C programming through AVR-GCC
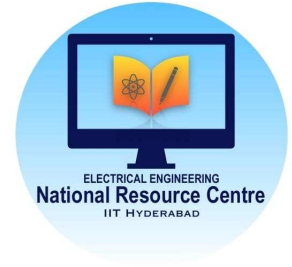
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Abstract—**The objective of this manual is to introduce the student to the basic features of programming, like conditional statments, loops, function and arrays using embedded C**

1 COMPONENTS

Component	Value	Quantity
Breadboard		1
Resistor	$\geq 220\Omega$	1
Arduino	Uno	1
Seven Segment Display	Common Anode	1
Jumper Wires		10

TABLE 0

2 C PROGRAMMING

1. Connect the seven segment display to the arduino.
2. Download the following directory. Note that the C file has to be renamed to **main.c** before using **make**.

   > svn checkout https://github.com/gadepall/ arduino/trunk/avr−gcc/cprog/codes

3. If-Else: Run **ifelse.c** and test for dec=0 and dec=8.
4. Switch-case and Function: Use **sevenseg_func.c** for generating numbers between 0-9.
5. For loop: Use **loop.c** to implement a decade counter.
6. Arrays and Headers: Ensure that **array.c** and **sevenseg.h** are in the same directory and run the C code.