

### Lab Cycle 3

1. Write a python program to handle the following errors using try, except and finally.
  - A. ZeroDivisionError
  - B. NameError.
  - C. ValueError.
2. Write a python program to create a module that has prime, even, odd methods. Use that module to check the type of a given number.
3. Write a python program to create user defined exceptions.
4. Write a program to define a method add and return sum of numbers (if integer arguments are given), concatenation of arguments (if string) by using method overloading.
5. Write a program to overload the '+' Operator and perform the addition of two objects.
6. Write a program to create a fraction class with following methods
  - a. str: returns the string representation of an object
  - b. add: add two fractional numbers.
  - c. sub: subtract two fractional numbers.
  - d. float: floating point representation of object.

7. Create a class vehicle and its subclasses car and truck. Each class has the following methods
  - a. show() in vehicle class displays vehicle type, colour, price.
  - b. speed() displays the max speed of the vehicle.
  - c. Change\_gear() displays the number of gears of the vehicle.
8. Create an abstract class shape and abstract methods area and perimeter. Use the abstract class to create two subclasses square and rectangle which display the area and perimeter of respective shapes.
9. Write a python program to implement multiple inheritances.
10. Write a python program to implement multi level inheritance.