

5. Writing a program in Java to throws, throw, finally, and custom exceptions in Java.

```
class CustomException extends Exception {  
    public CustomException(String message) {  
        super(message);  
    }  
}
```

```
public class ExceptionDemo {  
    public static void main(String[] args) {  
        try {  
            divide(10, 0);  
        } catch (CustomException e) {  
            System.out.println("CustomException caught: " + e.getMessage());  
        } finally {  
            System.out.println("Finally block executed.");  
        }  
    }  
}
```

```
public static void divide(int num1, int num2) throws CustomException {  
    try {  
        if (num2 == 0) {  
            throw new CustomException("Cannot divide by zero!");  
        }  
        int result = num1 / num2;  
        System.out.println("Result: " + result);  
    } catch (ArithmeticException e) {  
        throw new CustomException("ArithmeticException occurred: " + e.getMessage());  
    }  
}
```

OUTPUT:

CustomException caught: Cannot divide by zero!

Finally block executed.