

Chapter 11 CRT

1. No, data in memory cannot be called a file. A file refers to data stored on a persistent storage device like a hard drive or solid state drive, while data in memory is temporary and lost after the program terminates. data in memory is managed by the program at runtime, while files are managed by the OS file system.
2. `import java.io.File;`
3. Instead of:
`File textFile = new File("c:\inventory.txt");`
The correct statement is:
`File textFile = new File("c:\\inventory.txt");`
The error is that a double backslash(\\) should have been used instead of a single one(\\).
4. a) The try-catch-finally statement is used to write an exception handler.
b)

```
try{
    File textFile = new File("newFile.txt");
    if(textFile.createNewFile()) {
        System.out.println("File successfully created: ");
    }

    else{
        System.out.println("File already exists");
    }
}catch(IOException e) {
    System.out.println("An error occurred when trying to create the file");
    e.printStackTrace;
}
```

5. a) `System.err` (The err stream)
b) The messages are displayed on the console, where the `system.out` displays and it displays right after the error occurs`.
6. a) the file stream keeps track of the file position where reading or writing last occurred.
b) The carriage return character (Cr) followed by a line feed character (Lf) is called a line terminator.
7. The `fileWriter` and `bufferedWriter` classes write data to a file. The `bufferedWriter` wraps around the `FileWriter` to write strings more efficiently.

8.

```
try {  
    String line;  
    dataFile = new File(fileName);  
    in = new FileReader(dataFile);  
    readFile = new BufferedReader(in);  
  
    while((line = readFile.readLine()) != null)  
    {  
        double balance = Double.parseDouble(line);  
        totalBalance += balance;  
    }  
}
```

9. Writing objects to a file is object serialization. When info about the object from the file is retrieved, it is called object deserialization

10. Serializable interface must be implemented if objects of a class are to be written to a file.