BIG DATA ANALYTICS
HOMEWORK 3

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