

Sqoop and Scala Programming

Homework

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1. Write an object `Conversions` with methods `inchesToFeet`, `milesToKms` and `poundsToKilos` and invoke its methods from a class of your choice

```
object Conversions
{
    def inchesToFeet(inches: Double) = inches * 0.083333
    def poundsToKilos(pounds: Double) = pounds * 0.453592
    def milesToKilometers(miles: Double) = miles * 1.60934
}
```

2. Write a Scala program to get the largest element of an array using `reduceLeft`

```
object GfG
{
    // Main method
    def main(args: Array[String])
    {
        // source collection
        val collection = List(1, 3, 2, 5, 4, 7, 6)

        // finding the maximum valued element
        val res = collection.reduce((x, y) => x max y)

        println(res)
    }
}
```

3. Write a Scala code which reverses the lines of a file (makes the first line as the last one, and so on)

```
{
val filename = "/tmp/quote.txt"
io.Source.fromFile(filename)
    .getLines.toArray
    .reverse
    .mkString("\n")
}
```

4. Mention the types of Variables in Scala? And What is the difference between them?

Types:

- Mutable Variables
- Immutable Variables

Difference:

A mutable collection can be updated or extended in place. This means you can change, add, or remove elements of a collection as a side effect. Immutable collections, by contrast, never change.

5. Mention the Advantages of Scala

- Scala has an exact syntax, eliminating boilerplate code. ...
- It is both an object-oriented language and a functional language. ...
- You can use Scala to execute Java code.
- Scala uses an expressive typing system that ensures statistical abstraction is secure and consistent

6. Explain the Operators in Scala

- relational operators
- assignment operators
- logical operators
- arithmetic operators
- bitwise operators

7. How is a Class different from an Object?

Class is a blueprint or template from which objects are created.

Object is a real-world entity such as pen, laptop, mobile, bed, keyboard, mouse, chair etc.

Class is a group of similar objects.

Object is a physical entity.

8. Mention how Scala is different from Java

Scala is a statically typed programming language, whereas Java is a multi-platform, network-centric programming language. Scala uses an actor model for supporting modern concurrency, whereas Java uses the conventional thread-based model for concurrency.

9. Explain the access Modifiers available in Scala

Access Modifiers in Scala are used to define the access field of members of packages, classes or objects in Scala. For using an access modifier, you must include its keyword in the definition of members of package, class or object. These modifiers will restrict accesses to the members to specific regions of code.

There are Three types of access modifiers available in Scala:

1. Private
2. Protected
3. Public