

LAB A

Practice Lab

- 1) Write a program using exception handling to implement following details:
 - a) Create a class Time with data members hours, minutes and seconds (consider 24 hrs format for input).
 - a) Create a parameterized constructor to initialize the values of the data members. If the number of seconds entered by the user is >60, then throw an exception and print the appropriate message. Similarly, if minutes>60 and hours>23, exceptions should be thrown to handle both the cases.
 - b) Overload - operator to subtract two timestamps, throw an exception if first timestamp is lesser than the second timestamp.
- 2) Create a class template Mat with one type T argument and two int arguments. This class template will have one two-dimensional array of any datatype which will represent the matrix of given rows and columns. This class should contain following member functions:
 - a) Generic functions to enter the elements of the matrix and display it.
 - b) A generic function to find the sum of elements in the matrix
 - c) A generic function to transpose the matrix.In a main function, create matrix of integers and matrix of floating points using the Mat template class and check all the functionalities.