

## Exception Handling

### Checked exceptions

- 1] ClassNotFoundException
- 2] InterruptedException
- 3] IOException
- 4] SQLException
- 5] FileNotFoundException

### ClassNotFoundException

```
Public class SimpleClassNotFoundException {  
    Public static void main(String[] args) {  
        Try {  
            Class.forName("com.example.NonExistentClass");  
        } catch (ClassNotFoundException e) {  
            System.err.println("Class not found: " + e.getMessage());  
        }  
    }  
}
```

### FileNotFoundException

```
Import java.io.File;  
Import java.io.FileNotFoundException;  
Import java.util.Scanner;  
  
Public class SimpleFileNotFoundException {  
    Public static void main(String[] args) {  
        Try {  
            File file = new File("nonexistentfile.txt");
```

```

        Scanner scanner = new Scanner(file);
    } catch (FileNotFoundException e) {
        System.err.println("File not found: " + e.getMessage());
    }
}
}

```

### **SQLException**

```

Import java.sql.Connection;
Import java.sql.DriverManager;
Import java.sql.SQLException;
Import java.sql.Statement;

```

```

Public class SimpleSQLException {
    Public static void main(String[] args) {
        String url = "mysql://localhost:3306/mydatabase";
        String username = "root";
        String password = "password";

        Try (Connection connection = DriverManager.getConnection(url, username, password);
            Statement statement = connection.createStatement()) {
            String sql = "SELECT * FROM nonexistent_table";
            Statement.executeQuery(sql);
        } catch (SQLException e) {
            System.err.println("SQL Exception: " + e.getMessage());
        }
    }
}

```

### **IOException**

```

Import java.io.BufferedReader;
Import java.io.FileReader;

```

```
Import java.io.IOException;
```

```
Public class SimpleIOException {  
    Public static void main(String[] args) {  
        Try {  
            BufferedReader reader = new BufferedReader(new FileReader("nonexistentfile.txt"));  
            String line = reader.readLine();  
            While (line != null) {  
                System.out.println(line);  
                Line = reader.readLine();  
            }  
            Reader.close();  
        } catch (IOException e) {  
            System.err.println("IO Exception: " + e.getMessage());  
        }  
    }  
}
```

## Unchecked exception

### ArithmeticException

```
Public class SimpleArithmeticException {  
    Public static void main(String[] args) {  
        Try {  
            Int result = 10 / 0; // Division by zero  
        } catch (ArithmeticException e) {  
            System.err.println("Arithmetic Exception: " + e.getMessage());  
        }  
    }  
}
```

### **ClassCastException**

```
public class SimpleClassCastException {  
    public static void main(String[] args) {  
        try {  
            Object obj = new Integer(10);  
            String str = (String) obj; // Attempting to cast Integer to String  
        } catch (ClassCastException e) {  
            System.err.println("Class Cast Exception: " + e.getMessage());  
        }  
    }  
}
```

### **NullPointerException**

```
Public class SimpleNullPointerException {  
    Public static void main(String[] args) {  
        Try {  
            String str = null;  
            Int length = str.length(); // Attempting to access length of null object  
        } catch (NullPointerException e) {  
            System.err.println("Null Pointer Exception: " + e.getMessage());  
        }  
    }  
}
```

### **ArrayIndexOutOfBoundsException**

```
Public class SimpleArrayIndexOutOfBoundsException {  
    Public static void main(String[] args) {  
        Try {  
            Int[] arr = new int[5];  
            Int value = arr[10]; // Accessing index out of array bounds  
        }  
    }  
}
```

```
    } catch (ArrayIndexOutOfBoundsException e) {  
        System.err.println("Array Index Out Of Bounds Exception: " + e.getMessage());  
    }  
}  
}
```