**File handling**

File handling is an important part of any application.

Java has several methods for creating, reading, updating, and deleting files.

**Java File Handling**

The File class from the java.io package, allows us to work with files.

To use the File class, create an object of the class, and specify the filename or directory name:

**Example**

import java.io.File; // Import the File class

File myObj = new File("filename.txt"); // Specify the filename

**Packages to consider:**

import java.io.File; // Import the File class

import java.io.IOException; //Import to throws exception if a file doesn’t exist or isn’t accessible.

import java.io.FileNotFoundException; // Import this class to handle errors

import java.util.FileWriter; // Import for writing files

import java.util.Scanner; // Import the Scanner class to read text files

The File class has many useful methods for creating and getting information about files. For example:

|  |  |
| --- | --- |
| **Method** | **Description** |
| canRead() | Tests whether the file is readable or not |
| canWrite() | Tests whether the file is writable or not |
| createNewFile() | Creates an empty file |
| delete() | Deletes a file |
| exists() | Tests whether the file exists |
| getName() | Returns the name of the file |
| getAbsolutePath() | Returns the absolute pathname of the file |
| length() | Returns the size of the file in bytes |
| list() | Returns an array of the files in the directory |
| mkdir() | Creates a directory |

**Java Code to Create File**

import java.io.File;

import java.io.IOException;

public class Main {

public static void main(String[] args) {

try {

// Step 1: Create a File object for the file path

File myFile = new File("D:\\example.txt"); // Double backslashes for Windows path

// Step 2: Check if file already exists

if (myFile.exists()) {

System.out.println("File already exists: " + myFile.getAbsolutePath());

} else {

// Step 3: If not exists, create the file

if (myFile.createNewFile()) {

System.out.println("File created successfully: " + myFile.getAbsolutePath());

} else {

System.out.println("Failed to create the file.");

}

}

} catch (IOException e) {

// Step 4: Handle exceptions (e.g., access denied, disk error)

System.out.println("An error occurred.");

e.printStackTrace();

}

}

}

**Java Code to Write in a File**

package filewriting;

import java.io.FileWriter; // Import the FileWriter class

import java.io.IOException; // Import the IOException class to handle errors

public class Filewriting {

public static void main(String[] args) {

try {

FileWriter myWriter = new FileWriter("D:\\example.txt");

myWriter.write("Files in Java might be tricky, but it is fun enough!");

myWriter.close();

System.out.println("Successfully wrote to the file.");

} catch (IOException e) {

System.out.println("An error occurred.");

e.printStackTrace();

}

}

}

**Java Code to Read a File**

package fileread;

import java.io.File; // Import the File class

import java.io.IOException; //Import to throws exception if a file doesn’t exist or isn’t accessible.

import java.io.FileNotFoundException; // Import this class to handle errors

import java.util.Scanner; // Import the Scanner class to read text files

public class Fileread {

public static void main(String[] args) {

try {

File myObj = new File("D:\\example.txt");

Scanner myReader = new Scanner(myObj);

while (myReader.hasNextLine()) {

String data = myReader.nextLine();

System.out.println(data);

}

myReader.close();

} catch (FileNotFoundException e) {

System.out.println("An error occurred.");

e.printStackTrace();

}

}

}

**Java Code to Delete a File**

package filedelete;

import java.io.File; // Import the File class

public class FileDelete {

public static void main(String[] args) {

File myObj = new File("D:\\example.txt");

if (myObj.delete()) {

System.out.println("Deleted the file: " + myObj.getName());

}

else {

System.out.println("File does not exist or deleted already.");

}

}

}

**Task 1:**

Use reading code and print only the odd lines (i.e., lines 1, 3, 5, ...) of the file.

**Task 2:**

Use try and catch code in parametrized constructor of some class and pass address of the file from main function while creating object.