Case 4:

What is the purpose and difference in public, private and protected access specifiers. Illustrate a design example with this.

Program:

FirstAccess.java

**package** work1;

**public** **class** FirstAccess{

**private** **int** a=100;

**public** **int** b=150;

**protected** **int** c=200;

**private** **int** cube(**int** a) //can be invoked in this package only because access specifier is private

{

**return** a\*a\*a; //volume of cube is a3

}

**public** **int** cube1(**int** b) //can access in this and other package also

{

**return** b\*b\*b;

}

**protected** **int** cube2(**int** c) //can access in this and other package also

{

**return** c\*c\*c;

}

**public** **static** **void** main(String[] args) {

FirstAccess fa= **new** FirstAccess(); //constructor calls

System.***out***.println(fa.a+" "+fa.cube(100)); //object of constructor invokes here

/\*

\* System.out.println(fa.a+" "+fa.cube(101));

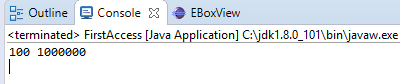
\* System.out.println(fa.a+" "+fa.cube(102));

\*/

}

}

Output:



Second.java

**package** work;

**import** work1.\*; //importing package work1 to package work to access

**class** Second **extends** FirstAccess {

**public** **static** **void** main(String[] args) {

Second s = **new** Second(); //constructor calls

System.***out***.println(s.b + " " + s.cube1(110)); //object invokes here

System.***out***.println(s.c + " " + s.cube2(120)); //object invokes here

}

}

Output:

