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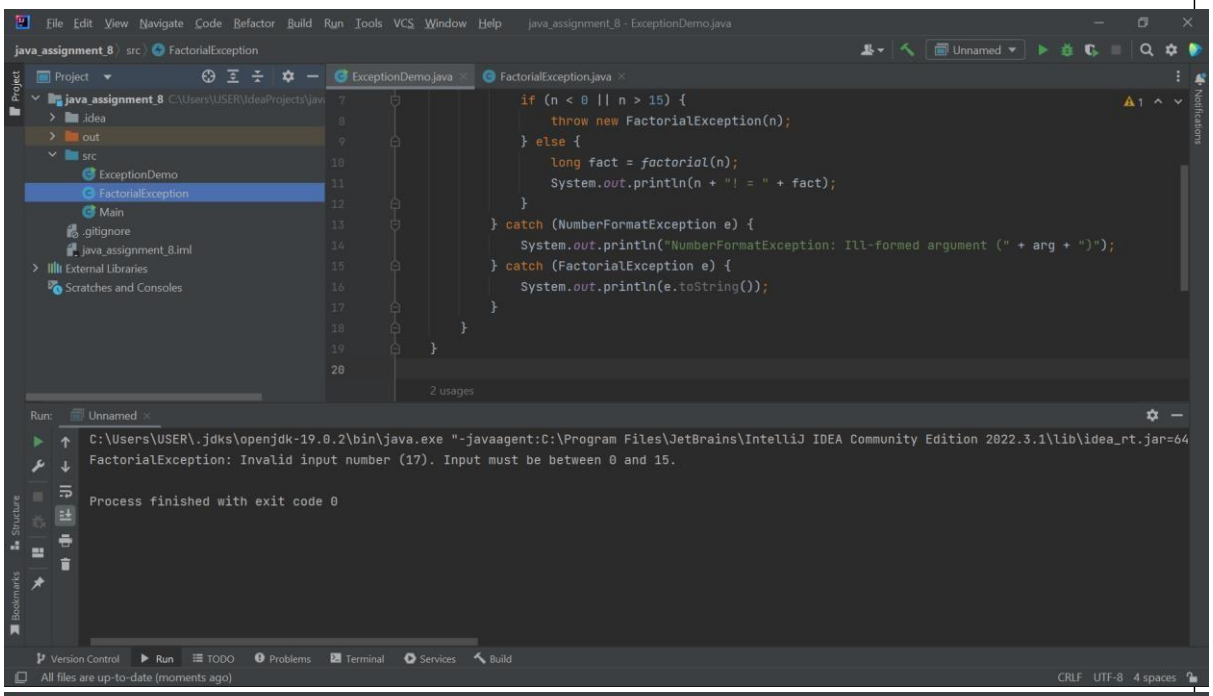
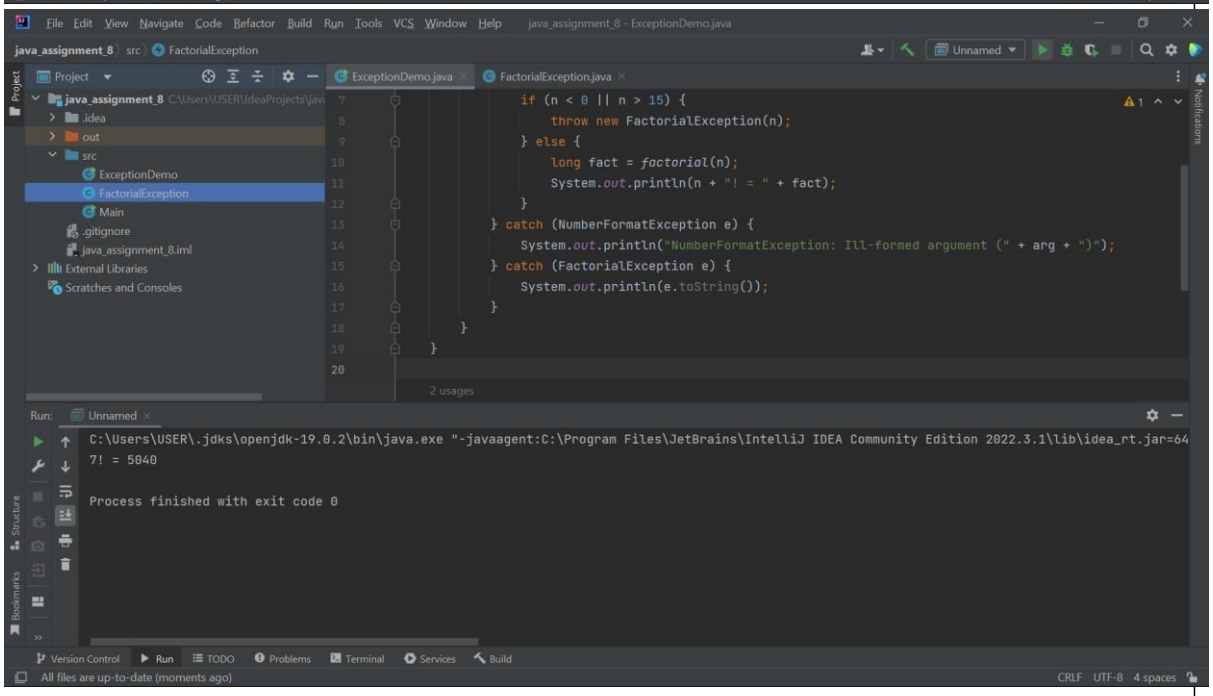
Branch – AIML (A2)

PART 1:
INPUT:

```
class FactorialException extends Exception {private int number;

	public FactorialException(int number) {this.number =
		number;
	}

	@Override
	public String toString() {
		return "FactorialException: Invalid input number (" + number + ").
Input must be between 0 and 15.";
	}
}


public class ExceptionDemo {
	public static void main(String[] args) {for (String arg : args)
		{
			try {
				int n = Integer.parseInt(arg);if (n < 0 || n >
				15) {
					throw new FactorialException(n);
				} else {
					long fact = factorial(n); System.out.println(n + "! = " +
					fact);
				}
			} catch (NumberFormatException e) {
				System.out.println("NumberFormatException: Ill-formedargument (" + arg +
")");
			} catch (FactorialException e) { System.out.println(e.toString());
			}
		}
	}

	public static long factorial(int n) {if (n == 0) {
			return 1;
		} else {
			return n * factorial(n - 1);
		}
	}
}
```

OUTPUT:


File Edit View Navigate Code Refactor Build Run Tools VCS Window Help
java_assignment_8 - ExceptionDemo.java
java_assignment_8 src FactorialException
Unnamed
Project
ExceptionDemo.java
FactorialException.java
java_assignment_8 C:\Users\USER\IdeaProjects\jav
.idea
out
src
ExceptionDemo
FactorialException
Main
.gitignore
java_assignment_8.iml
External Libraries
Scratches and Consoles
if (n < 0 || n > 15) {
throw new FactorialException(n);
} else {
long fact = factorial(n);
System.out.println(n + "! = " + fact);
}
} catch (NumberFormatException e) {
System.out.println("NumberFormatException: Ill-formed argument (" + arg + ")");
} catch (FactorialException e) {
System.out.println(e.toString());
}
}
}
2 usages
Run:
Unnamed
C:\Users\USER\.jdks\openjdk-19.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022.3.1\lib\idea_rt.jar=64
FactorialException: Invalid input number (17). Input must be between 0 and 15.
Process finished with exit code 0
Version Control
Run
TODO
Problems
Terminal
Services
Build
All files are up-to-date (moments ago)
CRLF
UTF-8
4 spaces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Main
.gitignore
java_assignment_8.iml
External Libraries
Scratches and Consoles
if (n < 0 || n > 15) {
throw new FactorialException(n);
} else {
long fact = factorial(n);
System.out.println(n + "! = " + fact);
}
} catch (NumberFormatException e) {
System.out.println("NumberFormatException: Ill-formed argument (" + arg + ")");
} catch (FactorialException e) {
System.out.println(e.toString());
}
}
}
2 usages
Run:
Unnamed
C:\Users\USER\.jdks\openjdk-19.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022.3.1\lib\idea_rt.jar=64
7! = 5040
Process finished with exit code 0
Version Control
Run
TODO
Problems
Terminal
Services
Build
All files are up-to-date (moments ago)
CRLF
UTF-8
4 spaces

PART 2:
INPUT:

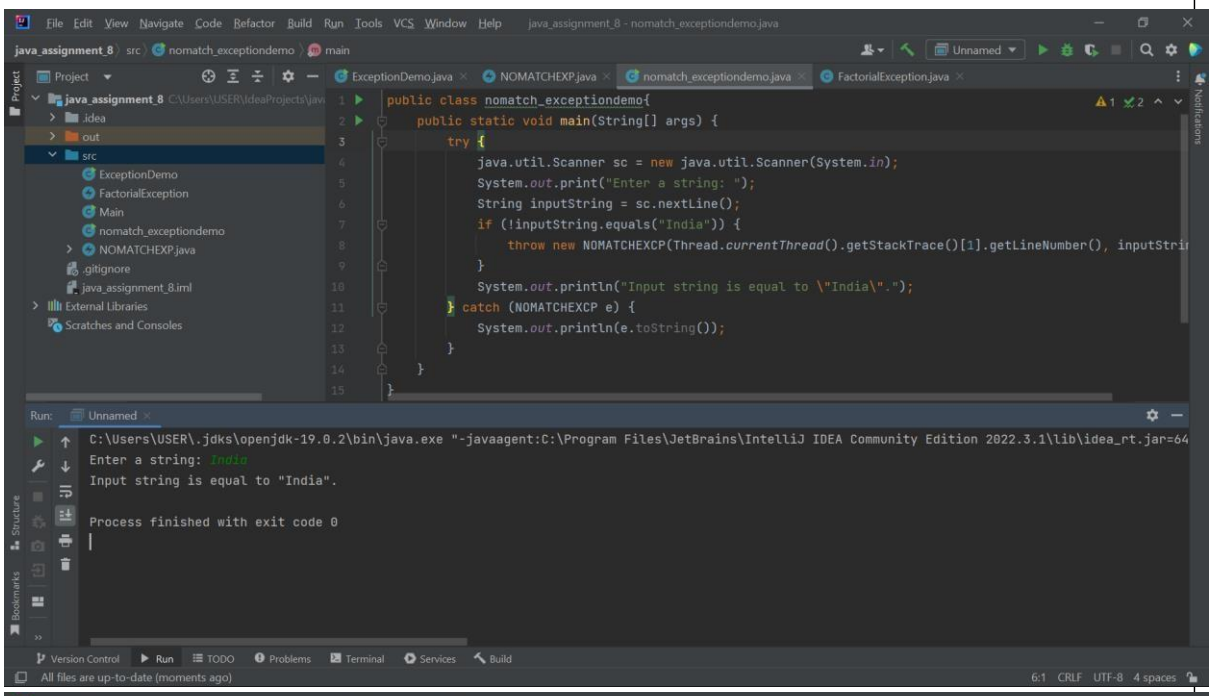
```
class NOMATCHEXCP extends Exception {private int
        lineNumber;
        private String inputString;

        public NOMATCHEXCP(int lineNumber, String inputString) {this.lineNumber =
                lineNumber;
                this.inputString = inputString;
        }

        @Override
        public String toString() {
                return "NOMATCHEXCP: Input string at line " + lineNumber + " is notequal to \"India\". Input
string: \"" + inputString + "\"";
        }
}


public class nomatch_exceptiondemo{
        public static void main(String[] args) {try {
                        java.util.Scanner sc = new java.util.Scanner(System.in);System.out.print("Enter a
                        string: ");
                        String inputString = sc.nextLine();if
                        (!inputString.equals("India")) {
                                throw new NOMATCHEXCP(Thread.currentThread().getStackTrace()[1].getLineNumber(),
inputString);
                        }
                        System.out.println("Input string is equal to \"India\".");
                } catch (NOMATCHEXCP e) {
                        System.out.println(e.toString());
                }
        }
}
```

OUTPUT:


File Edit View Navigate Code Refactor Build Run Tools VCS Window Help
java_assignment_8 - nomatch_exceptiondemo.java
java_assignment_8 src nomatch_exceptiondemo main
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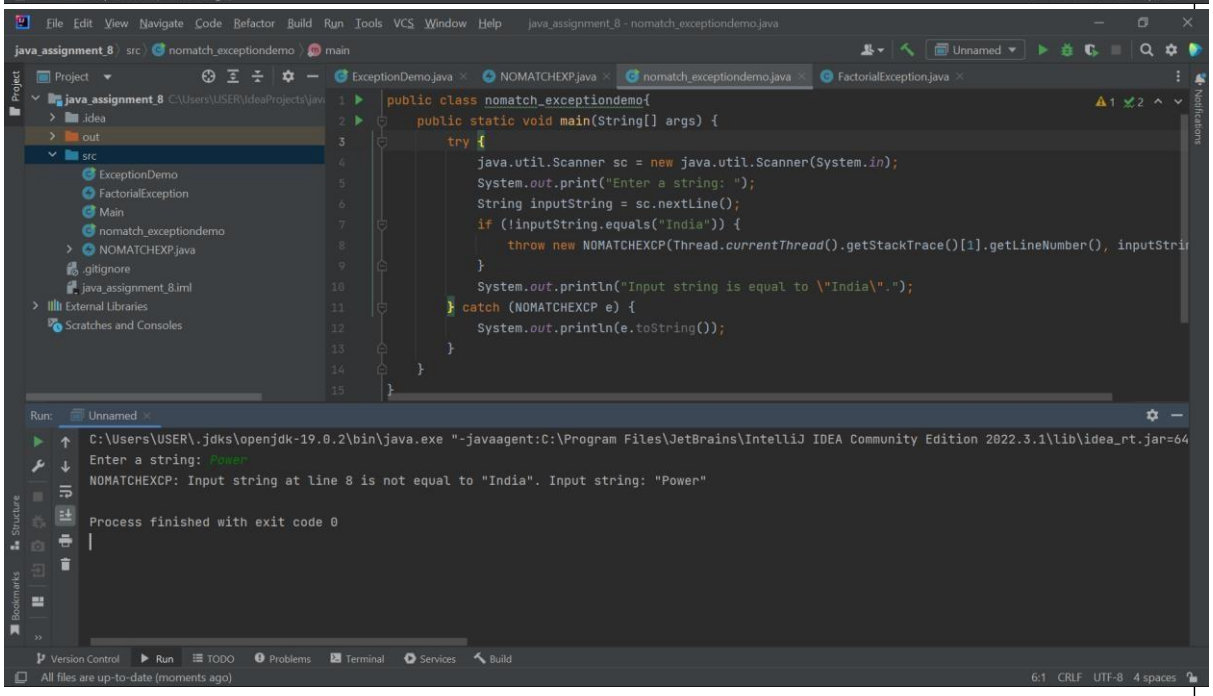
Project
java_assignment_8 C:\Users\USER\IdeaProjects\java
.idea
out
src
ExceptionDemo
FactorialException
Main
nomatch_exceptiondemo
NOMATCHEXP.java
.gitignore
java_assignment_8.iml
External Libraries
Scratches and Consoles
ExceptionDemo.java
NOMATCHEXP.java
nomatch_exceptiondemo.java
FactorialException.java
public class nomatch_exceptiondemo{
public static void main(String[] args) {
try {
java.util.Scanner sc = new java.util.Scanner(System.in);
System.out.print("Enter a string: ");
String inputString = sc.nextLine();
if (!inputString.equals("India")) {
throw new NOMATCHEXCP(Thread.currentThread().getStackTrace()[1].getLineNumber(), inputStri
}
System.out.println("Input string is equal to \"India\".");
} catch (NOMATCHEXCP e) {
System.out.println(e.toString());
}
}
}
Run: Unnamed
C:\Users\USER\.jdks\openjdk-19.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022.3.1\lib\idea_rt.jar=64
Enter a string: India
Input string is equal to "India".
Process finished with exit code 0
Version Control Run TODO Problems Terminal Services Build
All files are up-to-date (moments ago)
6:1 CRLF UTF-8 4 spaces


File Edit View Navigate Code Refactor Build Run Tools VCS Window Help
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External Libraries
Scratches and Consoles
ExceptionDemo.java
NOMATCHEXP.java
nomatch_exceptiondemo.java
FactorialException.java
public class nomatch_exceptiondemo{
public static void main(String[] args) {
try {
java.util.Scanner sc = new java.util.Scanner(System.in);
System.out.print("Enter a string: ");
String inputString = sc.nextLine();
if (!inputString.equals("India")) {
throw new NOMATCHEXCP(Thread.currentThread().getStackTrace()[1].getLineNumber(), inputStri
}
System.out.println("Input string is equal to \"India\".");
} catch (NOMATCHEXCP e) {
System.out.println(e.toString());
}
}
}
Run: Unnamed
C:\Users\USER\.jdks\openjdk-19.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2022.3.1\lib\idea_rt.jar=64
Enter a string: Power
NOMATCHEXCP: Input string at line 8 is not equal to "India". Input string: "Power"
Process finished with exit code 0
Version Control Run TODO Problems Terminal Services Build
All files are up-to-date (moments ago)
6:1 CRLF UTF-8 4 spaces

GITHUB LINK: https://github.com/Dhrubo2003/JAVA