

## 23-813-0207: Lab 4 - Java Programming Lab

### Lab exercise - 4

Date: 13/3/2024

java.io.File
+File(pathname: String)
+File(parent: String, child: String)
+File(parent: File, child: String)
+exists(): boolean
+canRead(): boolean
+canWrite(): boolean
+isDirectory(): boolean
+isFile(): boolean
+isAbsolute(): boolean
+isHidden(): boolean
+getAbsolutePath(): String
+getCanonicalPath(): String
+getName(): String
+getPath(): String
+getParent(): String
+lastModified(): long
+length(): long
+listFile(): File[]
+delete(): boolean
+renameTo(dest: File): boolean
+mkdir(): boolean
+mkdirs(): boolean

1. Write a program that demonstrates the problem of resource conflict. Suppose that you create and launch one hundred threads, each of which adds 1 rupee to an account. Assume that the account is initially empty. Also, demonstrate how this can be resolved

using synchronized block or synchronized method. The main thread should wait for all the hundred threads to finish, and then print the final balance.

2. Write a Java program that demonstrates how to create files in a platform-independent way and use the methods in the File class to obtain their properties. Refer to File class shown in above figure.
3. Write a Java program to get *filename* of a text file as command-line argument and print its content on the screen.
4. Write a program that reads n lines from the user and stores it in a file "sentences.txt"
5. Modify the Tic-Tac-Toe program to log all the moves into a file "tic-tac-toe-dd-mm-yyyy.log" in the form "Marker row colum" or "X invalid move", where dd-mm-yyyy is the date, Marker can be either 0 or X. Note that, if a file already exists, you need to append to the existing content, else create a new file.