// 1. Read and Write Name to a File

def file = new File("name.txt")

file.write("Hema Saranya")

println "Written to file: ${file.text}"

// Reading it back

try {

def readContent = new File("name.txt").text

println "Read from file: $readContent"

} catch (FileNotFoundException e) {

println "File not found: ${e.message}"

}

// 2. Divide by zero and file error handling

try {

int a = 10

int b = 0

int result = a / b

println "Result is $result"

} catch (ArithmeticException e) {

println "Divide-by-zero error: ${e.message}"

} catch (Exception e) {

println "Some other error: ${e.message}"

} finally {

println "Finished divide operation with try-catch-finally"

}

// 3. methodMissing and propertyMissing

class DynamicHandler {

def methodMissing(String name, args) {

println "Method $name is not defined"

}

def propertyMissing(String name) {

println "Property $name is not defined"

return "undefined"

}

}

def obj = new DynamicHandler()

obj.someUnknownMethod(1, 2)

println obj.unknownProperty

// 4. Metaprogramming: Dynamic Property Modification

class Person {

String name

int age

}

def p = new Person(name: "Hema", age: 22)

// Dynamically add a new property using metaprogramming

p.metaClass.gender = "Female"

println "Name: ${p.name}, Age: ${p.age}, Gender: ${p.gender}"

// Modify existing property dynamically

p.metaClass.setProperty("name", "Saranya Hema")

println "Updated Name: ${p.name}"