Lecture 6

• Topics Covered
  – Pre-defined methods
  – User-defined methods
Pre-defined methods

• Remember that everything in Java is inside a class. Therefore, there are no independent functions as we have in other procedural languages.

• If there are pre-defined methods for us to use, they will be inside some class.

• What do we usually have to have in order to call a method?

• Are there exceptions to this rule?
Invoking pre-defined methods

- The Math class has several pre-defined class methods that can be called without an object (instance). Class methods are called with the name of the class of which they belong

- Random Number Generator method
  - Prototype: double random()
  - Example: double val = Math.random();
  - 0.0 < val <= 1
Defining user-defined methods

• For now, we will define our methods inside the class where your main method lies (we will define them as class methods
Method syntax and Example

• Syntax
  
  modifiers  return_type  meth_name(param_list){
    statement_1;
    statement_2;
    ...
    statement_n;
  }

• Example

 public static int getMax( int a, int b){
    int result;
    if (a > b)
      result = a;
    else
      result = b;
    return result;
  }
Exercise

• Write a java program that will generate one random number between 1 and 50. Allow the user to guess until the user guesses the number. You can give the user hints if they are too low or too high.