Selection Statement

Chapter 3
A Java Language Program

• Is a Class
• A Class has data declarations and methods
• A Method has statements or instructions to perform the function of the method
• Statements can be:
  – Sequence statement; Ex: assignment statement
  – Selection statement; Ex: if statement
  – Repetition statement... we will learn it later
• It is similar to a writing an essay in any language:
  – Chapters, paragraphs, sentences, etc.
Sequence Statement

• Assignment statement;
• **Syntax**: (structure, format)
  LHS = RHS;
  Data = value;
• Example:
  gunReloadTime = 5;
• **Semantics**: (meaning)
  Assign gunReloadTime the value of 5
Selection Statement

• Implementing choices in the design
• Syntax:

    if (condition)
    {
        // do something
    }

    else
    {
        // do something else
    }
Condition

• How to express / write in Java language the condition for the selection statement?
• Using relational operators:
  
  `<`
  
  `>`
  
  `<=`
  
  `>=`
  
  `==`
  
  `!=`
Implementing Random Behavior

• Using random numbers generated by the Greenfoot environment.
• How to get a random number from the Greenfoot environment?
• Greenfoot itself is a class. Invoke a class method getRandomNumber (range)
• Example:
  percent = Greenfoot.getRandomNumber(100);
  percent will be assigned a random number between 0-99.
Adding new methods

• Lets add methods:
  • turnAtEdge()
  • randomTurn()
  • lookForWorm()
10 Concepts

• Next class....