1. Create a user defined package ‘calc’. Add two modules inside it called ‘standard’ & ‘scientific’. The ‘standard’ module will take care of basic arithmetic functions like add, subtract, multiply & divide. Whereas ‘scientific’ module defines advanced calculation functions like sin, cos, square, square root etc. Finally write a normal python code that tests all the functions kept in the package ‘calc’.
2. Write a class Date having attributes like day, month & year. The default date is 25/4/2010. Define a setDay() function which might throw InvalidDayError if we try to set invalid day. Here you need to define a user defined exception called InvalidDayError.
3. Write a class Account having fields accno, name & balance. Add withdraw & deposit functions. Make sure that withdraw throws InsufficientBalanceError if you do not have sufficient balance in the account. Also add string representation of account object.
4. Write a functionality to sort dates in ascending & accounts in descending fashion.
5. Create 3 classed ‘Employee[empno, name, salary]’, Manager[incentive] & Labor[overtime]. The classes Manager & Labor inherit Employee. Create few managers & few labors. Write a functionality to display salary of all employees working in the organization.
6. Write a program to implement doubly linked list. For this, you need to write 2 classes Node & NodeList. Here are attribute details:

Node: reference to previous node, reference to next node, data

NodeList: no attributes but few functions like addnode(), removenode(), countnodes(), printnodes(), insertnode() & reversenodes()