

LAB ASSIGNMENTS
PYTHON PROGRAMMING LAB
MCA 1st Year 1st Semester, 2023
Subject Code: MCA1152

1. With appropriate example(s) implement
 - (i) Hierarchical inheritance
 - (ii) Multilevel inheritance
 - (iii) Multiple inheritance
2. Import re and write scripts to achieve the following:
 - (i) accept a 6-digit roll number as input, and if it starts with 22, replace the 22 with 23
 - (ii) takes a word as input and satisfy the requirements that it should be of 5 letters, starts with 'c' and ends with 'r'
 - (iii) assume a product cataloging system has the following requirements:
 - first symbol: an uppercase character
 - second symbol: a digit
 - third symbol: the special character @
 - fourth symbol: a lowercase characterwrite a script that accepts an id and checks whether it is in correct format or not
 - (iv) check whether a given email id is in valid format or not.
3. Write a program which can iterate through a list of users (tuples comprising of a name, email and age) and if the user is at least 18 years old, adds her/him to a dictionary. Write an exception hierarchy which defines a different exception for each of these error conditions:
 - (i) the name is not unique
 - (ii) the age is not a positive integer
 - (iii) the user is under 18
 - (iv) the email format is not valid

Raise these exceptions where appropriate. Whenever an exception occurs, your program should move onto the next set of data in the list. Print different error messages for each different kind of exception.
4. Write a Python script to display the following Date Time String formats:
 - (i) Current date and time, (ii) Current Date, (iii) Current year, (iv) Month of year, (v) Week number of the year, (vi) Weekday of the week, (vii) Day of the month, (viii) Day of week, (ix) Current Time, (x) Current Hour, (xi) Current Minute, (xii) Current PM / AM
5. Write a script to get the number of days between two dates.
6. Write a script, that, given your date of birth, finds the weekday you were born and also your age in years and days.
7. Write a script that accepts two command line arguments and checks whether exactly two command line arguments are passed, no less or no more, and that the first argument is an integer and the second is a string. Make useful feedback if they are not.