Intro to Programming

CURIE 2011
Variables

• Variables hold values
• Variables must be declared before putting values in them
• The size of the variable must be large enough to hold the value:
  – A bit-sized variable can hold a bit: 0-1
  – A byte-sized variable can hold a byte: 0-255
  – A word-sized variable can hold a word: 0-65535
Making Things Happen Over and Over...

- FOR...NEXT – certain number of times
- DO .... WHILE – while a certain condition is met
- DO ... UNTIL – until a certain condition is met
- DO ... LOOP – unconditionally repeat
Making Decisions

- IF ... THEN – if a certain condition is met then do something
- ELSEIF – if another condition is met
- ELSE – in all other cases
- SELECT .... CASE – certain situations
- Logic:
  - $X > Y$ – greater than
  - $X < Y$ – less than
  - $X \geq Y$ – greater than or equal to
  - $X \leq Y$ – less than or equal to
  - $X <> Y$ – not equal to
  - $X \text{ AND } Y$ – both conditions must be met
  - $X \text{ OR } Y$ – either condition must be met
Subroutines

• Do specific things
• Must be given a label or name
• Can be “called” by main program
• Control returns to main program, line after being called
• Allows same code to be used over and over
• Makes program more compact, shorter, more logical