**Java Day7 Assessment**

**Exceptions, final class and final variable, Strictfp**

1. Write a program to create a final class that have final members such as Pan card number as String type, Once it is assigned its value cannot be changed. Check the Pan Card number should have 10 chars, First 3 characters are String, remaining 7 are Numbers Using Exception and throw an error, if it is not having the correct Format.
2. Demonstrate the use of throw & throws keyword in exception handling.
3. Explain the use of finally block in exception handling.
4. Write a java program to accept name from user. If the name contains a non-alphabetical character, raise an Exception “InvalidNameException.
5. Write a class Driver with attributes vehicle no, name & age. Initialize values through parameterized constructor. If age of driver is less than 18 then generate user-defined exception “AgeNotWithinTheRange”.
6. Write a program to define a user defined exception called “NoEqualException” that is thrown when a float value is not equal to 3.14. (Use Strictfp keyword for a float value). Also throw an Number Format Exception when the input get from the user is not in a floating point value.
7. Write a class Student with attributes roll no, name, age and course. Initialize values through parameterized constructor. If age of student is not in between15 and 21 then generate user-defined exception “Age Not within the Range”. If name contains numbers or special symbols raise exception “Name not valid”.
8. Write a java program to accept a number from the user, if number is zero then throw user defined exception “Number is 0” otherwise check whether no is prime or not (Use static keyword)
9. Write program to accept rollno, marks of four subjects in an array from user and throw MarksOutOf BoundsException if marks are < 0 or marks > 100.Also check ArrayIndexOutofBoundsException.

10. Let’s say, you are working with an airline company.

You are in the luggage check-in department and as per rules, you can allow 15kg per customer.

So now more than 15kg of weight is an abnormal condition for us or in other words its an exception.

This is our logic-based exception, so we’ll create our custom exception Weight Limit Exceeded

As per syntax, it will extend Exception.

We define the constructor which will get invoked as soon as an exception will be thrown

We have to explicitly throw the exception and hence we will use throw keyword for that.

Using throws keyword is as per our need. If we are handling an exception where it is getting thrown then we can avoid throws, else we will use throws and handle it in the caller.