

- ① Write the differences between nested classes & inner classes with minimum 3 differences.
- ② List the advantages of packages.
- ③ List any 10 classes or interfaces of java.io package.

### Answers

#### 2A) Advantages of packages:

- A package is a collection of classes.
- Some of the major packages are java.lang, java.util, java.awt, javax.swing, java.io.
- Packages increase the code accessibility.
- It increases reliability (accessing of classes is easy).
- Packages organise the similar classes into a single collection.

For example:

- java.lang contains classes/interfaces that are fundamental to language. These include String, Thread, Integer, Double etc.
- java.util contains interfaces and classes for storing lists and sets.
- Graphical programs can make use of members in java.awt.
- To perform input and output, one may use java.io.

→ Programs that use classes from other packages must import them from the appropriate packages.

→ Packages support reusability and easier project maintenance.



1A

## Nested class

- A class declared inside another class is called a nested class
- It contains both static and non-static classes
- static nested class cannot access instance members of outer class
- Nested class can ~~have~~ be created without outer class object if it's static

## Inner class

- An inner class is a non-static nested class
- It is always non-static
- Inner class can access all members of outer class
- Inner class requires an outer class object to create inner class object

3A

1. Buffered Writer
2. Byte Array Input Stream
3. String Writer
4. FileReader
5. FileWriter
6. Char Array Reader
7. Char Array Writer
8. Data Input Stream
9. Data Output Stream
10. Buffered Reader