

Assignment- 3

1. Create a student class that contains three variables (name, roll number and phone number) and two methods for taking the inputs and display the results of those filed. Next class teacher and staff inherit the student class. The teach class contains another two variables (name and area of teaching) and two methods for taking the inputs and display the results of those filed. The staff class contains another two variables (name and work) and two methods for taking the inputs and display the results of those filed. Further, teacher class contains three further classes, namely science, arts and commerce and each of the class contain a variable number of student and further contains two methods for taking the inputs and display the results of this filed.
2. Create a java class namely arithmetic which contains four abstract methods namely addition, subtraction, multiplication and division that perform arithmetic operation by taking two numbers as inputs. Further, write four non-abstract classes that defines the functionality of the above-mentioned operations and display the results of those functions by creating another main class.
3. Write a specific scenario and then write a java program on that scenario like Question 1 and 2 that represent multiple inheritance can possible to implement using interface. Similarly, write a specific scenario and then write a java program on that scenario like Question 1 and 2 that represent interface extends another interface instead of implements. (Do not use the examples which have been discussed in the lectures).
4. Write a recursive definition in java that converts binary number to decimal number.
5. Write a specific scenario and then write a java program on that scenario like Question 1 and 2 that contains both method overloading and method overriding in the same program.