# Module 2: Inheritance Assignment

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## Problem Statement:

You work in XYZ Corporation as a Data Analyst. Your corporation has told you to work with the inheritance of the classes.

## Tasks to be performed:

1. Create a class named parent_Class and inside the class, initialize a global variable num as 10.
    a. Create another class named child_Class and this class should be inherited from the parent class.
    b. Now create an object for the child_Class and with the help of child_Class object, display the value of 'num'.
2. Create three class named A, B, and C.
    a. Inside the A class, create a constructor. Inside the constructor, initilize 2 global variables- name and age.
    b. After initializing the global variables inside the constructor, now create a funtion named 'details' and that function should return the 'name' variable.
    c. Inside the B class, create a constructor. Inside the contructor, initialize 2 global veriables- name and id.
    d. After initializing the global variables inside the constructor, now create a funtion named 'details' and that function should return the 'name' variable.
    e. The C class should inherit from class A, and B. Inside the class C, create a constructor, and inside the constructor, call the contructor of class A.
    f. Now, create a method inside the class C, as get_details, and this fucntion should return the vaue of name.
    g. Atlast, create an object of class C, and with the help of the object, call the get_details().

3. Create a class named 'Sub1', inside the class, generate a user defined function named 'first' and inside the function, pass the following statement in the print()- 'This is the first function from Sub 1 class'.

    a. Now create another class named 'Sub2', and inside the class, create a function named 'second', and pass the following message in the print()- 'This is the second function from the Sub 2 class'.

    b. After that, create another class named 'Super' and inside that class, create a method named 'final', and pass the below message in the print()- 'This is the final method from the super class'.

    c. Now, create an object for the Super class and call all the 3 user defined methods, i.e., first(), second(), and final().

4. Create a class named 'Parent', and inside the class, create a function named 'fun1' and pass the following message in the print()- 'This is the message from the fun1'.

    a. Now create a class named 'Child1' and inside the class, create a method named 'fun2' and pass the following message in the print()- 'This is the message from the fun2'.

    b. After that, create another class named 'Child2' and inside the class, create a method named 'fun3' and pass the following message in the print()- 'This is the message from the fun3'.

    c. Now, create an object of Child2 class and with the help of the object, call the 'fun1' method from the 'Parent' class.

5. Create a class named 'Parent', and inside the class, create a function named 'fun1' and pass the following message in the print()- 'This is the message from the fun1'.

    a. Now create a class named 'Child' and inside the class, create a method named 'fun2' and pass the following message in the print()- 'This is the message from the fun2'.

    b. After that, create another class named 'Hybrid' and inside the class, create a method named 'fun3' and pass the following message in the print()- 'This is the message from the fun3'.

    c. Now, create an object of Hybrid class and with the help of the object, call the 'fun1', 'fun2', and 'fun3' methods.