

# 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 a penny to an account. Assume that the account is initially empty. Also demonstrate how this can be resolved using synchronized block or synchronized method.

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.