Assignment 2

1. **Why we need packages in java?**
   Packages contain related classes which provide useful methods and constructs for common problems.
2. **What is the default imported package?**
   The Java Lang package.
3. **What is Class? What is Object?**
   Class is a template for an object which is an instance of a class. A class defines the attributes and methods that an object maintains or uses.
4. **Why we need constructor?**
   Java creates a default constructor because we need to define what values will fill the attributes of an object once it's constructed.
5. **What is the default value of local variable? What is the default value of instance variable?**
6. What is garbage collection?
7. **The protected data can be accessed by subclasses or same package. True or false?**
   True.
8. **What is immutable class?**
   An immutable class can not be modified after being declared.
9. **What's the difference between "==" and equals method?**
   "==" compares the reference in memory while equals compares the actual values as well.
10. **What is wrapper class?**
    Wrapper classes correspond to the primitive data types i.e. Integer to int.
11. **What is autoboxing?**
    Automatic casting from a smaller unit of data to a larger one like int to Integer.
12. **StringBuilder is threadsafe but slower than StringBuffer, true or false?**
    False.
13. **Constructor can be inherited, true or false?**
    Yes. A child class can extend a parent class and override or use the parent's constructor class.
14. **How to call a super class's constructor?**
    Simply call the super() method.
15. **Which class is the super class of all classes?**
    The Object class is the super class of all classes.
16. Create a program to count how many files/folders are there inside one folder.
    - the count method should take a parameter called Criteria like this: count(Criteria criteria){}
    - For Criteria class, multiple conditions should be included such as: folder path, includeSubFolder or not, the extension of the file be counted and so on.
    - Optional: Take the input from keyboard.
    - Take care of the invalid inputs. Exception handling.

- Get proper result displayed.
  "There are XXX file(s) and XXX folder(s) inside folder XXX with extension XXX." or something user friendly.