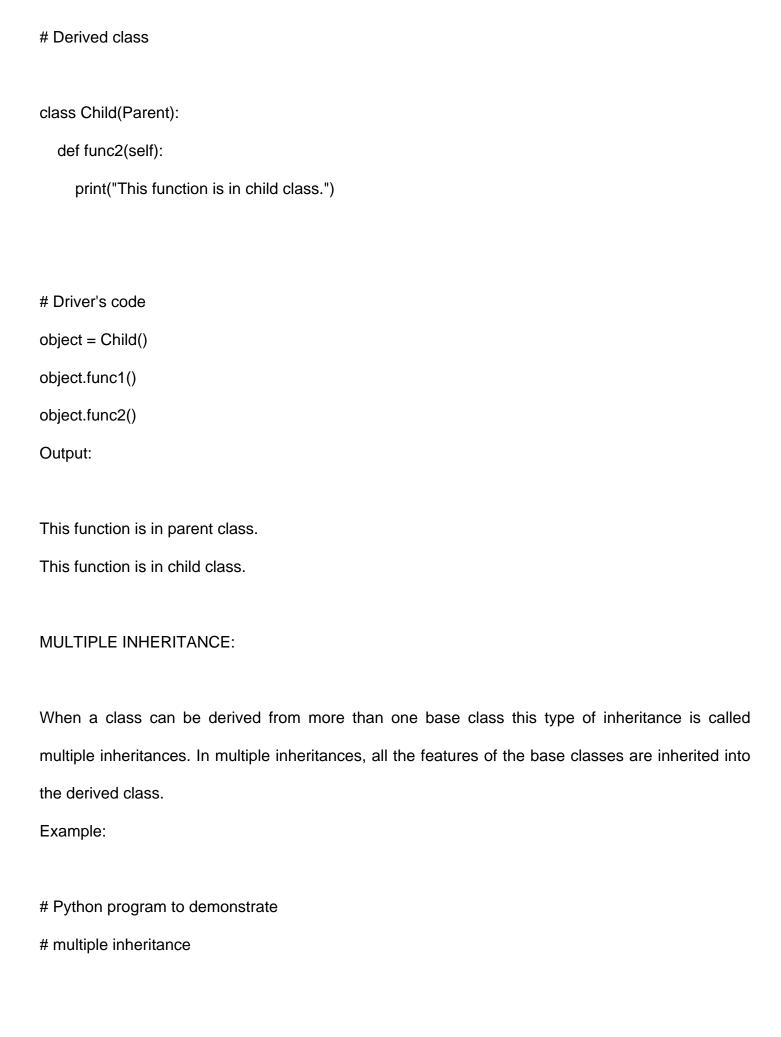
TYPES OF INHERITANCE PYTHON: Inheritance is defined as the mechanism of inheriting the properties of the base class to the child class. Here we a going to see the types of inheritance in Python. Types of inheritance Python Types of Inheritance in Python Types of Inheritance depend upon the number of child and parent classes involved. There are four types of inheritance in Python: SINGLE INHERITANCE: Single inheritance enables a derived class to inherit properties from a single parent class, thus enabling code reusability and the addition of new features to existing code. Example: # Python program to demonstrate # single inheritance # Base class class Parent:

def func1(self):

print("This function is in parent class.")

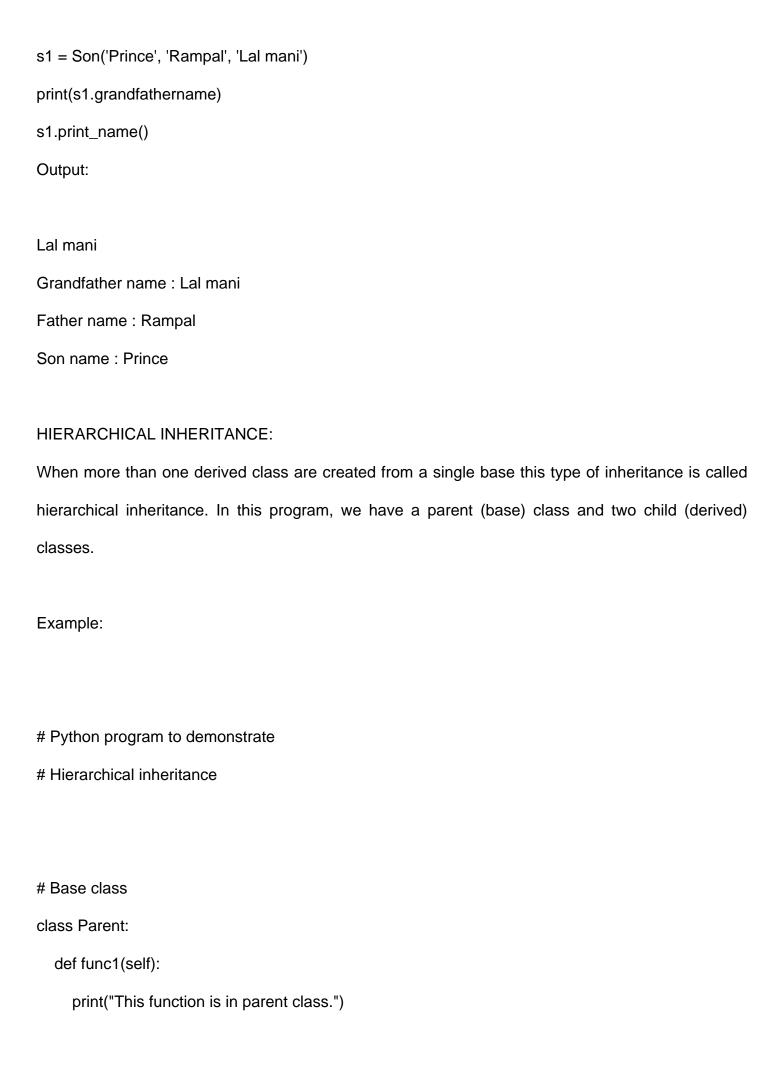


```
# Base class1
class Mother:
  mothername = ""
  def mother(self):
     print(self.mothername)
# Base class2
class Father:
  fathername = ""
  def father(self):
     print(self.fathername)
# Derived class
class Son(Mother, Father):
  def parents(self):
     print("Father :", self.fathername)
     print("Mother :", self.mothername)
# Driver's code
s1 = Son()
s1.fathername = "RAM"
```



```
class Father(Grandfather):
  def __init__(self, fathername, grandfathername):
     self.fathername = fathername
     # invoking constructor of Grandfather class
     Grandfather.__init__(self, grandfathername)
# Derived class
class Son(Father):
  def __init__(self, sonname, fathername, grandfathername):
     self.sonname = sonname
     # invoking constructor of Father class
     Father.__init__(self, fathername, grandfathername)
  def print_name(self):
     print('Grandfather name :', self.grandfathername)
     print("Father name :", self.fathername)
     print("Son name :", self.sonname)
```

Driver code



```
class Child1(Parent):
  def func2(self):
     print("This function is in child 1.")
# Derivied class2
class Child2(Parent):
  def func3(self):
     print("This function is in child 2.")
# Driver's code
object1 = Child1()
object2 = Child2()
object1.func1()
object1.func2()
object2.func1()
object2.func3()
Output:
```

This function is in parent class.

Derived class1

This function is in child 1.
This function is in parent class.
This function is in child 2.
Hybrid Inheritance:
Inheritance consisting of multiple types of inheritance is called hybrid inheritance.
Example:
Python program to demonstrate
hybrid inheritance
class School:
def func1(self):
print("This function is in school.")
class Student1(School):
def func2(self):
print("This function is in student 1. ")

```
class Student2(School):
  def func3(self):
     print("This function is in student 2.")
class Student3(Student1, School):
  def func4(self):
     print("This function is in student 3.")
# Driver's code
object = Student3()
object.func1()
object.func2()
Output:
This function is in school.
```

This function is in student 1.