Access modifiers

1. Create a class Student with 4 variables called as rollNo, admissionNo, age, courseId. Each of the variables should have one of the access modifier: public, protected, no-access-modifier and private. Add 4 methods in the class: public method doPublic, no access modifier method doDefault, protected method doProtected, private method doPrivate.

a. In main method outside the class but in same package – create object of type Student.

i. Try to access all the variables and all the methods in it. Verify the visibility against the access modifier table.

b. In same package as Student, create a new class TQPPStudent and extend the Student class.

i. Create a method called as checkStudentVariableAccess in TQPPStudent and try to assign values to the inherited variables in the method. Verify the visibility against the access modifier table.

ii. Create a method called as checkStudentMethodAccess in TQPPStudent and try to call the inherited methods in the method. Verify the visibility against the access modifier table.

c. In another package, create a new class OtherPackageStudent and extend the Student class.

i. Create a method called as checkStudentVariableAccess in Student and try to assign values to the inherited variables in the method. Verify the visibility against the access modifier table.

ii. Create a method called as checkStudentMethodAccess in Student and try to call the inherited methods in the method. Verify the visibility against the access modifier table.

d. In main method outside the class but in some other package – create object of type Student.

i. Try to access all the variables and all the methods in it. Verify the visibility against the access modifier table.

e. In main method outside the class but in some other package – create object of type TQPPStudent.

i. Try to access all the variables and all the methods in it. Verify the visibility against the access modifier table.

f. In main method outside the class but in some other package – create object of type OtherPackageStudent.

g. Try to access all the variables and all the methods in it. Verify the visibility against the access modifier table.

h. Write all the possible number of programs for access modifires.

Access Modifier	within class	within package	outside package by subclass only	outside package
Private	Y	N	N	N
Default	Y	Y	N	N
Protected	Y	Y	Y	N
Public	Y	Y	Y	Y