Java Lecture : Sept 7

Tutorial?

Facebook group?

Quiz on Sept 21 - Covering Lectures 1 – 4.

1. Primitive types

2. Declaration of variables

<datatype> <variableName>;

int num; // declare

<variableName> = <value>

num = 30; // assign

<datatype> <variable> = <value>

int num = 30; // initialize

Variable names must be

* one word
* start with a letter or \_ or $
* consist of letters (A – Z, a – z), digits (0 – 9) or \_ or $

variables we start with lowercase, Class name we start with Uppercase.  
Java is case sensitive!!!!!

- Java, java, JAVA, jaVA are all different identifiers.

3. Arithmetic operators

With integers: +, -, \*, /, %

For division, /

* - if both operands are integer, it will do integer division
* - if one of the operands is double, it will do double division

Modulo operator, % is to get the REMAINDER for integer division.

4. Strings  
  
// Declare a string

String name = "BIT101";  
String dipName = "DIP215";

5. Concatenation operator – if either operand is a String.  
String both = name + dipName; // concatenate  
System.out.println("Combined class is " + both);  
 // prints "Combined class is BIT101DIP215"

System.out.println("Total number is " + 15 + 20);  
 // prints "Total number is 1520"

6. Typecasting

byte > short > int > long > float > double

A value from the left can be stored in a variable of the type from the right  
To go the other way you need to TYPECAST

double dNum = 30.7;  
int iNum = (double) dNum; // typecast

7. Precedence Rules

Arithmetic operations performed in the following order:

* ()
* \*, /, %
* +, -

(3 + 4) \* 5 / 3

8. Characters: **char** data type

'a', '\t'

7. Scanner

|  |
| --- |
| import java.util.Scanner;  public class TestScanner{  public static void main(String[] args)  {    // Declare a Scanner object  Scanner sc = new Scanner(System.in);  int iNum = sc.nextInt(); // read an integer  sc.nextLine(); // consume the ENTER pressed by user  double dNum = sc.nextDouble(); // read a double  String subjectCode = sc.next(); // read one word  String name = sc.nextLine(); // read a line until user presses ENTER  } |

8. printf  
double price = 8.456;  
System.out.printf("The price is %5.2f", price);

8. if/then