SECURE CODE

WARRIOR

ENABLED DEBUG FEATURES

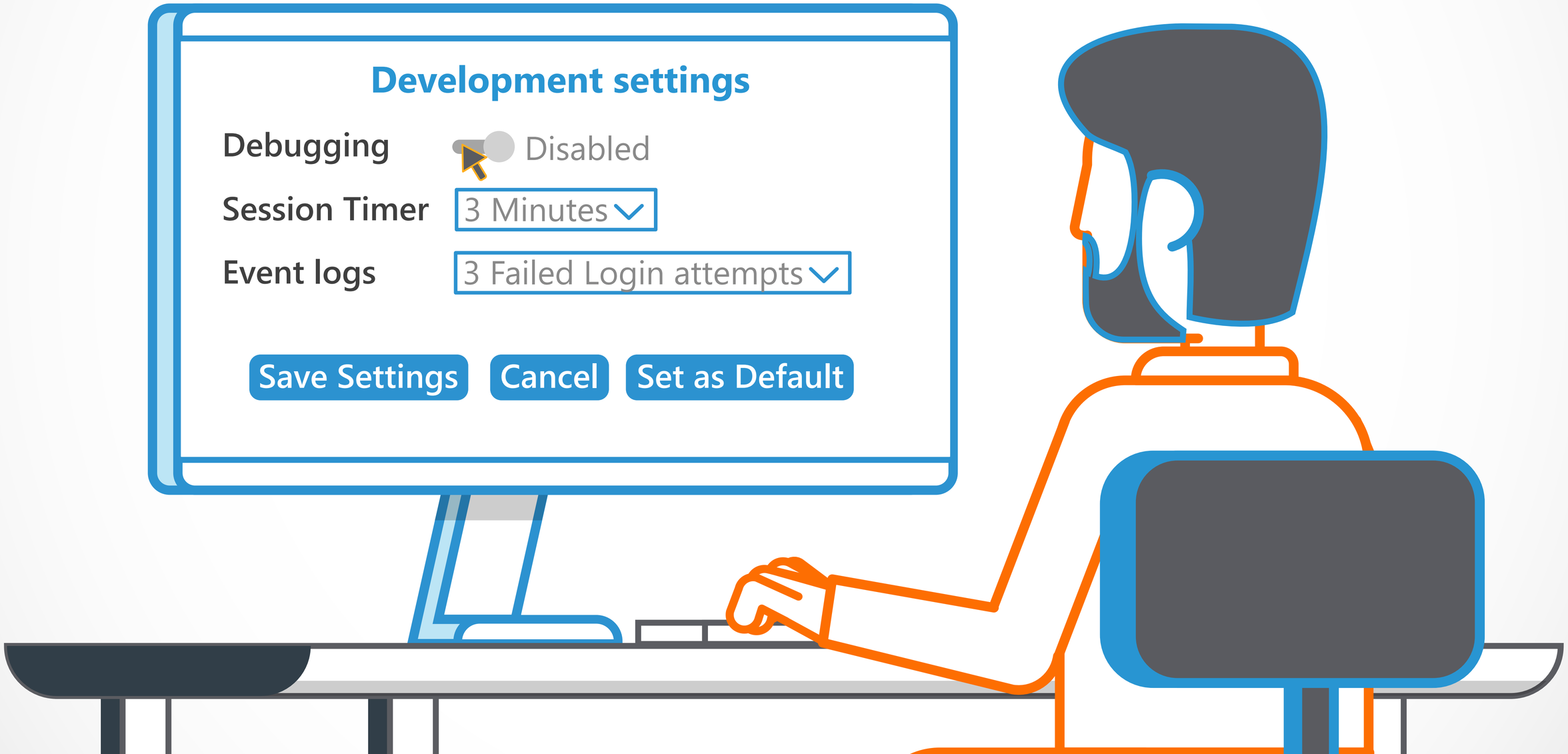
We'll go through

some causes and preventions of vulnerabilities in this category.

WHAT DO WE MEAN BY ENABLED DEBUG FEATURES?

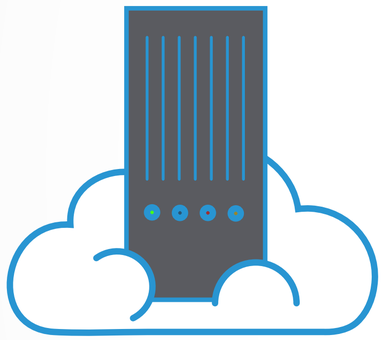
Debug Features are features that help developers know the internal state of an application while investigating the cause of errors.

Generally, these should not be enabled in a Production environment.



LET’S LOOK AT AN EXAMPLE

A web application is correctly configured to catch any errors and forward them to a generic error page.



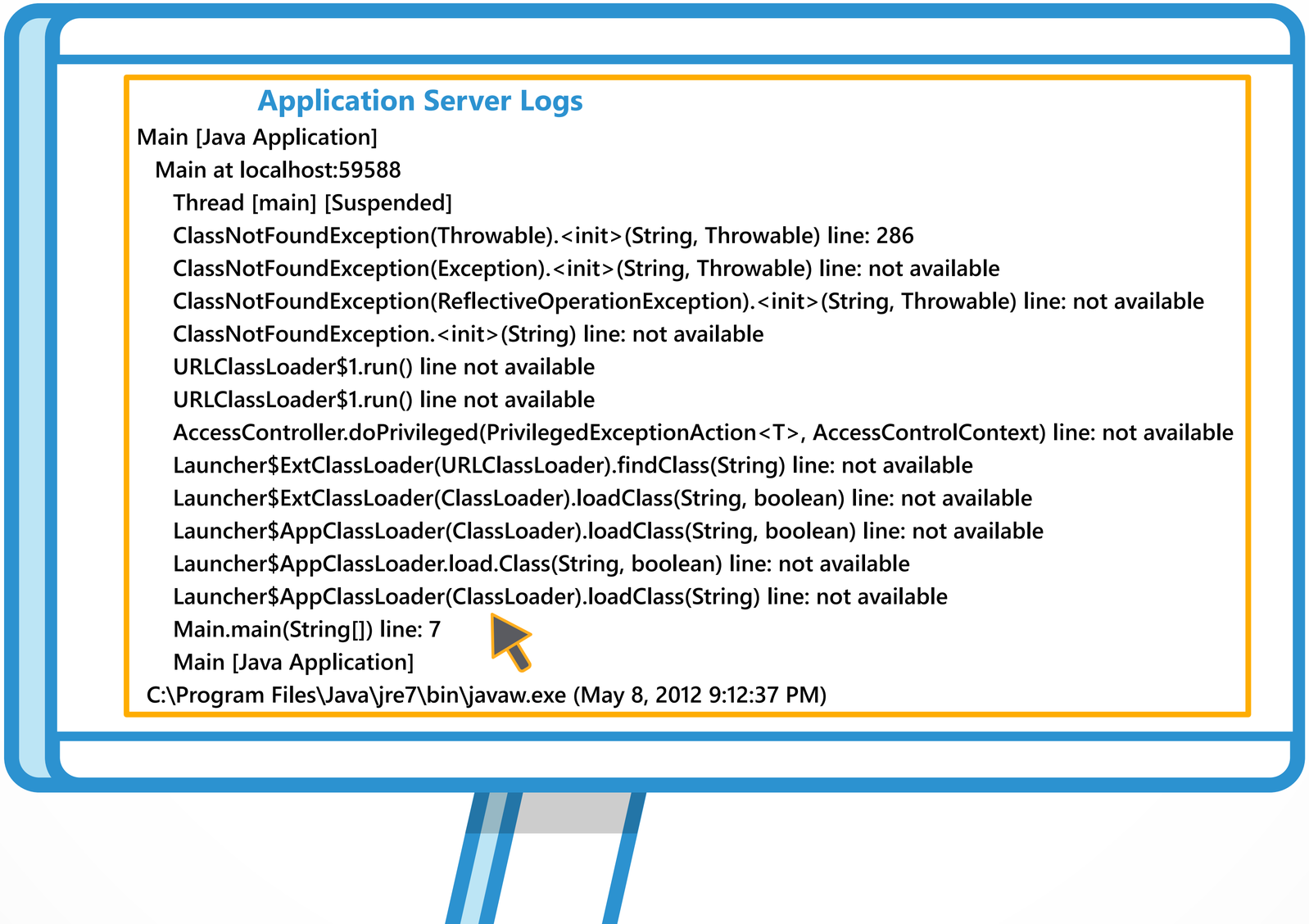
Application Server

Application Server Logs

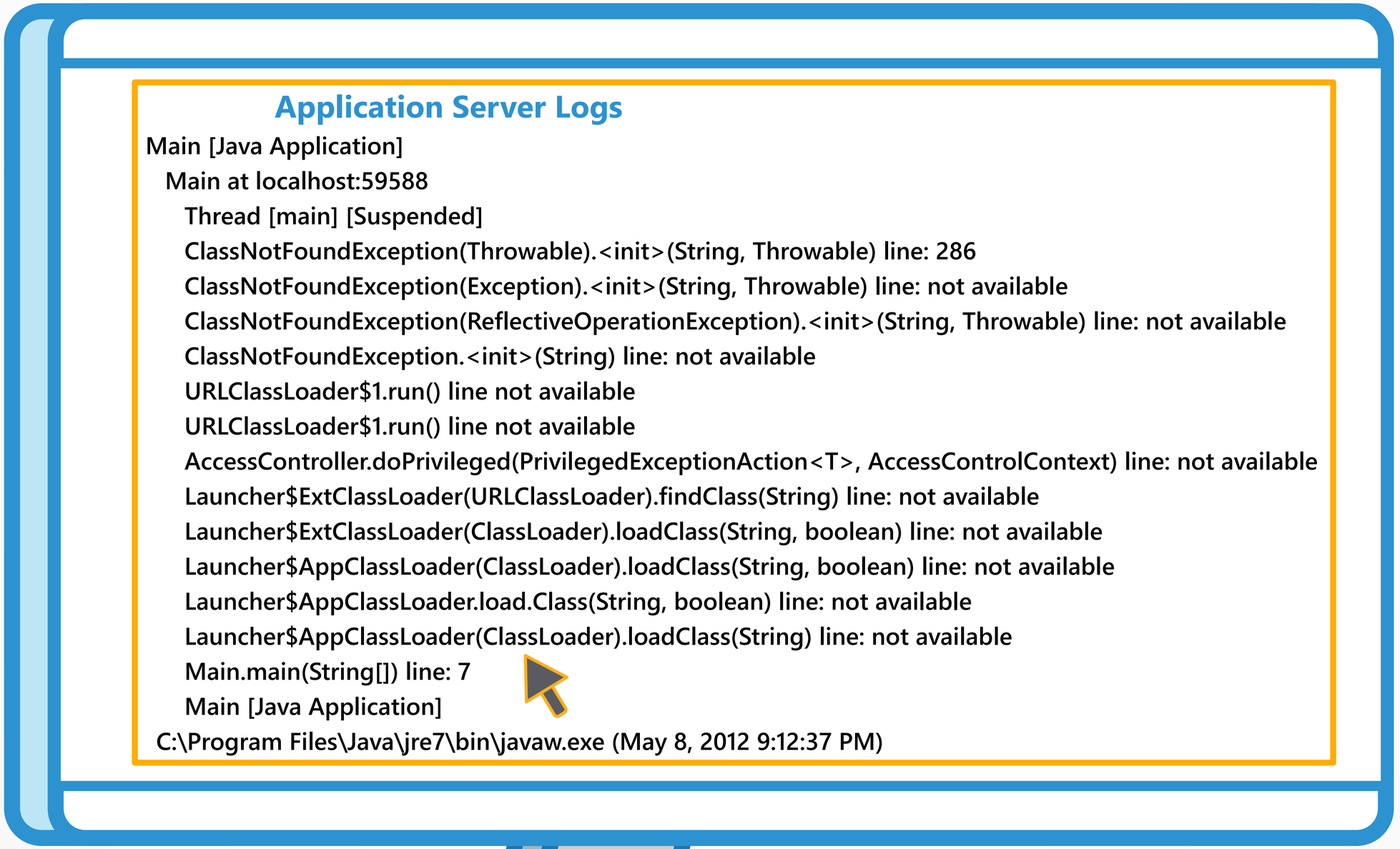
```
Main [Java Application]
  Main at localhost:59588
    Thread [main] [Suspended]
    ClassNotFoundException(Throwable).<init>(String, Throwable) line: 286
    ClassNotFoundException(Exception).<init>(String, Throwable) line: not available
    ClassNotFoundException(ReflectiveOperationException).<init>(String, Throwable) line: not available
    ClassNotFoundException.<init>(String) line: not available
    URLClassLoader$1.run() line not available
    URLClassLoader$1.run() line not available
    AccessController.doPrivileged(PrivilegedExceptionAction<T>, AccessControlContext) line: not available
    Launcher$ExtClassLoader(URLClassLoader).findClass(String) line: not available
    Launcher$ExtClassLoader(ClassLoader).loadClass(String, boolean) line: not available
    Launcher$AppClassLoader(ClassLoader).loadClass(String, boolean) line: not available
    Launcher$AppClassLoader.load.Class(String, boolean) line: not available
    Launcher$AppClassLoader(ClassLoader).loadClass(String) line: not available
    Main.main(String[]) line: 7
    Main [Java Application]
  C:\Program Files\Java\jre7\bin\javaw.exe (May 8, 2012 9:12:37 PM)
```

However, in the latest update, a flag for development mode has been included in the production environment.

As a result, when errors come up in the application, the full stack trace is being returned.



This leaks information about the application and it's runtime environment.



A Hacker can now use the captured data to look for weak points in the host platform, the application or it's dependencies and better plan their attack.

To avoid attacks relating to Enabled Debug Features, developers should

- Implement an organization-wide security policy
- Set up a patch management process to continually monitor components throughout the software lifecycle
- Acquire components from official sources only, via secure links
- Inventory client and server-side components to check for security alerts, using tools like NVD or CVE

Congratulations, you have now completed this module!

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www.securecodewarrior.com