**Candidate Id: 2380155**

**Name : Bharath Magesh**

**Assignment No : 04**

**Exercise 1: Write a Java Program to validate the full name of an employee. Create and throw a user defined exception if firstName and lastName is blank.**

**Answer:**

**package** ExceptionHandling;

//User-defined exception class

**class** NameException **extends** Exception {

**public** NameException(String message) {

**super**(message);

}

}

//Employee class

**class** Employee {

**private** String firstName;

**private** String lastName;

**public** Employee(String firstName, String lastName) **throws** NameException {

**if** (firstName == **null** || firstName.trim().isEmpty()) {

**throw** **new** NameException("First name cannot be blank");

}

**if** (lastName == **null** || lastName.trim().isEmpty()) {

**throw** **new** NameException("Last name cannot be blank");

}

**this**.firstName = firstName;

**this**.lastName = lastName;

}

**public** String getFullName() {

**return** **this**.firstName + " " + **this**.lastName;

}

}

//Main class to test the program

**public** **class** Main {

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

**try** {

Employee emp1 = **new** Employee("John", "Doe");

System.***out***.println("Employee full name: " + emp1.getFullName());

// This will throw an exception

Employee emp2 = **new** Employee("", "Doe");

} **catch** (NameException e) {

System.***out***.println("Exception: " + e.getMessage());

}

}

}

**OUTPUT:**

**Employee full name: John Doe**

**Exception: First name cannot be blank**

**Exercise 2: Validate the age of a person and display proper message by using user defined exception. Age of a person should be above 15.**

**Answer:  
package** ExceptionHandling;

//User-defined exception class

**class** AgeException **extends** Exception {

**public** AgeException(String message) {

**super**(message);

}

}

//Person class

**class** Person {

**private** **int** age;

**public** Person(**int** age) **throws** AgeException {

**if** (age <= 15) {

**throw** **new** AgeException("Age must be above 15");

}

**this**.age = age;

}

**public** **int** getAge() {

**return** **this**.age;

}

}

//Main class renamed to App

**public** **class** App {

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

**try** {

Person person1 = **new** Person(20);

System.***out***.println("Person age: " + person1.getAge());

// This will throw an exception

Person person2 = **new** Person(10);

} **catch** (AgeException e) {

System.***out***.println("Exception: " + e.getMessage());

}

}

}

**OUTPUT:**

**Person age: 20**

**Exception: Age must be above 15**

**Exercise 3: Create an Exception class named as “EmployeeException”(User defined Exception) in a package named as “com.demo.exception” and throw an exception if salary of an employee is below than 3000. Use Exception Handling mechanism to handle exception properly**

**Answer:**

**Employee.java**

**package** com.demo.exception;

//File: Employee.java

**public** **class** Employee {

**private** String name;

**private** **double** salary;

**public** Employee(String name, **double** salary) **throws** com.demo.exception.EmployeeException {

**if** (salary < 3000) {

**throw** **new** com.demo.exception.EmployeeException("Salary must be above 3000");

}

**this**.name = name;

**this**.salary = salary;

}

**public** String getName() {

**return** name;

}

**public** **double** getSalary() {

**return** salary;

}

}

**EmployeeException.java**

**package** com.demo.exception;

**public** **class** EmployeeException **extends** Exception {

**public** EmployeeException(String message) {

**super**(message);

}

}

**App.java**

**package** com.demo.exception;

//File: App.java

**public** **class** App {

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

**try** {

Employee emp1 = **new** Employee("Alice", 3500);

System.***out***.println("Employee Name: " + emp1.getName());

System.***out***.println("Employee Salary: " + emp1.getSalary());

// This will throw an exception

Employee emp2 = **new** Employee("Bob", 2500);

} **catch** (com.demo.exception.EmployeeException e) {

System.***out***.println("Exception: " + e.getMessage());

}

}

}

**OUTPUT:**

**Employee Name: Alice**

**Employee Salary: 3500.0**

**Exception: Salary must be above 3000**