

CE0825a: Object Oriented Programming II

12: Documentation, Bugs, Versioning

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Monday, 11th April 2016

Documentation and Testing

- Generally ignored in ‘programming’ courses, but vital!
- Testing estimated between 10 and 50 percent of total time
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General Commenting

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- Meaningful variable, class, method names
- Single letter variables
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Useless Comments and Names

```
/* Print a string */
void blah(String x)
{
    // Print the string:
    System.out.println(x);
}
```

Useful Version

```
import java.util.*;
import javax.naming.directory.*;
public class lecture12_checkemail {
    /* Check if the provided email is valid, by looking for a mail
       server for it.
    */
    public static boolean isValidEmail(String email) {
        try {
            Properties env = new Properties();
            env.put("java.naming.factory.initial",
                    "com.sun.jndi.dns.DnsContextFactory");
            final InitialDirContext idc = new
                InitialDirContext(env);
            String [] parts=email.split("@");
            Attributes attrs = idc.getAttributes(parts[1],
                new String []{ "MX" });
            String mailservers =
                attrs.get("MX").get(0).toString();
            System.out.println(mailservers);
            return parts.length==2;
        } catch(Exception e) { System.err.println(e); return
            false; }
    }
    /* Test if all the email addresses on the command line are
       valid.
    */
    public static void main(String args[]) {
        for(String email : args) {
            if (!isValidEmail(email)) {
```

Javadoc

- Java's own documentation is written via Javadoc
 - <http://docs.oracle.com/javase/8/docs/technotes/tools/windows/javadoc.html>
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Javadoc tags

Special annotations to help the HTML generation¹

author Who wrote it

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@exception 1.0

{@link} 1.2

@param 1.0

@return 1.0

@see 1.0

@since 1.1

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 - What?
 - When?
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- Crash reporting, field telemetry
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