

Question 1: Write an object `Conversions` with methods `inches to Feet`, `miles to Kms` and `Pounds to Kilos` and invoke its methods from a class of your choice

```
object Conversions {  
    def inchestocentimeters(inches: Double) = inches * 2.54  
  
    def gallonstoliters(gallons: Double) = gallons * 3.78541  
  
    def milestokilometers(miles: Double) = miles * 1.60934  
}
```

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

```
scala> val a = Array(20, 12, 6, 15, 2, 9)  
a: Array[Int] = Array(20, 12, 6, 15, 2, 9)
```

```
scala> a.reduceLeft(_ min _)  
res: Int = 2
```

```
scala> a.reduceLeft(_ max _)  
res: Int = 20
```

Question 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")
```

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

Each variable declaration is preceded by its type. By contrast, Scala has two types of variables:

`val` creates an immutable variable (like `final` in Java),

`var` creates a mutable variable

Question 5: Mention the Advantages of Scala

The Advantages of Scala are:

Scala has an exact syntax, eliminating boilerplate code. Programs written in Scala require less code than similar programs written in Java.

It is both an object-oriented language and a functional language.

Scala is statically typed : binds the type to variable to its entire scope unlike java, Scala doesn't have primitives

This combination makes Scala the right choice for web development

Question 6: Explain the Operators in Scala.

An operator is a symbol that tells the compiler to perform specific mathematical or logical manipulations. Scala is rich in built-in operators and provides the following types of operators –

- Arithmetic Operators
- Relational Operators
- Logical Operators

- Bitwise Operators
- Assignment Operators

Question 7:How is a Class different from an Object?

A class is a blueprint for declaring and creating objects.

An object is a class instance that allows programmers to use variables and methods from inside the class.

Memory is not allocated to classes.

Classes have no physical existence.

Question 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.

Question 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.