

Scala for Apache Spark

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- Slides: <https://github.com/medale/scala-spark/blob/master/presentation/ScalaSpark.pdf>
- Scala Spark Code Examples: <https://github.com/medale/scala-spark>

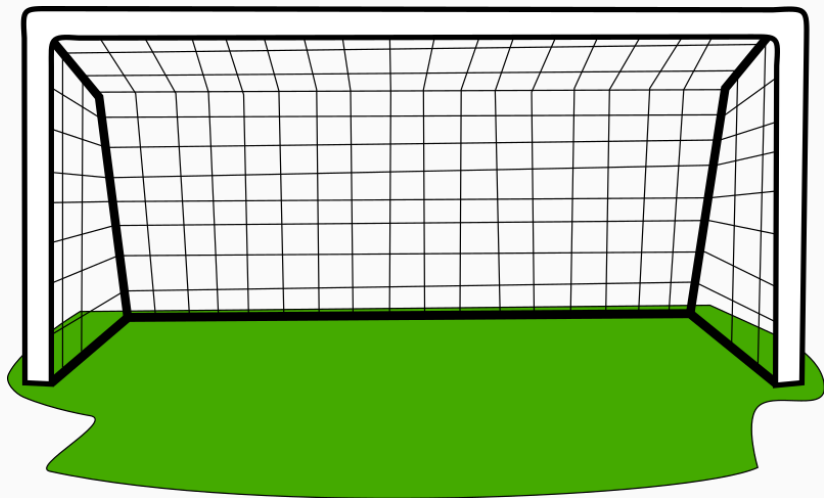


Figure 1: Intro to Scala for Spark

Why Scala for Spark?

- full interoperability with Java
 - strong type system
 - elegant multi-paradigm (functional & OO)
 - less boilerplate/less code
- JVM

```
package com.uebercomputing.scalaspark.common;

public class JavaMain {
    private int answer = 0;
    public JavaMain(int answer) {
        this.answer = answer;
    }
    public int getAnswer() {
        return answer;
    }
    public static void main(String[] args) {
        System.out.println("Starting a Java program...");
        JavaMain jaMain = new JavaMain(42);
        int answer = jaMain.getAnswer();
        System.out.println("The answer was " + answer);
    }
}
```

Scala Main One

```
package com.uebercomputing.scalaspark.common

class ScalaMainOne(val answer: Int)

object ScalaMainOne {

  def main(args: Array[String]): Unit = {
    println("Starting a Scala program...")
    val scMain = new ScalaMainOne(42)
    println(scMain)
    val answer = scMain.answer
    println(s"The answer was ${answer}")
  }
}
```

Starting a Scala program...

com.uebercomputing.scalaspark.common.ScalaMainOne@256216b3

The answer was 42

Scala Main Two - case class

```
package com.uebercomputing.scalaspark.common
```

```
case class ScalaMainTwo(answer: Int)
```

```
object ScalaMainTwo {
```

```
  def main(args: Array[String]): Unit = {  
    println("Starting a Scala program...")  
    //ScalaMainTwo.apply(42)  
    val scMain = ScalaMainTwo(42)  
    println(scMain)  
    val answer = scMain.answer  
    println(s"The answer was ${answer}")  
  }
```

```
}
```


Starting a Scala program...

ScalaMainTwo(42)

The answer was 42

Scala Main Two - javap ScalaMainTwo.class

```
public class ScalaMainTwo implements Product,Serializable
    public static Option<Object> unapply(ScalaMainTwo);
    public static ScalaMainTwo apply(int);
...
    public ScalaMainTwo copy(int);
...
    public int productArity();
    public Object productElement(int);
    public Iterator<Object> productIterator();
...
    public int hashCode();
    public String toString();
    public boolean equals(Object);
...
```