

(Attempt any 2 out of 3)

1. Create one superclass

HillStations and three subclasses
Manali, Mussoorie, Gulmarg.

Subclasses extend the superclass
and override its location() and
famousFor() method. i.call the
location() and famousFor() method
by the Parent class', i.e. Hillstations
class. As it refers to the base class
object and the base class method
overrides the superclass method;
the base class method is invoked at
runtime. ii.call the location() and
famousFor() method by the all
subclass', and print accordingly.

2. Write a Java program that
demonstrates method overriding by

creating a superclass called Animal and two subclasses called Dog and Cat. • The Animal class should have a method called makeSound(), which simply prints "The animal makes a sound." • The Dog and Cat classes should override this method to print "TheCat/The dog meows/barks" respectively. • The program should allow the user to create and display objects of each class. [Hint:Use multilevel inheritance]

3. Create abstract class vaccine. Create two variables age(int), nationality(String). create 2 concrete methods firstDose() and secondDose(). Scenario 1: user can take the first dose if the user is

Indian and age is 18. After vaccination the user has to pay 250rs (which will be displayed on the console). Scenario 2: Users are eligible to take the second dose only after completing the first dose. Scenario 3: create abstract method `boosterDose()` in abstract class `Vaccine`. Create one implementation class `vaccinationSuccessful`, where implement `boosterDose()` method. Create main class `vaccination` and invoke all methods accordingly. [Hint: Create constructor to initialize variables `age` and `nationality`, Use flow control (If else) to check condition] Sample Input
Nationality: Indian Age: 18

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(Attempt any 2)

1. Create a Book class with bookId, bookName and authorName. Create parameterized constructor to initialize the object. Create an ArrayList of type Book and store all book objects into collections and display all book details. [Hint: Use advanced for loop to display all Books details]

2. Write a program to reverse a given List of strings

original list = [apple, banana, cherry, date]

reversed list = [date, cherry, banana,

apple]

3. Write a Java program that calculates the sum of all even numbers present in an ArrayList of integers.

Sample Input:

2

5

8

10

15

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