Packages

Introduction

- The `package` and the `import` constructs in Scala are similar in their nature to those we know from Java.

The Java Global Hierarchy

- Scala resides in the Java platform global hierarchy of packages.

The Default Package

- Scala supports the default package concept. Unless we place the package declaration in our source code, all classes our source code file includes will be part of the default package.

The Package Statement

- The package statement should be placed in the beginning of the source code file.

```
package com.abelski.samples

class Box
{
    ...
}
```

Reverse Domain Name Convention

- Scala is part of the Java ecosystem. It is highly recommended to follow the Java reverse domain name convention.

```
package com.abelski.samples
{
    ...
}

package com.zindell.demo
{
    …
}
```

Nested Packages

- The Scala programming language allows us to nest packages within each other.

```
package com.abelski.samples
{
    package graphics
    {
        ...
    }
    package games
    {
        ...
    }
}
```

Nested Packages

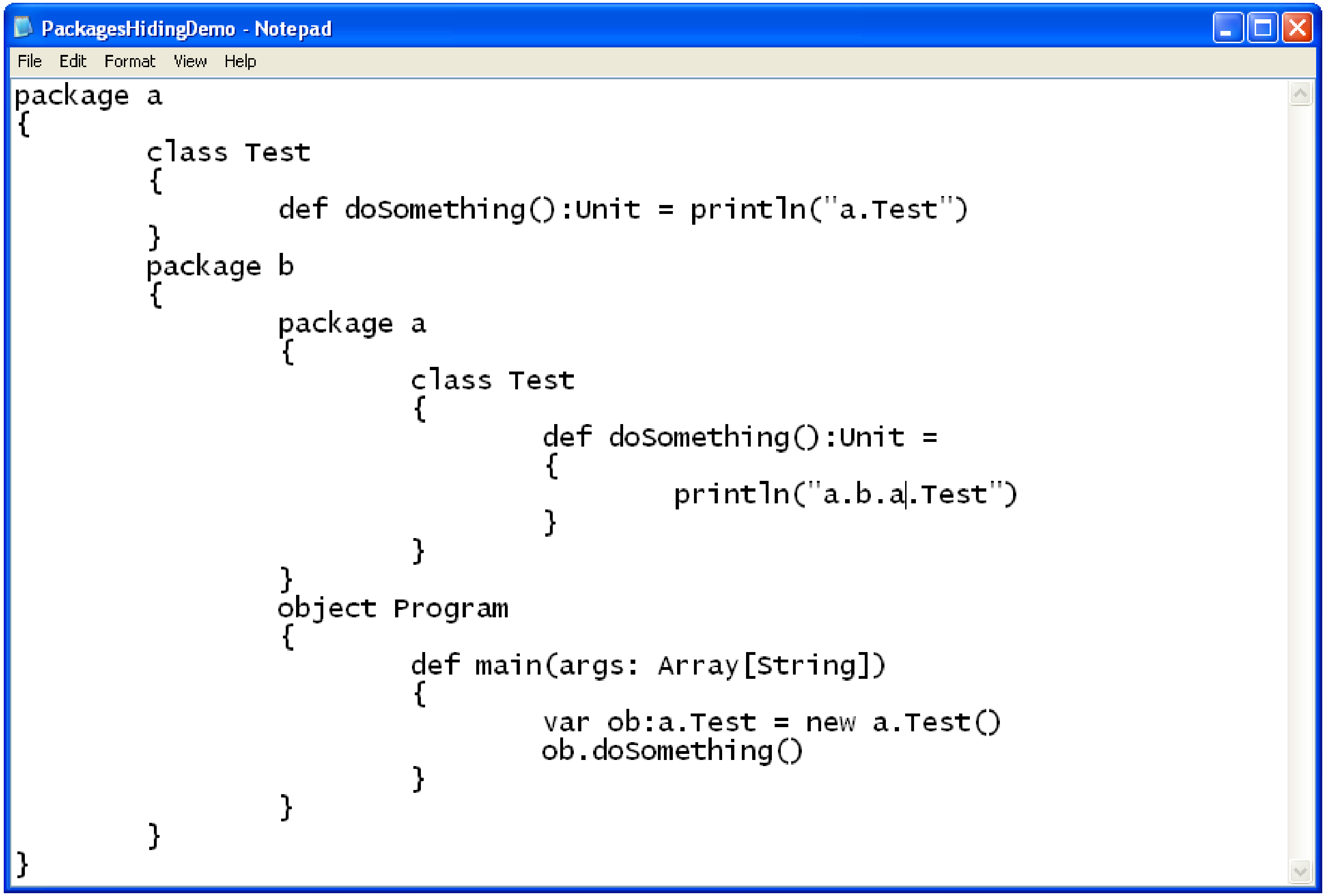
- Within a nested package there is no need to specify the full qualified name of classes we want to use that belongs to the same package or its outer one.

```
package com.abelski.samples
{
    class Test {...}
    package graphics
    {
        class GraphicsTest extends Test {...}
    }
}
```

Packages Hiding

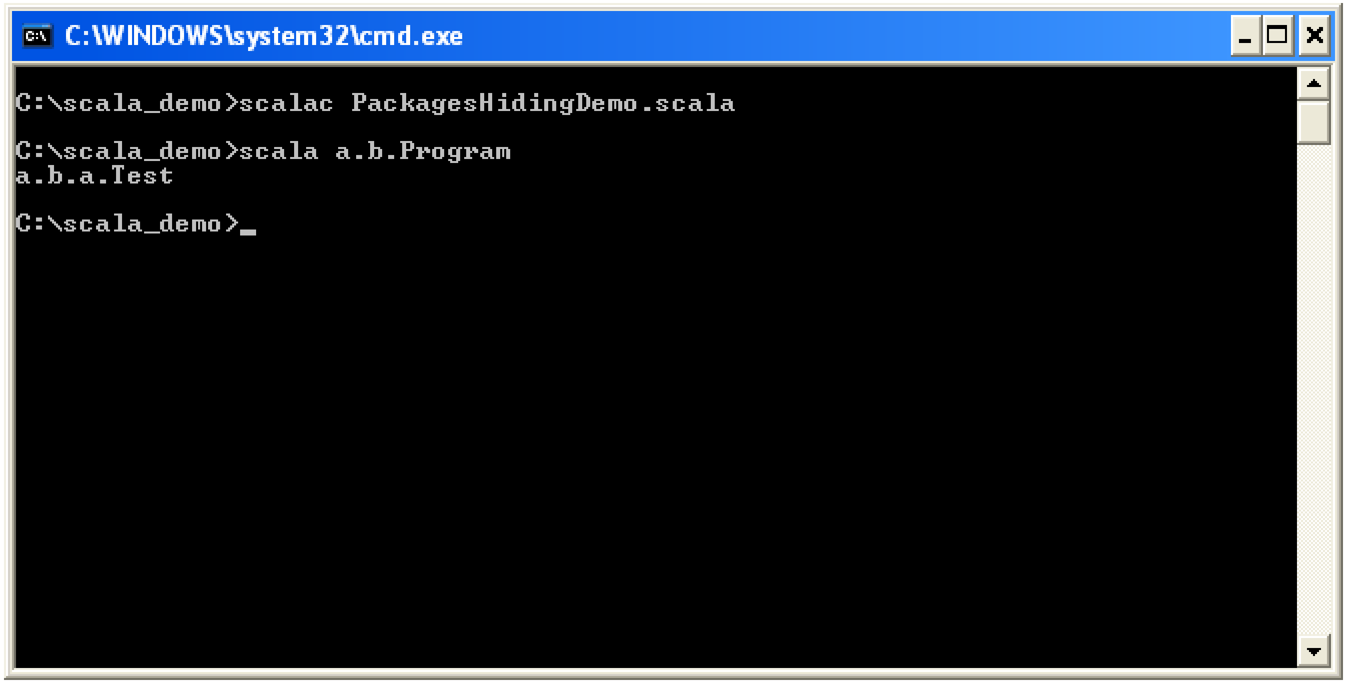
- When having a package identical in its name to the name of an outer package it will hide it.

Packages Hiding



```
package a
{
        class Test
        {
                def doSomething():Unit = println("a.Test")
        }
        package b
        {
                package a
                {
                        class Test
                        {
                                def doSomething():Unit =
                                {
                                        println("a.b.a.Test")
                                }
                        }
                }
                object Program
                {
                        def main(args: Array[String])
                        {
                                var ob:a.Test = new a.Test()
                                ob.doSomething()
                        }
                }
        }
}
```

Packages Hiding



```
C:\scala_demo>scalac PackagesHidingDemo.scala

C:\scala_demo>scala a.b.Program
a.b.a.Test

C:\scala_demo>_
```

The Import Statement

- The Scala programming language supports the same import mechanism we know from Java.
- Once we import a specific class that belongs to specific package we can access it using its plain simple name as opposed to using its full qualified one.

```
import com.abelski.Program
import com.zindell.graphics.demo.Test
```

The Import Statement

- In order to import all classes that belong to specific package we should use '_' as opposed to using '*' as common in Java.

```
import com.abelski._
import com.zindell.graphics.demo._
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The Import Statement

- Working with a specific object we can import its members. Doing so it would be possible to access each and every one of them without specifying the name of the object.
- We can either import all members of a specific object or just a specific member.

```
import com.abelski.Program._

import com.zindell.graphics.demo.Program.doSomething
```

The Import Statement

- The import statements in Scala can appear anywhere. They don't need to be placed at the beginning of the compilation unit.

The Import Selector Clause

- The import statement in Scala allow us to import just some of the members that belong to the imported package.

```
import com.abelski.demo.{JacaGama,BongoKongo}
```

- Using the import selector clause we can even choose to rename a member we import.

```
import com.abelski.demo.{JacaGame=>JGame,BongoKondo}
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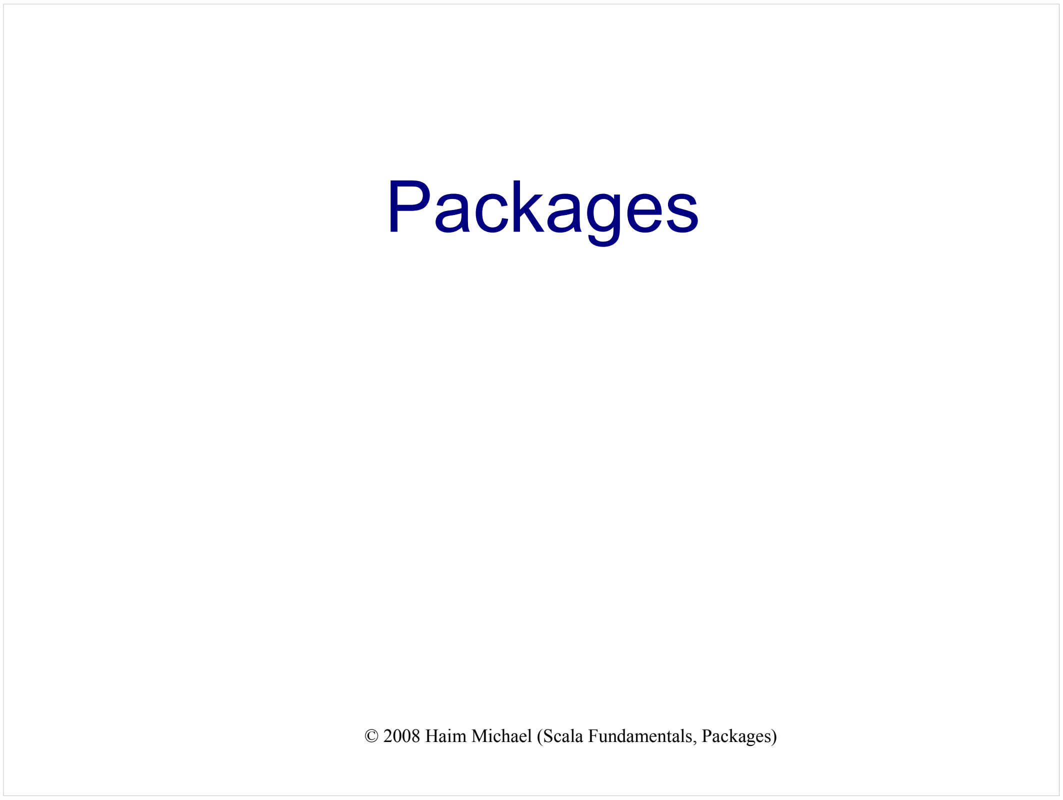
Automatic Imports

- When coding in Scala the following automatic imports take place:

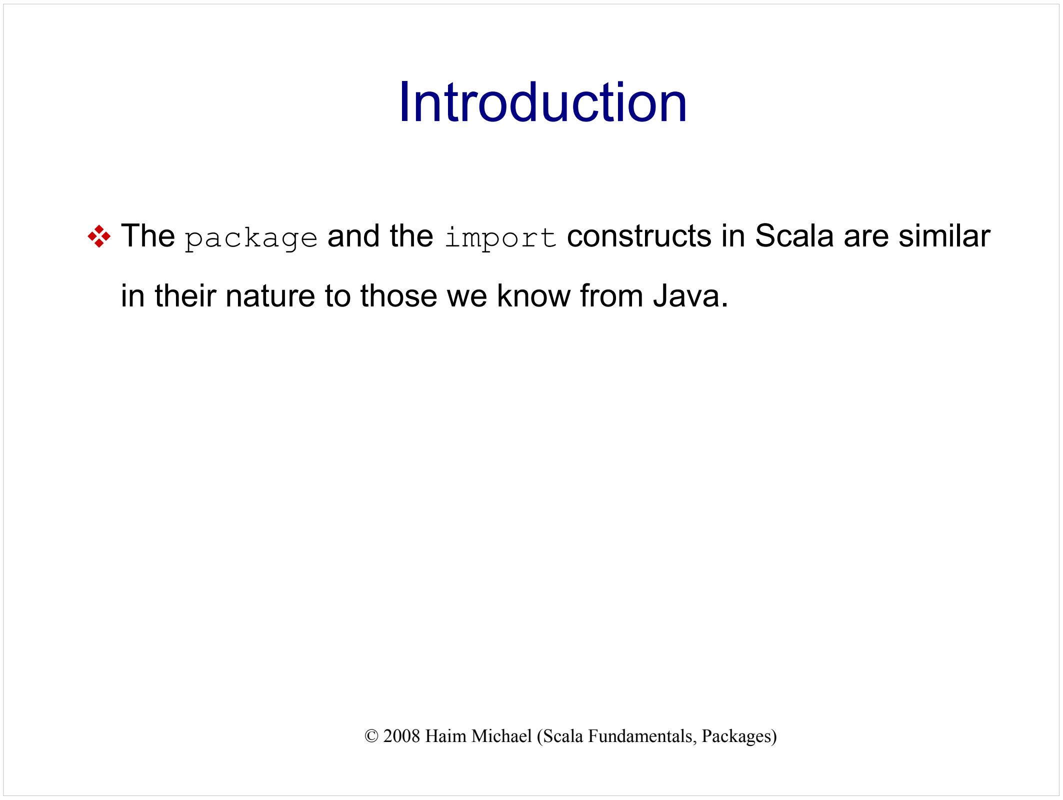
  All members of the `scala` package

  All members of the `java.lang` package

  All members of the `scala.Predef` singleton object



Packages



Introduction

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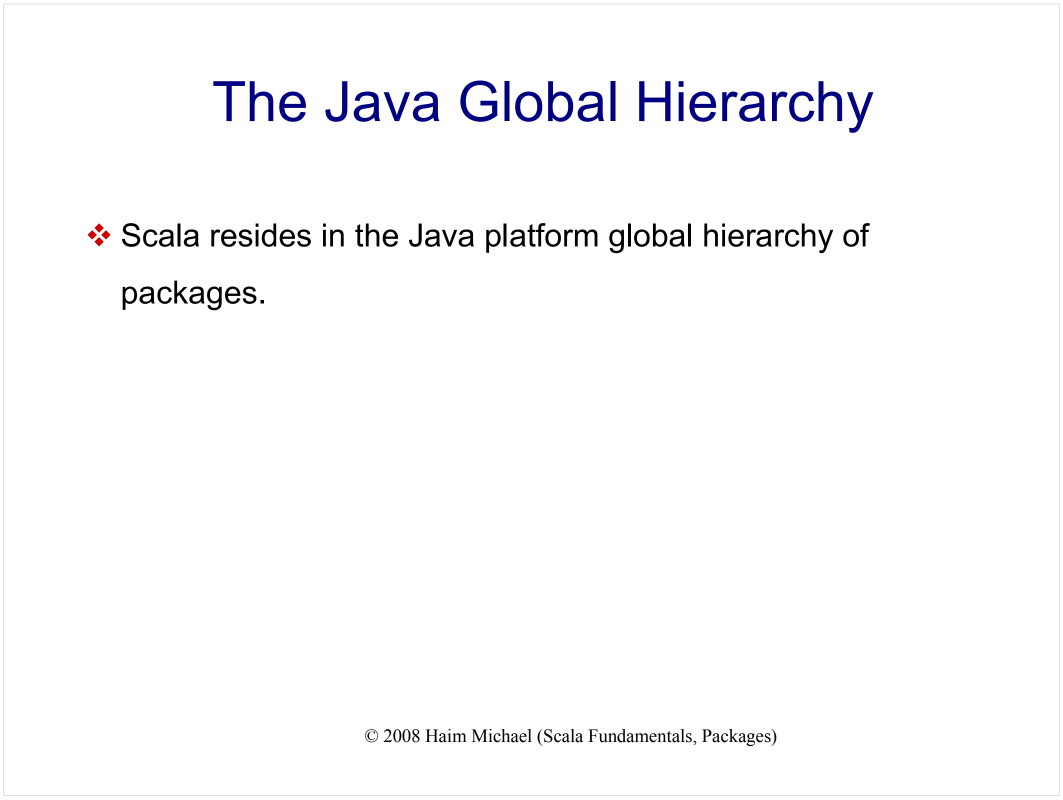

The Java Global Hierarchy

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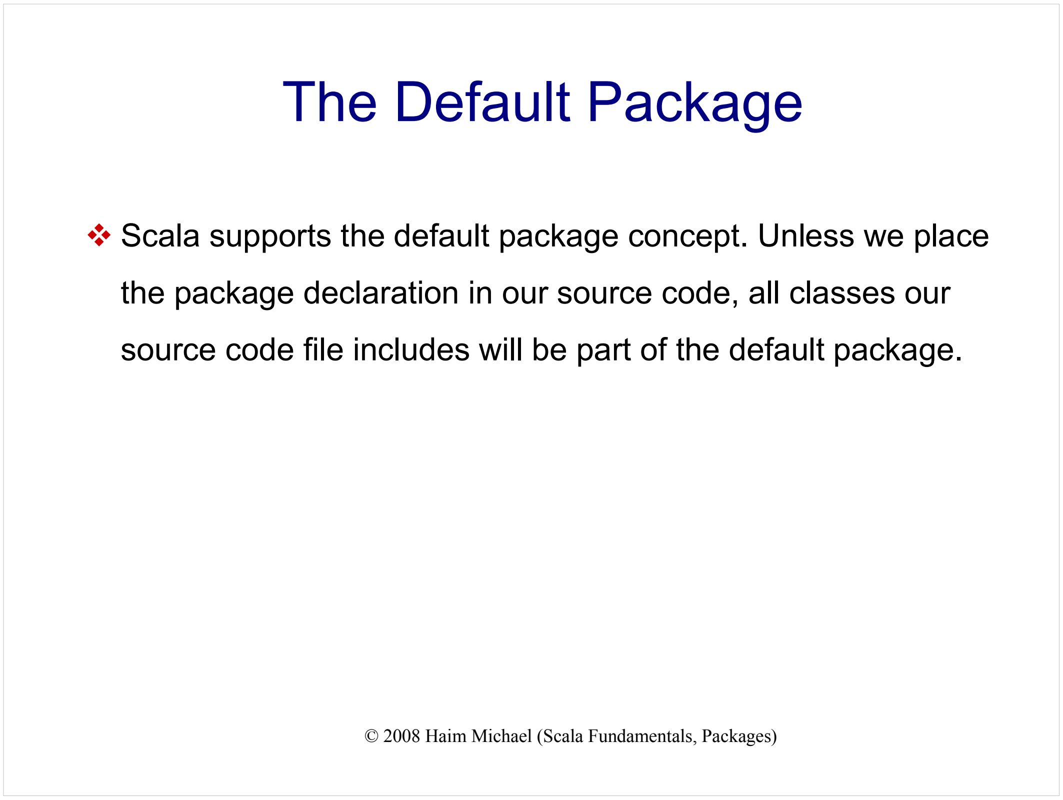

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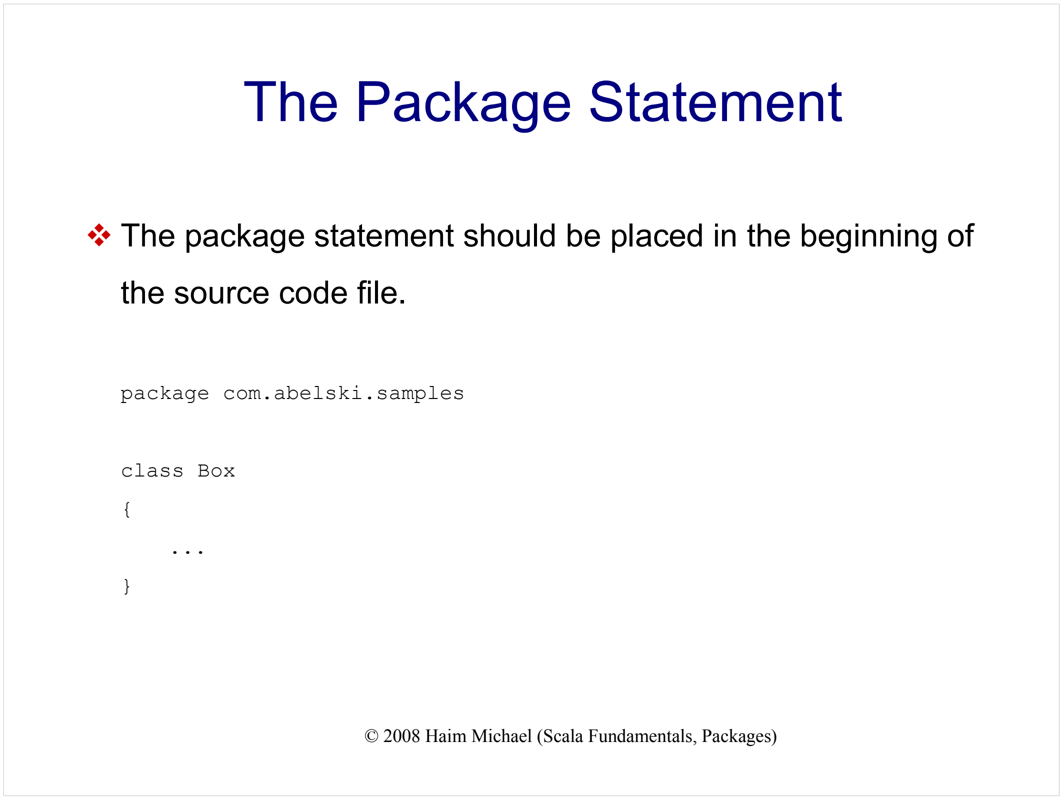

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class Box
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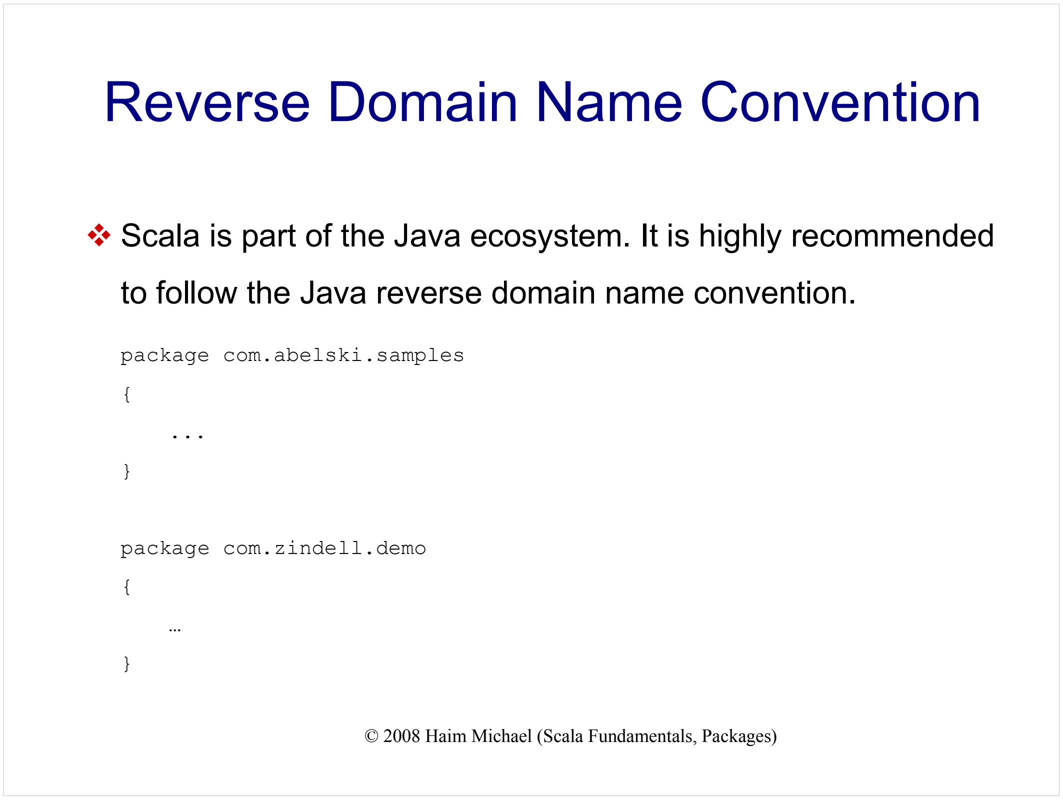

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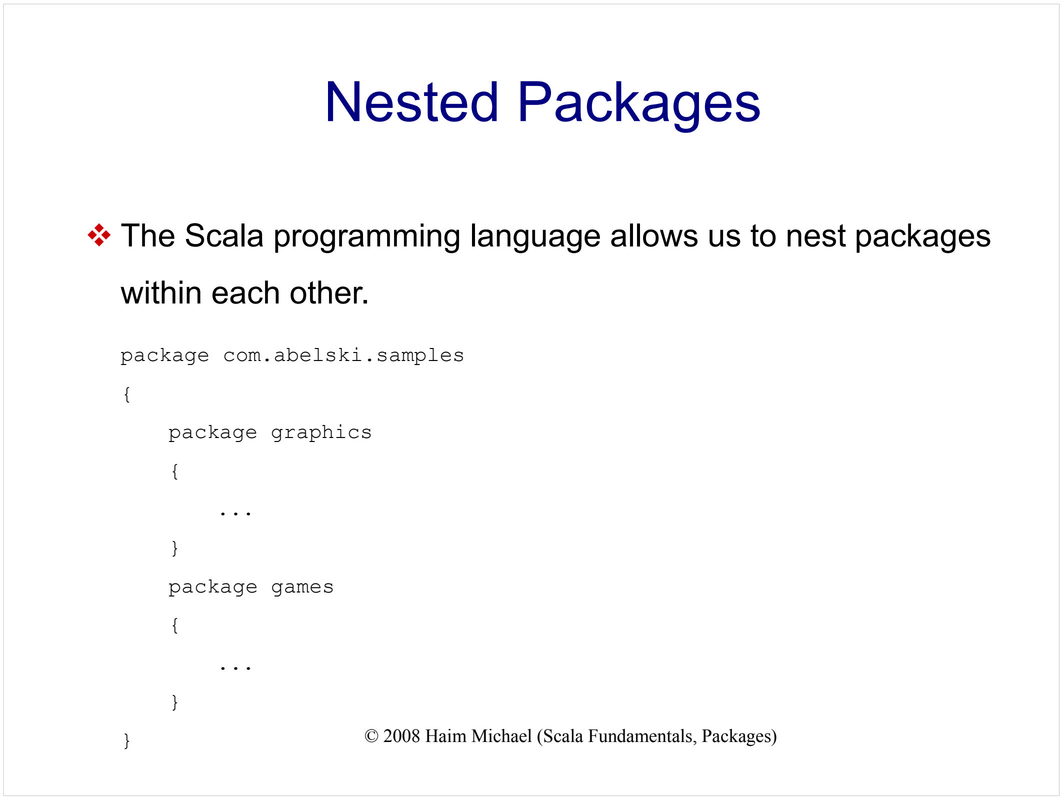

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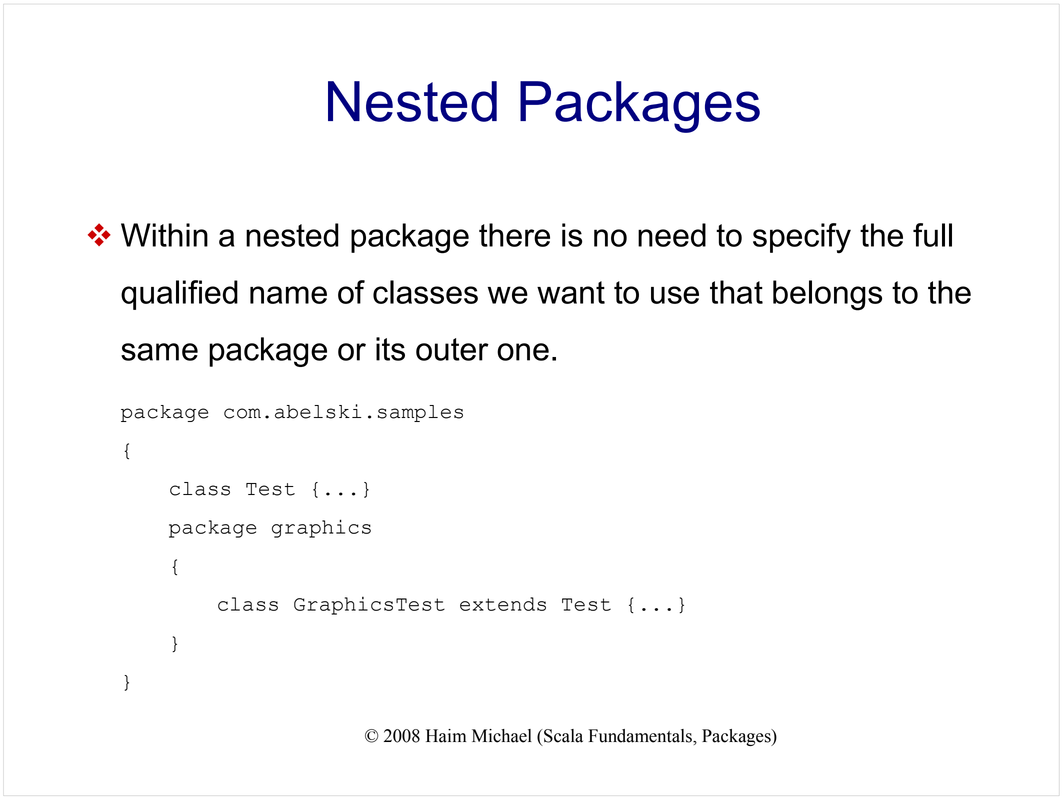

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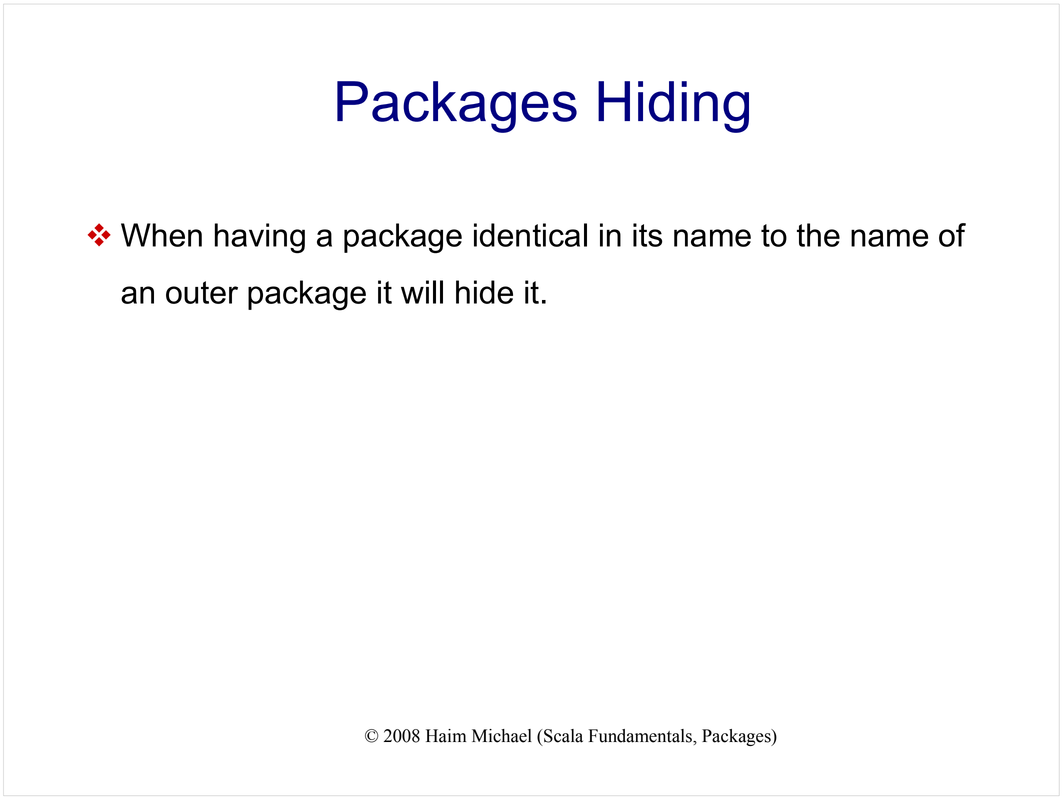

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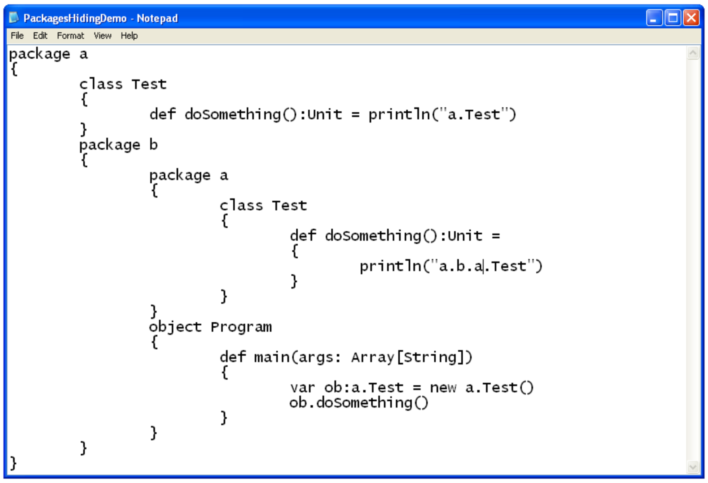

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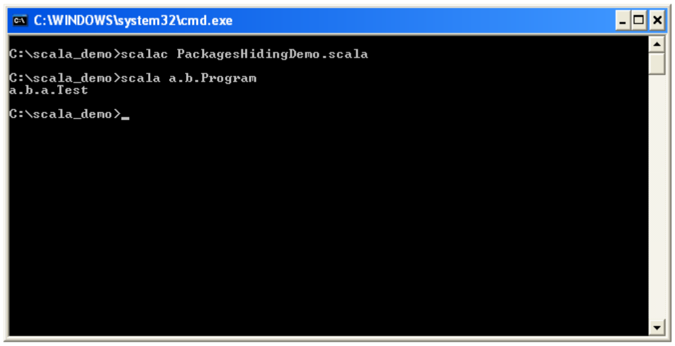

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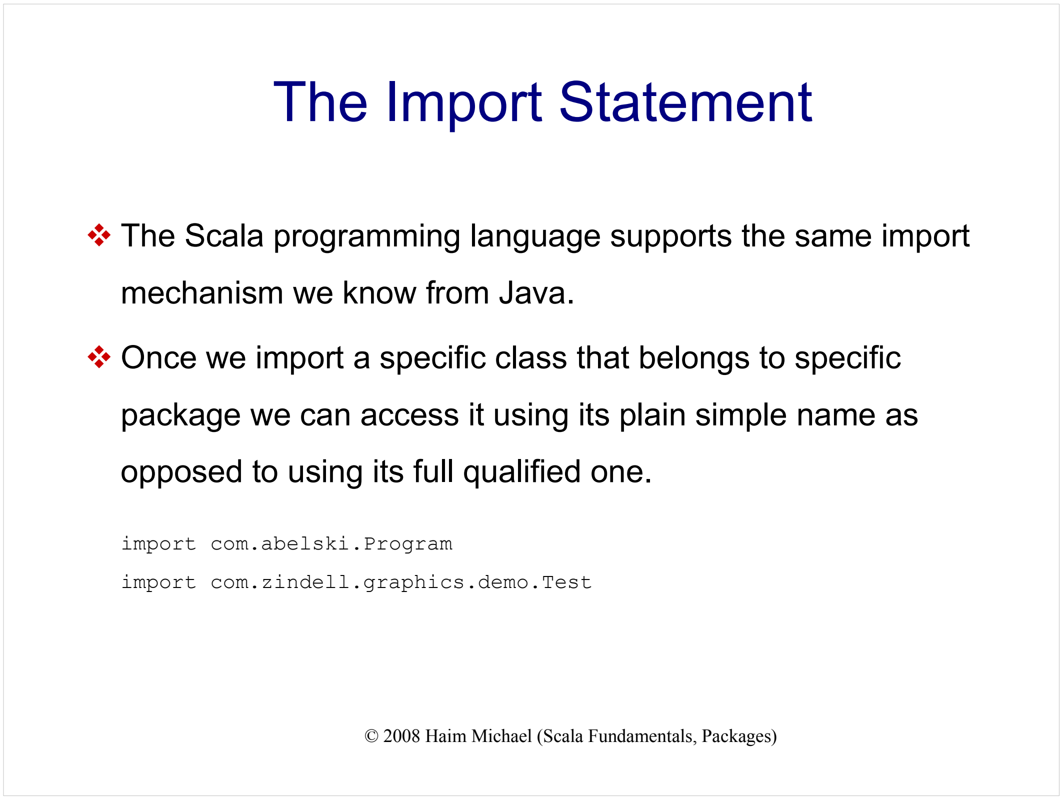

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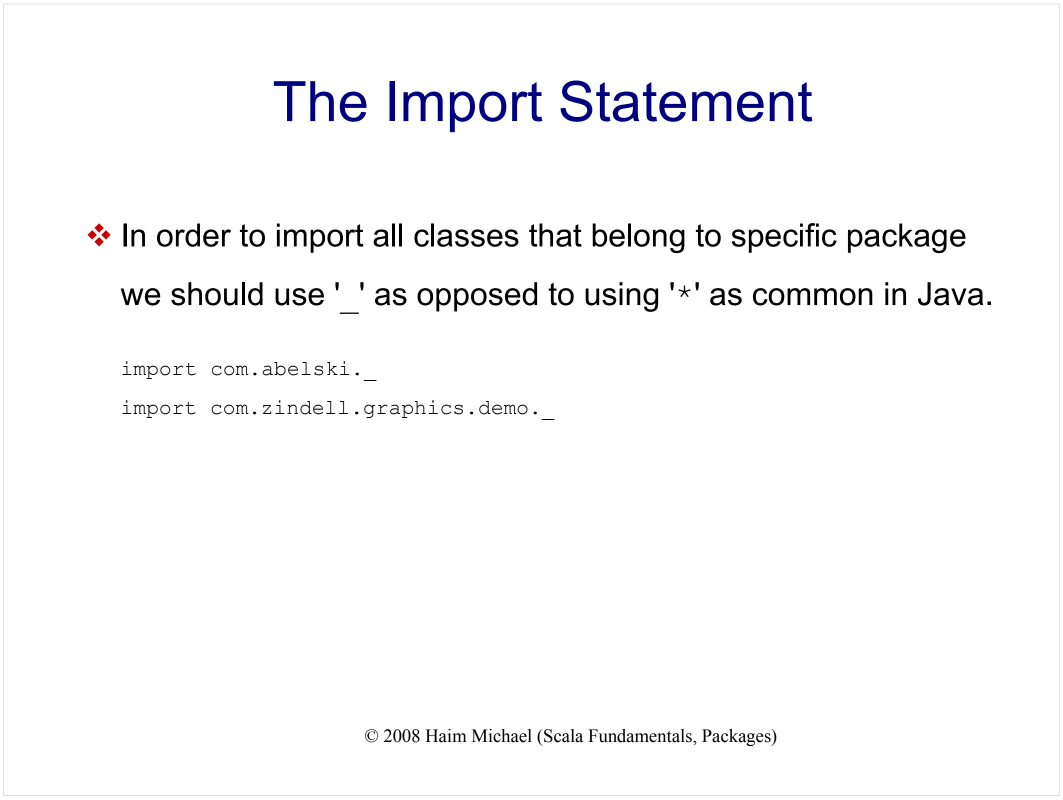

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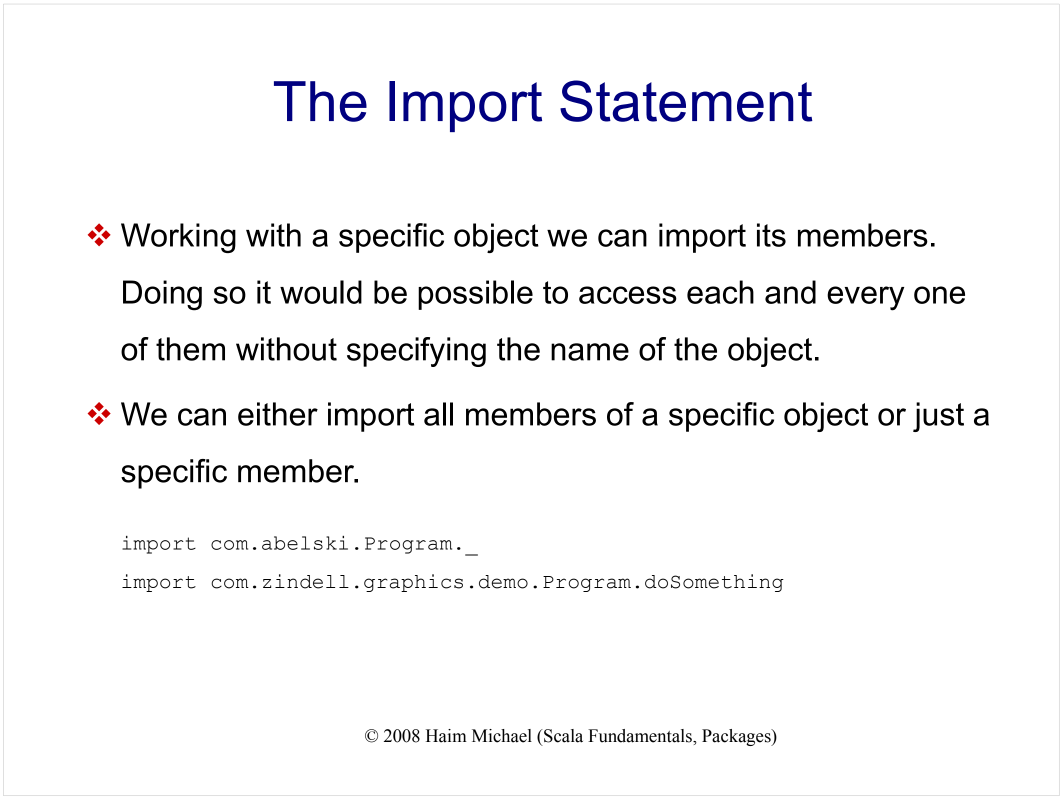

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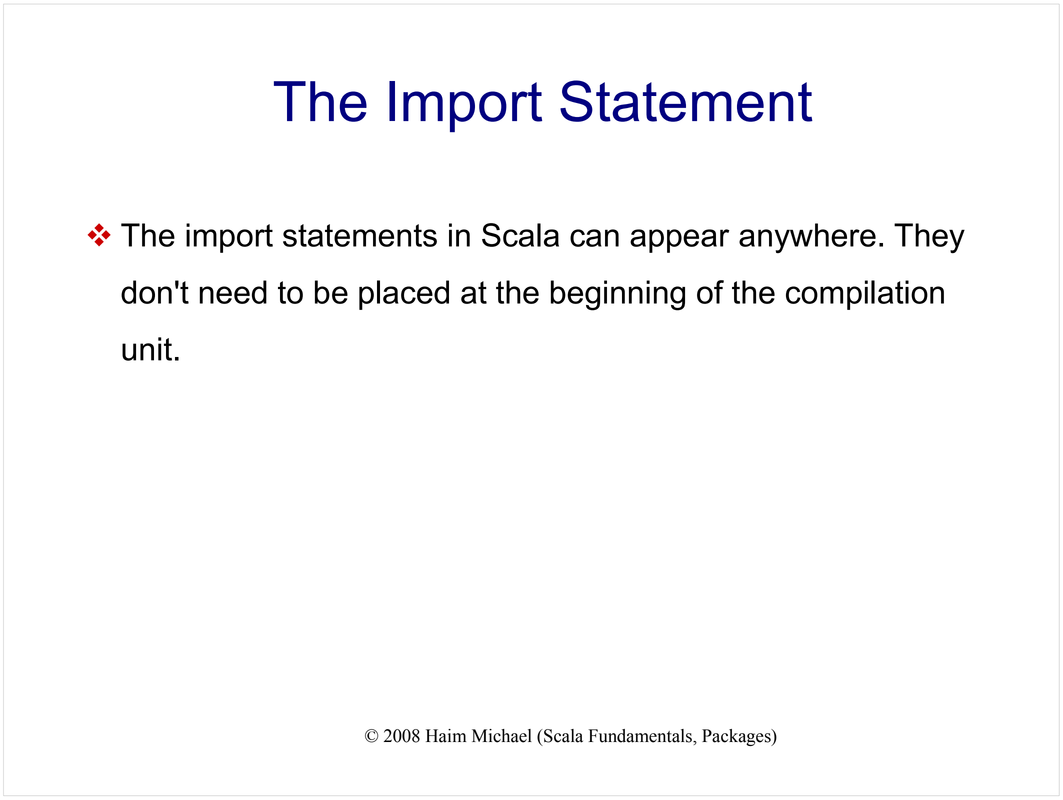

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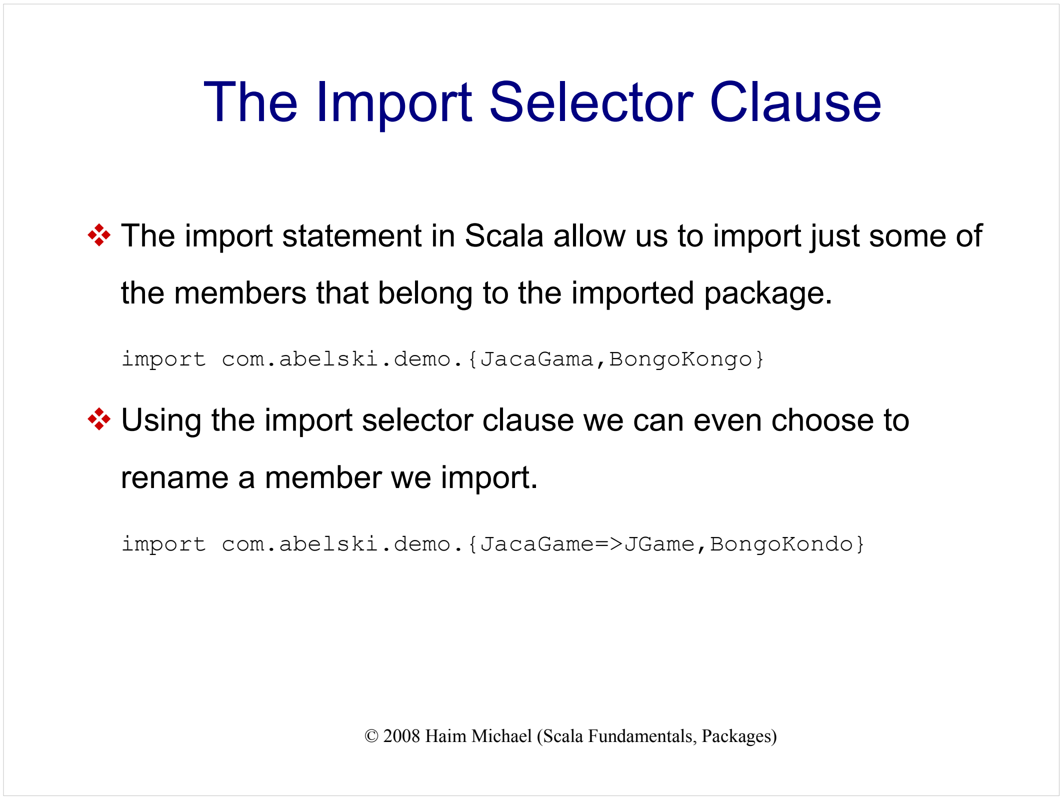

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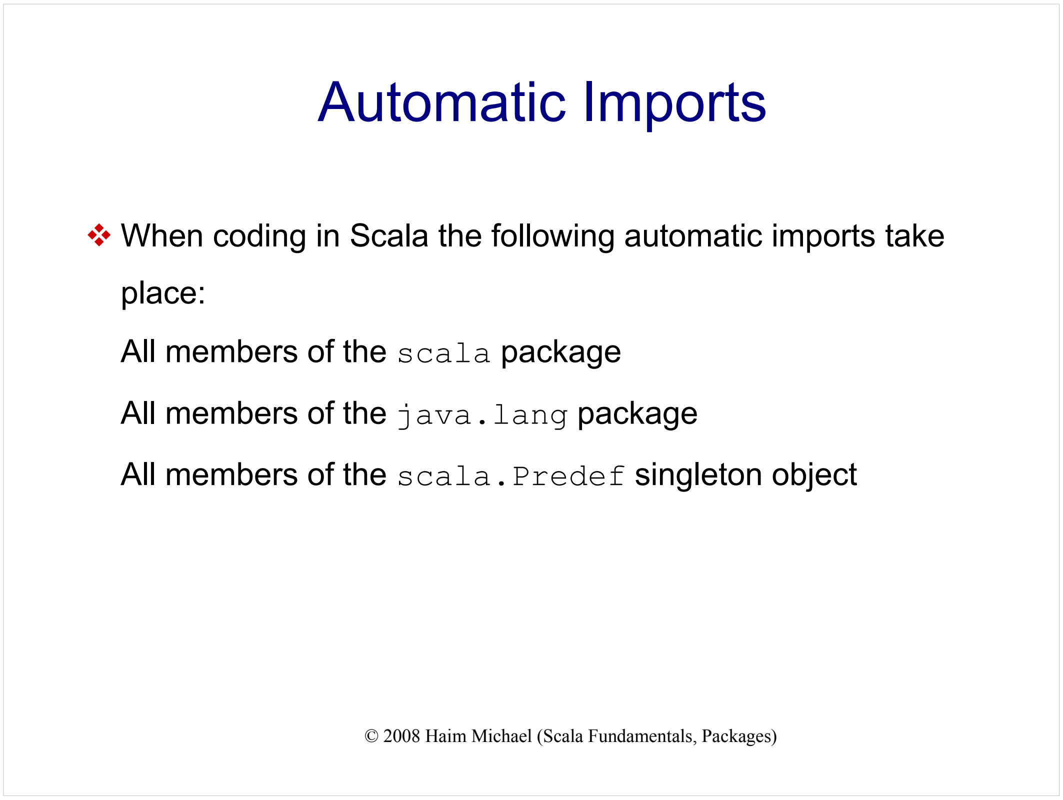

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