Experiment No. 9
Implement a program on Exception handling.
Date of Performance:
Date of Submission:

Aim: Implement a program on Exception handling.

Objective: To able handle exceptions occurred and handle them using appropriate keyword

Theory:

The Exception Handling in Java is one of the powerful mechanisms to handle the runtime errors so that the normal flow of the application can be maintained.

Exception Handling is a mechanism to handle runtime errors such as ClassNotFoundException, IOException, SQLException, RemoteException, etc.

Java Exception Keywords

Java provides five keywords that are used to handle the exception. The following table describes each.

Keyword	Description
try	The "try" keyword is used to specify a block where we should place an exception code. It means we can't use try block alone. The try block must be followed by either catch or finally.
catch	The "catch" block is used to handle the exception. It must be preceded by try block which means we can't use catch block alone. It can be followed by finally block later.
finally	The "finally" block is used to execute the necessary code of the program. It is executed whether an exception is handled or not.
throw	The "throw" keyword is used to throw an exception.
throws	The "throws" keyword is used to declare exceptions. It specifies that there may occur an exception in the method. It doesn't throw an exception. It is always used with method signature.

```
public class JavaExceptionExample{

  public static void main(String args[]){
```

```
try{
  //code that may raise exception
  int data=100/0;

}catch(ArithmeticException e){System.out.println(e);}
 //rest code of the program
 System.out.println("rest of the code...");
}
}
```

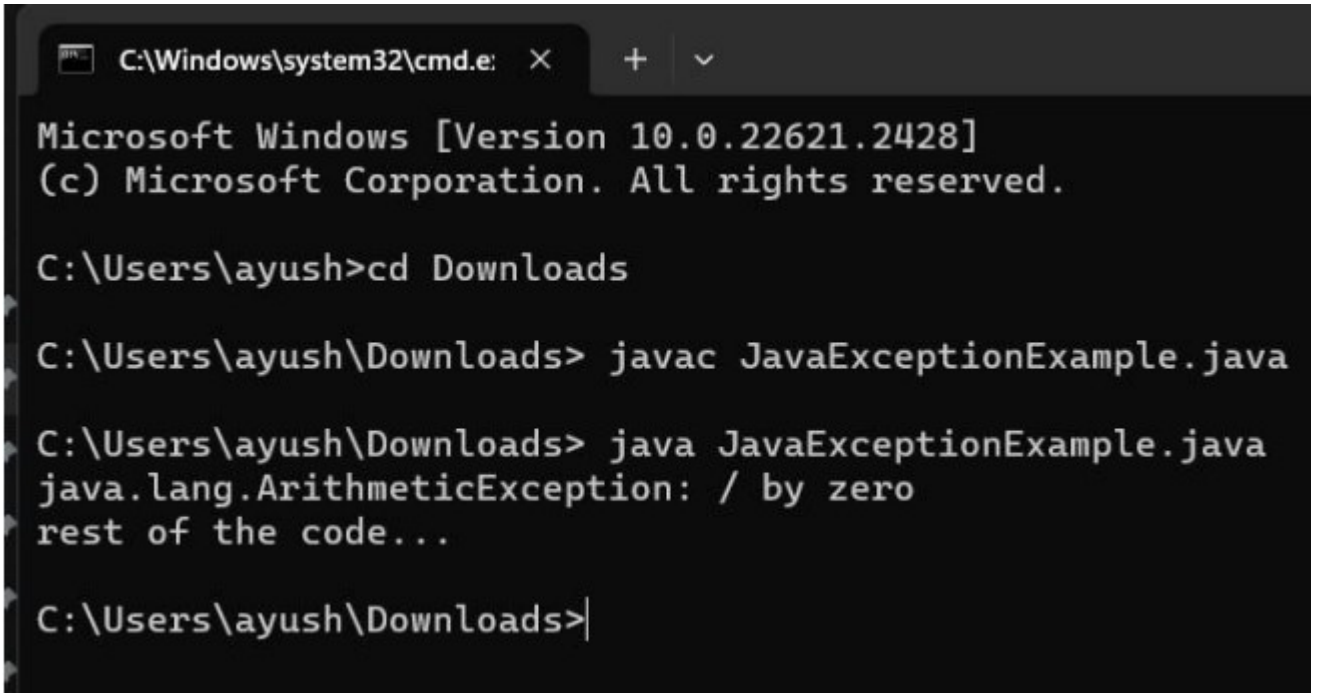
Output:

```
Exception in thread main java.lang.ArithmeticException:/ by zero
rest of the code...
```

Code:

```
public class JavaExceptionExample{
public static void main(String args[]){
 try{
 //code that may raise exception
int data=100/0;
 }catch(ArithmeticException e){
System.out.println(e);
} //rest code of the program
System.out.println("rest of the code...");
 }
 }
```

OUTPUT:



Conclusion:

Comment on how exceptions are handled in JAVA.

Handling Exceptions in Java:
- Java uses a structured approach to handle exceptions, which are unexpected events that disrupt the normal flow of a program.
- Exception handling involves the use of `try`, `catch`, `finally`, and `throw` blocks.
- In the `try` block, code that might raise an exception is enclosed.
- If an exception occurs, it is caught by a corresponding `catch` block that handles the exception.
- The `finally` block, if present, is executed regardless of whether an exception is thrown or not and is often used for cleanup tasks.
- Developers can manually throw exceptions using the `throw` keyword when specific conditions are met.
- Exception handling in Java is crucial for writing reliable and robust code, allowing for graceful error management and program stability.