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Object Oriented Programming (JAVA)

Lecture 6

Lexical Issues [1/5]

1) Whitespace 2) Identifier 3)Literals 4) Comments 5) Separators 6) Keywords

- Whitespace: Free-form language, no need to put extra indentations, as long as there's one white space between each token.
- Identifiers: Sometimes call it as conventions. Some common conventions to name variables, methods, classes, interfaces and packages.
  - Sequence of uppercase and lowercase letters, numbers, or the underscore and dollar-sign characters
  - Java is a case-sensitive language

    MyVariable myVariable _myVariable

    $myVariable _myVar1 my_variable

    my-variable My Variable 2MyVariable

Lexical issues [2/5]

- Literals:
  - It's a constant value in Java can be represented by using literals.

    100 98.7 'X' "This is a test"
- Comments:

  There are 3 type of comments in Java
  - Single Line comment
  - Multiple Line Comment
  - Document Comment

Lexical Issues [3/5]

Document Comments

- Document Comments allow you to create documentation for your program.
  - Start of Comments /**
  - End of comments */
  - Every line have an * in start
  - Several Tags for documentation @author @version @deprecated @param @return ...

```
/**
   *  This document is Hello World Document
   *  As My first program with OOP Course
    *  @author  Student Name
   *  @version 1.0
*/
```

Lexical Issues [4/5]

Java Separators

Symbol	Name	Purpose
( )	Parentheses	Used to contain lists of parameters in method definition and invocation. Also used for defining precedence in expressions, containing expressions in control statements, and surrounding cast types.
{ }	Braces	Used to contain the values of automatically initialized arrays. Also used to define a block of code, for classes, methods, and local scopes.
[ ]	Brackets	Used to declare array types. Also used when dereferencing array values.
;	Semicolon	Terminates statements.
,	Comma	Separates consecutive identifiers in a variable declaration. Also used to chain statements together inside a **for** statement.
.	Period	Used to separate package names from subpackages and classes. Also used to separate a variable or method from a reference variable.

Lexical Issues [5/5]

Java Keywords

abstract	double	int	strictfp
boolean	else	interface	super
break	extends	long	switch
byte	final	native	this
case	finally	new	throw
catch	float	package	throws
char	for	private	transient
class	goto	protected	try
const	if	public	void
continue	implements	return	volatile
default	import	short	while
do	instanceof	static	synchronized

Applets

- Client side web base application (Browser)
- Applets run on your browser (A way to run java program through your browser)
- Very small internet or intranet application, and very secure
- Life cycle : Init→start→paint→stop→destroy
- Object→Component→Container→Panel→Applet

Applet Application

```
import java.awt.Graphics;

public class HelloApplet extends java.applet.Applet

  {

      public void init() {

                  resize(150,25);

      }

public void paint(Graphics g)

          {

                  g.drawString("Hello world!",
      50, 25);

          }

}
```

Applet Html

```
<html>
   <head>
        <title>This is an aplet</title>
   </head>
<body>
 <h1>This is an applet</h1>
   <Applet CODE="HelloApplet.class" width="200" height="200”>
</body>
</html>
```

Embedding Applet

- The Applet tag in html is used to embed an applet in the web page.
- *CODE* attribute of Applet tag is used to specify the name of Java applet class name.
- To test your applet open the html file in web browser

Java Documentation

- http://docs.oracle.com/javase/1.5.0/docs/index.html

Week Review

- Programming Paradigm
- Abstraction
- 3 OOP Principles
- Java Programs (1st Program, 2nd Program)
- Two Control Statements
- Using Block of Code
- Lexical Issues
- Java Documentation
- Applets

Questions?

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Thanks…