Course 4 – Sprint 3: Read and Write from a File

Learning Consolidation

1. Difference between BufferedReader and FileReader in Java
    a. BufferedReader and FileReader both classes are used to read data from a given character stream .BufferedReader is a Decorator that provides buffering for faster IO, while FileReader is used to read data from File.

2. Serialization in Java
    a. Serialization is the process of maintaining the state of an object in a sequence of bytes.Deserialization is the process of restoring an object from these bytes. The Java Serialization API provides a standard mechanism for creating serializable objects.

https://docs.oracle.com/javase/tutorial/jndi/objects/serial.html

3. System.out.println() in Java
    a. println()" is a method of PrintStream class. "out" is a static object of PrintStream class defined in "System" class. System is a class from java.lang package used to interact with the underlying operating system by the programmer.

4. RandomAccessFile in Java
    a. The Java.io.RandomAccessFile class file behaves like a large array of bytes stored in the file system.Instances of this class support both reading and writing to a random access file. It is a special class from java.io package which is neither a input stream nor a output stream (because it can do both). It is directly a subclass of Object class. Generally, a stream does only one purpose of either reading or writing; but RandomAccessFile can do both reading from a file and writing to a file. All the methods of DataInputStream and DataOutStream exist in RandomAccessFile.

5. Choose the correct options for the following code:

```
import java.io.*;
public class FilesInputOutputDemo
{
    public static void main(String args[]) throws
    IOException {
        InputStream obj = new
    FileInputStream("input.txt");
        System.out.print(obj.available());
    }
}
```

a) true
b) false
c) prints number of bytes in file
d) prints number of characters in the file

6. Predict the output of the following code:

```
public class FilesDemo
{
    public static void main(String args[])
    {
        File fileobj = new File("/java/system");
        System.out.print(" " + obj.getParent());
        System.out.print(" " + obj.isFile());
    }
}
```

7. What is BufferedWriter ? What are flush() and close() used for?
    a. BufferedWriter is temporary source for data storage. BufferedWriter is used to write character data to the file.Flush() is method available in BufferedWriter which ensures that all data items are written to file including last character.Close() is used to closes the character output stream.

8. Predict the correct code:

a.
```
FileWriter fileWriter = new
FileWriter("../file.txt");
    File file = new File(fileWriter );
    BufferedWriter bufferedWriter = new
          BufferedWriter(fileWriter);
```

b.
```
BufferedWriter bufferedWriter = new
          BufferedWriter("../file.txt");
       File file = new File(bufferedWriter );
       FileWriter fileWriter = new
FileWriter(file);
```

c.
```
File file = new File("../file.txt");
      FileWriter fileWriter = new
FileWriter(file);
    BufferedWriter bufferedWriter = new
       BufferedWriter(fileWriter);
```

d.
```
File file = new File("../file.txt");
   BufferedWriter bufferedWriter = new
       BufferedWriter(file);
   FileWriter fileWriter = new
       FileWriter(bufferedWriter );
```

9. Handle the correct exception for the following code?

```
File file = new File("../file.txt");
FileWriter fileWriter = new
FileWriter(file);
```

10. Additional Reading For NIO

https://docs.oracle.com/javase/8/docs/technotes/guides/io/index.html

https://howtodoinjava.com/java-nio-tutorials/