humanoid robot police man rotating in all directions with hand movements for stop and go actions. This is a project comprises two stepper motors to perform the action.
18. MICROCONTROLLER AT-89C2051 BASED IR WIRELESS FREQUENCY COUNTER:
The project will check the unknown frequency input upto 200KHz. coming from an IR source and display at LCD.
19. MICROCONTROLLER AT-89C2051 BASED LINEFOLLOWER ROBOT:
A Robotic car that follows the black lineate the floor area based on IR sensors with transmitters and receivers. With options like:
(a) mines/metal detector with auto brake
(b) IR sensor with auto braking at front.
20. MICROCONTROLLER AT-89C2051 BASED STEPPER MOTOR CONTROLLER WITH VARIABLE SPEED AND DIRECTION:
It controls a stepper motor for direction and speed functions.
21. MICROCONTROLLER AT-89C2051 BASED ROBOTIC ARM:
The three stepper motor based key controlled robotic arm can grip, lift and rotate the specified object using 3 axis movement.
22. MICROCONTROLLER AT-89C2051 BASED COUNT DOWN TIMER:
The project performs the countdown operation for upto -99 minutes with two seven segments display showing actual time left to activate or de-activate the connected relay.
23. MICROCONTROLLER AT-89C2051 BASED FOUR DIGIT CODE LOCK WITH LCD DISPLAY:
One can lock the desired device with the help of this project. It will open with a selected four digit code.
24. MICROCONTROLLER AT-89C2051 BASED AUTOMATIC FLUSHING SYSTEM:
It will switch on the motor pump for flushing for a time duration whenever the urinals/toilet is used by someone.

25. MICROCONTROLLER AT-89C2051 BASED SPEED MONITORING SYSTEM FOR MOTOR – TACHOMETER:

The project reads the motor speed on any ac/dc motor at four seven Segment displays using IR technique. The project also comprises a Dc motor speed controller circuit to change the speed of motor with a variable control.

26. MICROCONTROLLER AT-89C2051 BASED ULTRASONIC DISTANCE METER:

This will check and display the distance between device and object/wall etc. at LCD.

27. MICROCONTROLLER AT-89C2051 BASED TEMPERATURE INDICATOR:

The temperature of room can be displayed at LCD using a sensitive device DS 1621.

28. MICROCONTROLLER AT-89C2051 BASED CAPACITANCE METER:

The project will check the value of unknown capacitor at seven segment display.

29. MICROCONTROLLER AT-89C2051 BASED HEART BEATMONITOR (PULSE RATE)

It will check the pulse rate of a person from the finger and display it at seven segment unit.

30. MICROCONTROLLER AT-89C2051 BASED WIRELESS RF LINKED HEART BEAT MONITOR (PULSE RATE).

It will check the pulse rate from the remote end using RF transmitter and receiver link at say 10 meters.

31. MICROCONTROLLER AT-89C2051 BASED ALARM CLOCK:

The unit display the time in Hr. Min. and one can set the alarm also for a desired time at Seven segment display.

32. MICROCONTROLLER AT-89C2051 BASED ALARM CLOCK:

The unit display the time in Hr. Min. and one can set the alarm also for a desired time at seven segment display.

33. MICROCONTROLLER AT-89C2051 BASED VEHICLE SPEEDOMETER CUM ODOMETER:

The project comprises a dc motor speed controller circuit with reed sensor. It is being detected by this and display the same at LCD in form of speed Km./Hr. and also display the distance covered by the vehicle.

1. *MOTOR SPEED CONTROLLER USING CELLULAR PHONE*

2. *DATA ACQUISITION SYSTEM USING VB FRONT END AS DATA LOGGER.*

3. *FULL DUPLEX μ C TO μ C COMMUNICATION*
4. *GPS VEHICLE THEFT IDENTIFICATION AND TRACING AND CONTROL SYSTEM*
5. *INTERNET BASED HOME AUTOMATION SYSTEM*
6. *A NOVEL REAR-END COLLISION, ACCIDENT AVOIDANCE, DISTANCE MEASURING USING ULTRASONIC TECHNOLOGY*
7. *HEART BEAT MONITORING*
8. *MULTIPOINT REMOTE MONITORING AND DATA ACQUISITION SYSTEM USING RF TECHNOLOGY*
9. *BUS NUMBER ANNOUNCEMENT AND IDENTIFICATION FOR BLIND PEOPLE*
10. *PIR SENSOR BASED MOTION DETECTION SYSTEM FOR SECURITY*
11. *RC5 PROTOCOL BASED CONTROLLER COMMUNICATION AND DEVICE CONTROL*
12. *INTELLIGENT BRAIN READER AND BIOMETRIC CONTROL SYSTEM OF ELECTRICAL EQUIPMENTS*
13. *WIRELESS SERIAL COMMUNICATION LINK FOR CHATTING AND CONTROLLING OF DEVICES USING RF TECHNOLOGY*
14. *ULTRASONIC BASED BLIND MAN PATH GUIDANCE & CONTROL USING INTERACTIVE VOICE RESPONS SYSTEM (IVRS)*
15. *ULTERSONIC RADER.*
16. *ULTERSONIC BASED WATER LEVEL CONTROLLER*
17. *ULTERSONIC BASED DISTANCE MESSURING SYSTEM*
18. *VOICE BASED ACTIVATION AND CONTROL SYSTEM OF DEVICES*
19. *SPEED CONTROL OF AC MOTORS USING SCR*
20. *ADVANCED ENCRYPTION STANDARD (AES) IMPLEMENTATION FOR CONTROL OF DEVICES USING RF TECHNOLOGY*
21. *AUTOMATED PREPAID ENERGY METER CONSUMPTION SYSTEM*
22. *AUTOMATIC ACCIDENT IDENTIFICATION, DETECTION VIA VIBRATION SENSORS USING RF TECHNOLOGY*
23. *FINGER PRINT BASED AUTHENTICATED, ACCESS CONTROL AND AUTOMATED DOOR OPENING SYSTEM*
24. *MICROCONTROLLER - MICROCONTROLLER COMMUNICATION FOR REMOTE CONTROL OF DEVICES USING RF TECHNOLOGY WITH INTERACTIVE LCD.*
25. *AUTOMATED & UNMANNED CONTROL SYSTEM OF RAILWAY CROSSING USING WIRELESS IR SENSOR, DTMF ENCODER AND FM TECHNIQUE*

26. *MOBILE TO PC INTERFACE FOR CONTROLLING OF DEVICES USING DTMF TECHNOLOGY*
27. *DISH POSITION CONTROLLING & MONITORING SYSTEM USED FOR RADAR & OTHER TELECOMMUNICATION APPLICATIONS*
28. *DYNAMIC & AUTOMATIC PROGRAMMABLE TEMPERATURE CONTROL SYSTEM FOR INDUSTRIAL MACHINERIES SAFETY CONTROL SYSTEM*
29. *WEB CAMERA POSITIONING SYSTEM*
30. *TRANSFORMER OVER-HEAT PROTECTION WITH INTIMATION TO EB*
31. *FINGER PRINT BASED AUTHENTICATION AND CONTROLLING SYSTEM OF DEVICES*
32. *OVER SPEED AND DRUNKEN DRIVE INDICATOR*
33. *ENABLING / DISABLING AND WIRELESS CONTROL OF APPLIANCES & DEVICES BY FM & DTMF SYSTEMS USING RF TECHNOLOGY*
34. *BOILER MONITORING AND CONTROL SYSTEM*
35. *WIRELESS CONTROL OF APPLIANCES & DEVICES BY MOBILE PHONE USING DTMF TECHNOLOGY*
36. *IMPLEMENTATION OF SOLAR CELL TRACING SYSTEM FOR THE MAXIMUM UTILISATION OF SOLAR POWER AND ILLUMINATION*
37. *INTERACTIVE ENVIRONMENTAL AIR POLLUTION MONITORING AND AUTOMATIC PHONE DIALING SYSTEM*
38. *CONTROL OF PC USING DTMF TECHNOLOGY VIA MOBILE PHONE*
39. *PULSE WIDTH MODULATION (PWM) BASED SPEED CONTROL OF MOTORS*
40. *INTELLIGENT HOME SECURITY SYSTEM USING INTERACTIVE VOICE RESPONSIVE SYSTEM*
41. *AUTO CONTROLLING OF 3 PHASE INDUCTION MOTOR*
42. *AUTOMATIC PLANT IRRIGATION*
43. *MOTOR PARAMETER MONITORING SYSTEM*
44. *ALCOHOL SENSOR DETECTION FOR DRIVERS IN VEHICLES*
45. *AUTOMATIC DOOR OPENING USING PIR SENSOR*
46. *AT KEYBOARD BASED PASSWORD PROTECTED DOOR ACCESS SYSTEM*
47. *PWM BASED INVERTER USING AVR*
48. *PWM BASED SINGLE PHASE INDUCTION MOTOR SPEED CONTROL IN CLOSED LOOP*
49. *AUTOMATIC ELECTRIC PHASE CHANGE OVER*

50. *HUMAN MOVEMENT MONITORING USING PIR SENSOR*
51. *Monitor and Control of Greenhouse Environment-GreenBee*
52. *Digital Lock Using AT89C2051 with LCD and Keypad*
53. *Electronic Voting machine with Managed Control Unit*
54. *Data acquisition system using 8051*
55. *Control your PC with TV remote*
56. *IR Remote Switch using TV remote*
57. *Digital Code lock with LCD and Keypad using AT89C2051*
58. *Secured Wireless Data Communication*
59. *Time Operated Electrical Appliance Controlling System*
60. *Microcontroller Based Digital code Lock (AT89C2051)*
61. *PC BASED DATA LOGGER (AT89S52 + VB)*
62. *Prepaid Energy Meter (AT89S52)*
63. *RF Based Remote control (AT89C2051)*
64. *Infrared Remote Switch (6 devices + 1 fan)*
65. *Automatic Room light Controller with Visitor Counter (AT89S52)*
66. *Auto Control of three phase Induction motor*
67. *AC Dimmer*
68. *DC Drive*
69. *IR Based FAN regulator*

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