Project Name	
1. Microwave oven (countdown timer, safety door cut-out)	
2. Temperature display (degrees Celcius onto LCD or Seven segment display)	
3. Temperature alarm (sound alarm at pre-settable temperature)	
4. Light-activated switch (turn lights on automatically at pre-settable low-light level)	
5. Automatic light switch (turns lights off after a pre-settable time)	
6. Motion detection safety/security light (turns light on when movement detected, turns off after a preset time)	
7. Car burglar alarm (vibration detection)	
8. House burglar alarm (turn on/off from inside via entry/exit zone)	
9. Garage / shed burglar alarm (turn on/off from outside – i.e. before entry)	
10. Seat-belt alarm (if someone is sitting in a seat and has not fitted their seatbelt then sound alarm if the ignition key is turned and/or prevent engine from starting)	
11. Baby-left-in-car alarm (if a baby or child is sitting in a seat and the driver gets out and locks the door then sound alarm)	
12. Car black-box (record vibration of car in two dimensions every 1 second into memory to enable predictive maintenance and to help accident investigators to understand the mechanics of an accident)	
13. Air-bag trigger system (trigger front air-bag if a shock above a certain threshold is sensed in the X dimension of the accelerometer; similarly, trigger side air-bag if a shock above a certain threshold is sensed in the Y dimension)	
14. Keyboard-operated safe (enter code at keypad to lock / unlock)	
15. Clock (time displayed HH:MM:SS on LCD display, time-set facility)	
16. Sports timer / stopwatch (start / stop buttons – elapsed time displayed on LCD)	
17,Alarm clock (pre-settable alarm time)	
18.RFID secuirty Lock (only open when the correct tag is present)	
19. Vibration alarm (use accelerometer to detect vibration – sound alarm if vibration level too high)	
20. Bus stop sign (display the time of arrival of the bus – count down until the bus arrives)	
21. Bus / tube current stop notice (display the name of the next stop the bus will arrive at)	
22. Lawn watering sprinkler system (use servo to move the sprinkler head)	
23. Camera mount (use switches to select position – move servos to position the camera - pan / tilt)	
24. Simple robotic device (toy, model car etc.; use one or two servos to create movement)	
25. Air-conditioning system (use temperature reading and user input to control fans, heater and cooler)	
26. A tilt-based game in which the user must tilt a handset to follow the movement of a set of LEDs (this will use the Accelerometer and bar-LEDs module). A user will be given a score based on their reactions.	
27. RFID car ignition system (only start the car if the RFID tag is in range of the reader AND the ignition button is pressed)	
28. Fridge-alarm and door reminder (sounds alarm if fridge door left open too long, also sound alarm if fridge is too hot inside)	
29. Remote controlled light (turn on/off, dim and control brightness from a TV remote control handset) Remote controlled light (turn on/off, dim and control brightness from a TV remote control handset)	
30. Children's educational toy to teach counting, adding and/or subtraction (keypad input, seven segment or LCD display)	
31. Egg timer with programmable 'egg-hardness' option (sound alarm when egg is cooked, keypad / switches to select egg hardness, seconds countdown on LCD or seven segment display)	
32. Self-righting system for a small robot vehicle (use an accelerometer to detect that the robot has turned over and use a servo to flip the robot back up the right way – you do not have to build the actual robot, just a mock-up with the self-righting device attached)	
33. Electric toothbrush (use a servo to provide the brush movement – adjustable speeds and time duration)	
34. Environment monitor for Greenhouse (usesTemperature and Humidity sensors– Humidity sensor will be available by about the fourth week of term)	
Other simple robotic applications using one or two servos and Meccano (discuss with tutor)	
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