TECHNOLOGY LEARNING CENTER

..Finishing School for Engineer's

EMBEDDED MINI PROJECT LIST 2014

1	Aero dynamic wind mill with reverse charge protection for rural power generation applications
2	Intelligent Fire Detector with automatic water sprinkler system/air blower to avoid fire accidents
3	Industrial electrical appliances control system using IR remote(TSOP 1738 IR Receiver module)
4	Solar based mobile charger for rural areas (Charge your mobile anywhere with sunlight)
5	Renewable Energy management – Solar based lighting system with inverter and CFL lamp load
6	Solar tracking system
7	Assistive technology – implementation of high sensitive intelligent Blind Stick to assist visually challenged

8	Atomization agriculture system using mobile phone
9	Solar based e-uniform for soldiers
10	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)
11	Foot step power generation system for rural energy application to run AC and DC loads
12	H-Bridge implementation for DC motor direction control for robotic applications
13	Solar based mobile charger for rural areas (Charge your mobile anywhere with sunlight)
14	Coin based mobile phone charger
15	Coin based water dispenser
16	IR based intelligent highway lighting system
17	Intelligent gas detector
18	Automatic room light control upon human presence

info@tlcindia.org
www.tlcindia.org
+91-9705351122

19	Automatic night lamp with morning alarm
20	Intelligent automatic Plant irrigation system with water pump control based on soil moisturizing condition
21	Automatic Public water tap control system
22	Sensor based automatic door lock system
23	Automatic stair case lighting system
24	Home automation using mobile phone
25	Bank cash box guard with alert
26	Man less railway gate
27	smoke detector
28	Coin based toll gate system
29	Home security system
30	Water level indicator with alarm
31	Hand cranked dynamo based energy generation system for emergency headlamp applications for mining workers and engineers who work under ground and dark conditions

info@tlcindia.org
www.tlcindia.org
+91-9705351122

32	Co2 monitoring in green house
33	Electrical power generation using speed breaker
34	Micro inverter for CFL lamps
35	Automatic heat detector
36	Diamond security system
37	Electronic letter box
38	Automatic door lock system using tv remote
39	Solar based cool cap
40	Water level controller
41	Dark activated switch
42	Periodically on/ off mosquito repeller
43	Solar lighting system
44	Voice transmission using frequency modulation technique for college radio application
45	High sensitive metal detector for detecting metal objects
46	Rainbow clock

47	Farmer friendly solar based electrical fence for rural agriculture
48	Error free sound activated door open (triggers the load on second clap sound)
49	High sensitive electronic ear(hearing aid)
50	Clap based digital volume control
51	Communication through laser beam
52	Laser activated switch
53	Triac based Ac motor speed control system
54	IR based automatic wash basin/mirror lamp controller
55	Intelligent automatic street light control system using high sensitivity LDR
56	Fire alarm using thermistor
57	Laser guided door opener
58	Sensitive temperature switch
59	Traffic light controller with pre-determined time
60	Level indicator for petrol dispensing stations

61	High way alert signal lamp
62	Water activated relay
63	Sound operated switch
64	Door opening alarm
65	Sensor based door lock
66	Controlled lighting inside the house upon human presence
67	Solar automatic traffic and street light controller
68	DTMF telephone operated electrical appliances
69	Motion sensor for security light
70	Solar air cooler
71	Solar lighting system with auto tracking
72	Solar powered automatic railway gate controller
73	Solar fan with lighting system
75	RF based wireless remote control
76	Theft preventer alarms
77	Renewable energy management –solar based lighting system with

	inverter and CFL lamp load
78	High sensitive LPG sensor with gas leak alert buzzer
79	Transformer less switch mode power supply circuit
80	Intelligent IR based automatic highway lighting system with day / night sensor
81	Rain detector
82	Led torch using max660
83	Simple water temperature indicator
84	Coin operated milk dispensing system using IR sensor
85	Auto charging grinding machine with solar power
86	Solar intelligent vehicle (car)
87	Mining safety implementation of Electronic Nose to detect dangerous gases for alerting mining workers and engineers for preventive actions – (This nose can sense various odors and gases like methane, carbon monoxide, liquid petroleum gas etc - more sensitive than human nose)

88	Solar powered automatic rain operated wiper
89	Solar air cooler with auto tracking
90	High Sensitive LDR based Automatic night lamp with morning alarm
91	Versatile emergency lamp
92	Solar powered bomb detecting robot
93	Low cost electronic quiz buzzer
94	Electrical power generation using speed breaker
95	mobile phone detector(mobile bug)
96	stair case lighting system
97	intelligent solar emergency lighting system
98	Design of IR transmitter and IR receiver for Shopping malls using Comparator
99	Mail box alerting system by using 555 Timer
100	Controlling of digital device with digital input to 555 Timer
101	DTMF based industrial automation/home automation

102	Smart card based door lock system for MNC's
103	Visitor counter
104	Automatic room light control using PIR sensor
105	Intelligent fire detector
106	PIR sensor based human accident prevention with vehicles(auto-breaking on scanning human)
107	Coin based mobile phone charger
108	Vision based automated car parking system
109	Aero dynamic wind mill with reverse charge protection for rural areas
110	Smart card based bank security system
111	Zigbee based intelligent helmet for coal miners safety purpose
112	Intelligent traffic control using IR sensor
113	Human recognition using RFID technology
114	Anti theft system for valuable items using LDR
115	Home security system using PIR sensor.

116	Life cycle testing of electrical loads by down counter
117	Automatic dialing to any telephone using i2c protocol on detecting burglary
118	Networking of multiple microcontrollers
119	Line following robotic vehicle using microcontroller
120	Detecting power grid synchronization failure on sensing frequency or voltage beyond acceptable range
121	Non contact tachometer
122	Display of dialed telephone numbers on seven segment display
123	Underground cable fault distance locator
124	Cell phone based DTMF Controlled garage door opening system
125	BLDC motor speed controller with rpm display
126	Predefined speed control of BLDC motor
127	CYCLO converter using THYRISTOR
128	Distance measurement by using ultrasonic sensors

129	Portable programmable medication remainder
130	Ir obstacle detection to actual load
131	Programmable energy meter for electrical load survey
132	Sun tracking solar panel
133	Security system with user changeable password
134	Dish positioning system control by IR remote
135	Stamp value calculator for postage needs

MICRO CONTROLLER BASED

136	Speed checker to detect rash driving on highways
137	Password based circuit breaker
138	Visitor counter
139	Industrial temperature controller
140	Programmable ac power control
141	Dual converter using
142	Contactless liquid level controller
143	SCADA (supervisory controller& data acquisition) for remote

	industrial plant
144	Automatic surveillance camera panning system for pc
145	Closed loop control for a brushless dc motor to run at the exactly entered speed
146	Using a TV remote as a cordless mouse for the computer
147	Movement sensed automatic door sensing system
148	DTMF based load control system
149	Synchronized traffic signals
150	RFID card based paid car parking
151	Auto intensity control for street lights
152	Programmable switching control for industrial automation in repetitive nature of work.
153	Precise digital temperature control
154	Optimum energy management system
155	Four quadrant dc motor speed control with microcontroller
156	Pre stampede monitoring and alarm system

157	Pc based electrical load control
158	Bidirectional rotation of an induction motor with a remote control device
159	Precise illumination control of lamp
160	Speed controlled unit designing for a dc motor
161	Speed and direction controller of electric dc motor using smart phone
162	SMS based weather report
163	Electric motor speed control system with clockwise and anti-clockwise direction
164	Radio frequency based remote controlled robot with wireless video camera mounted on it
165	Construction of electrical oven temperature monitoring and controlling with time management
166	Active door and load controlling system using sensors
167	Auto door code lock

168	Automatic rail way gate control using microcontroller
169	GPS and microcontroller based location display on LCD display
170	Implementation of mobile based hi-tech door locking system
171	Industrial conveyer belt for object counting system
172	Home security robot prevent theft
173	Radio frequency based industrial wireless control system
174	Real time pedestratian detection and tracking at night time for driver assistance system
175	Remote controlled bomb disposable robot
176	RF based multiple device control using single remote
177	RFID based book tracking system in libraries
178	Secure wireless data communication
179	Wireless digital code lock with a status display
180	Power devices operated through movement sensor an effective fault governing on universal motor

181	Distribution transmission line voltage monitoring and alert system
182	Temp based speed controlling of frezle(exhaust) fan
183	Integrated chip based electrical equipments access control system
184	Intelligent street light operation and status through mobile phone
185	An efficient power saver for street lights using LDR and RTC
186	Electrical plant boiler temperature and water level monitor and control
187	Dynamic temperature adjustable system and load controlling using triac
188	Multi zone temperature monitoring with voice announcement system
189	Industrial devices operated through wireless technology
190	Handheld computer based speed controlling of dc motor

TECHNOLOGY LEARNING CENTER
..Finishing School for Engineer's

191	Smart card based access control system for power devices
192	Supervising & mechanization of agricultural field environment
193	Acceleration operating of dc motor through IR
194	Automatic gate operating and vehicles counting in corporate companies
195	Checking and auto control of water level using wireless sensor
196	Speed moderate of dc motor through remote device
197	Season based street light control system
198	Implementation of PWM technique for electric motor using h-bridge
199	Efficient energy utilization in corporate field with PIR sensor
200	Design and development of water sprinkler system for plants
201	Microcontroller based vehicles speed display for highways
202	Speed variation of dc motor using PWM motor
203	Highly sensitive biomedical digital heart beat monitoring system

TECHNOLOGY LEARNING CENTER
..Finishing School for Engineer's

204	Infrared Remote controlled High Voltage device switching with Electromagnetic Relay using AT89S52 MCU
205	16 X 2 LCD interfacing in 4 bit method
206	16 X 2 LCD interfacing in 8 bit method
207	PC based Appliances control in a plant
208	Communicating to 89S52 MCU through windows hyper terminal using RS-232 communication 0
209	Super sensitive Industrial Security System with Auto dialer and 60dB loud siren
210	Coin operated fortune telling system with dancing LED effect
212	Programmable temperature monitor and controller for industrial boilers & ovens
213	High sensitive LDR based power saver for street light control system
214	Embedded rigging free Electronic Voting System with instant results

215	Automatic Temperature based Fan Speed Controller
216	Embedded Automatic Car Parking System using AT89C51 MCU
217	High sensitive IR based Unmanned Railway Gate Control using AT89C51 Microcontroller
218	Automatic Room Light control with Visitor Counting for power saving applications in seminar halls
219	Embedded automatic two gate interlock for toll tax system
220	DC Motor speed control using PWM Technique
221	Electronic Notice Board with LCD and PS2 key board interfacing for user friendly message entry
222	DTMF based Industrial automation and appliances control system for rural and agriculture applications
223	Auto turn off for water pump with four different time slots for power saving applications 0
224	GSM based building automation.

225	Embedded security system (key pad and LCD display)
226	Home / office security system
227	Automatic room light controllers with visitors counter
228	Electronic eye with security system
229	Attendance system using RFID
230	Super intelligent robot using smoke sensors and light dependent resistor
231	RFID based guide for tourists
232	Electronic voting machine
233	Secured wireless data communication (at89s52)
234	SMS based automated room system.
235	Solar tracking system
236	Microcontroller based intelligent traffic light system.
237	Monitor and control of greenhouse environment-greenbee
238	Fire monitor using microcontroller
239	Friendly home automation system using cell phone

240	Embedded password based security door lock system using 89s52.
241	Electronic house – a well equipped modern house
242	Digital code lock with voice output
243	Automatic advanced railway gate control system.
244	Development of embedded system for energy saving of street light
245	Implementation of mobile based hi-tech door locking system.
246	Infrared remote switch -at89s52
247	Industrial protection system using smoke sensor
248	Interfacing 4x4 matrix key pad to micro controller
249	Microcontroller based digital clock with alarm
250	Time operated electrical appliance controlling system.(stair case lighting)
251	RFID based toll collection system
252	SMS based weather report system

253	Speed control of motor through cell phone
254	Traffic light controller
255	Wired robot
256	Wireless water-level indicator
257	Soil moisture controller
258	Wireless equipment control using at89s52
259	DTMF controlled motor
260	GSM based industrial automation
261	Biomedical heart beat monitor with microcontroller 8051
262	A live human being detector in war fields
263	Bank locker security system.
264	Digital thermometer with LCD display
265	Automatic plant irrigation (at89c2051)
266	Accident identification system
267	Multi pattern running lights (at89c2051)
268	Industrial protection system using temperature

269	Development of pc based PWM for dc motor speed control
270	Periodically on-off mosquito repellent
271	Robot control using TV remote
272	Design and implementation of object counter for industrial automation
273	Pc based home automation
274	Digital up/down counter (AT89S52)
275	GSM based home security system
276	Communicating to 89S52 MCU through windows hyper terminal using RS-232 communication
277	Industrial electrical appliances control system using IR Remote (TSOP1738 IR receiver module)
278	Wireless Music transmission and reception by IR communication
279	Radio frequency based remote Industrial Appliances control system

280	RF remote controlled metal detecting robot
281	Wireless Data Encryption and decryption for secured communication using RF
282	Wireless Electrical Apparatus Control System with Speed Control of AC motor in a plant using RF communication
283	Wireless DC Motor speed and direction Control using RF communication
284	Wireless Electronic Notice board with Multipoint Receiver
285	Wireless DC Motor Speed and Direction Control using IR (PWM and H-Bridge)
286	Wireless Electrical Apparatus Control System using IR communication
287	ZIGBEE based Secured Wireless Data transmission and Reception
288	ZIGBEE Based Wireless Electronic Notice Board with Multi Point Receivers

289	Two-way Wireless Data Messaging System for Rural Areas using ZIGBEE Technology
290	ZIGBEE based wireless remote weather station monitoring system
291	DTMF based industrial automation and appliances control system (Control your industrial appliances through a mobile phone from anywhere on the planet)
292	Pc based electrical load control
293	RFID card based paid car parking
294	Secured wireless data communication (at89s52)
295	SMS based automated room system.
296	RFID based toll collection system
297	SMS based weather report system
298	GSM based home security system
299	Wireless controlled RF Based pick and place robot with Base Rotation, Elbow And Wrist Motion With a Functional Gripper

300	RF remote controlled metal detecting robot to assist bomb detecting squad on terrorists attacks
301	IR based Intelligent Autonomous self guided vehicle Robot for defense applications
302	Mobile Phone controlled DTMF based robotic boat to travel in water for ocean research applications
303	Wireless RF Controlled Fire Fighting Robot with high pressure air blower / water sprinkler
304	Wireless RF Controlled LPG Detecting Robot for underground and mining applications
305	RF controlled robotic wheel chair for physically challenged with obstacle identification and musical alert system
306	IR based escaping cock robot (Inspired by nature: inspired by nature – escapes from you, if you try to catch it)
307	Pc controlled spy robot
308	Voice controlled robot for physically challenged people

309	super intelligent robot using smoke sensors and light dependent resistor
310	Robot with camera interface which can be used as a spy-bot.
311	Play with robotic eye(IR sensor)
312	wired robot
313	Obstacle detector robot.
314	a live human being detector in war fields
315	fire fighting robot (at89s52)