

1) Write an object **Conversions** with methods **inchesToFeet**, **milestoKms** and **poundsToKilos** 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  
}
```

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
```

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?

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

5) Mention the Advantages of Scala:

The Advantages of Scala

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.

This combination makes Scala the right choice for web development

6) Explain the Operators in Scala:

**Divide AND Assignment (/=) operator is used for dividing left operand with right operand and then assigning it to variable on the left.**

**Modulus AND Assignment (%=) operator is used for assigning modulo of left operand with right operand and then assigning it to the variable on the left.**

**7) How is a Class different from an Object?**

**Class vs 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.**

**8) Mention how Scala is different from Java:**

**Key Difference between Scala and 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**