

Ojashwi College
BCA – 3rd Semester
OOP in Java

Lab 4: Handing Error and Exception

1. Write a class Person with member variable id, firstname and lastname. The constructor and setter methods should throw exception if id is zero or negative, or firstname/lastname is null or empty.
2. Write a class Stack that throws exceptions while trying to pop an item when it is empty and while trying to push an item when it is full. Write a demonstration that illustrate try and catching these exceptions.
3. Write a method that adds elements of two integer arrays (a and b) positionwise, up to first n elements and returns the array containing the sum of first n items of a and b.
`Int [] add (int [] a, int [] b, n).`

However,

- a) The method should throw an exception (Say, `NegativeValueException` extends `Throwable`) when n is negative.
- b) The method should throw an exception (Say, `ArrayLengthException` extends `Throwable`) when n is larger than length of either a or b.

Write a program that try to add two array using the above method.

The program should display the sum array and Error message if any exception occurs. [Use finally]

4. Write a class MySquare, with member variable side and method area() that compute area of the square. The method area() throws `ShapeException` (extends `Throwable`) if side is less than or equal to 0.

Write a program that creates MySquare objects of sides given in array and prints its area.

For invalid sides, it should print "Invalid Shape".

Example: supplied sides = [5.0, -1.0, 0.0, 1.0, 2.0]

Output:

```
Area of square (0) is 25.0
Square (1): Invalid Shape
Square (2): Invalid Shape
Area of square (3) is 1.0
Area of square (4) is 4.0
Area of square (5) is 9.0
```