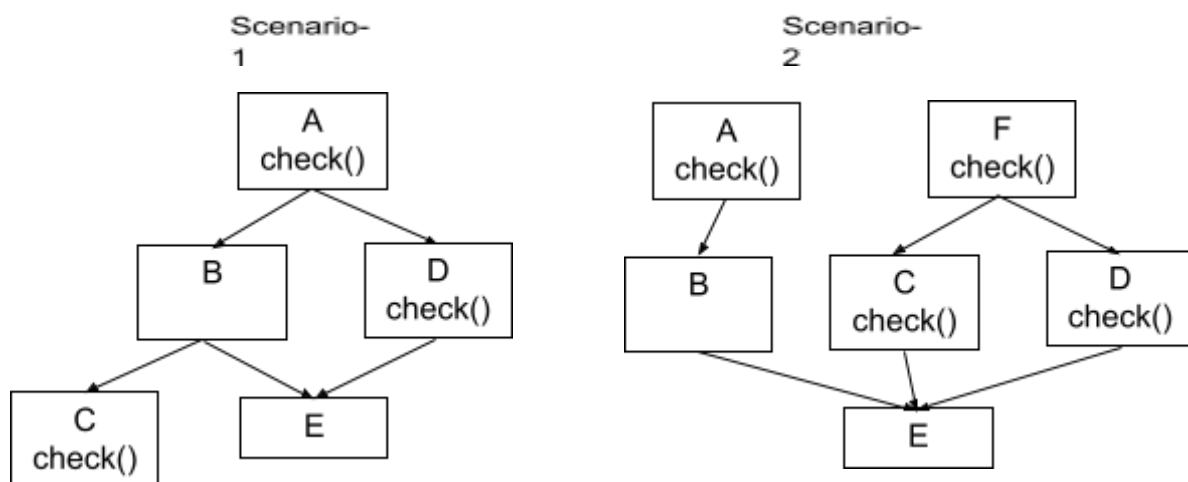


GANPAT UNIVERSITY
U. V. PATEL COLLEGE OF ENGINEERING
B.Tech. CE/IT Semester IV
2CEIT404: Python Programming

Practical-8: Object oriented programming with python

- 1) Create a class Employee with data members: name, department and salary. Use constructor to initialize values and display() method for printing information of three employees.
- 2) Write a program to create class Student with following attributes: instance variables enrollment_no, name and branch; instance methods get_value() and print_value(); class variable cnt; static method show(). Variable cnt counts number of instances created and show() method displays value of cnt.
- 3) Write a program to overload ** (exponential) operator.
- 4) Create class Hospital having attributes patient_no, patient_name and disease_name and an instance p1. Show use of methods getattr(), setattr(), delattr(), and hasattr() for p1. Display values of attributes __dict__, __doc__, __name__, __module__, __bases__ with respect to class Hospital. Delete instance p1 in the end.
- 5) Design a class Lion having method roar() and a class Cub having method play() which inherits class Lion. Use instance of Cub called- simba to access methods roar() and play(). Define public attribute legs, protected attribute ears and private attribute mane of class Lion. Show accessibility of these variables according to their scope.
- 6) Class Person with attributes- name and age is inherited by class SportPerson with attribute sport_name. Use appropriate __init__() method for both classes. Call parent __init__() method from child __init__() method with the help of (A) super() method (B) parent class name.
- 7) Write programs to implement following scenarios where A, B, C, D, E and F are classes and check() is a method. In both scenarios, which check() method is called, when we execute statement- E().check()



- 8) Write a program in which Python and Snake sub classes implement abstract methods- crawl() and sting() of the super class Reptile. What is the output of following statements?
i) **issubclass**(Python, Reptile) ii) **isinstance**(Snake(), Reptile)