Exception Handling

**Problem Statement:**

Develop a simple java application to calculate the tax for an employee based on his salary.

Develop a class named “**TaxCalculator“** with a method named **calculateTax** with the following method parameters, are empName , isIndian, empSal. This method should return taxAmount.

The business logic for calculating the tax is as follows, this has to be implemented inside the method,

If the employee is not a Indian. The calculator should throw a ***CountryNotValidException*** If the employee name is null or empty. The calculator should throw a ***EmployeeNameInvalidException*** If empSal is greater than one lakh and isIndian true taxAmount =empSal \*8/100 Otherwise If empSal is between 50K and 1lakh and isIndian true taxAmount =empSal \*6/100 Otherwise If empSal is between 30 and 50 Thousand and isIndian true taxAmount =empSal \*5/100 Otherwise If empSal is between 10 and 30 Thousand and isIndian true taxAmount =empSal \*4/100 Otherwise The calculator should throw a ***TaxNotEligibleException.***

Develop a ***CalculatorSimulator***  , implement the following logic in main method

1. Execute the calculateTax Method and print the tax amount as **“Tax amount is “<Tax Amount>**
2. In case the calculateTaxMethod throws exceptions, this method needs to catch the appropriate exception print the stack trace and display the following messages,
   1. **Country not valid:**  “**The employee should be an Indian citizen for calculating tax**”
   2. **Employee name not valid:**  “**The employee name cannot be empty**”
   3. **Not eligible for Tax calculation:**  “**The employee does not need to pay tax**”

The following test cases to be executed, change the data in main method and run it and verify the output messages

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| --- | --- | --- | --- | --- |
| **Test Cases** | **Employee Name** | **Employee Salary** | **Is Indian** | **Message Expected** |
| Test Case 1 | Ron | 34000 | **False** | **The employee should be an Indian citizen for calculating tax.** |
| Test Case 2 | Tim | 1000 | **True** | **The employee does not need to pay tax** |
| Test Case 3 | Jack | 55000 | **True** | **Tax amount is 3300** |
| Test Case 4 |  | 30000 | **True** | **The employee name cannot be empty** |