**PART 01:**

1. Create a new class called ‘Item’ with two protected instance variables (private variables), an integer variable called ‘location’, and a String variable called ‘description’.
2. Add a constructor method for the Item class that takes an integer and a String as arguments (in that order).
3. The constructor should assign the value of these parameters to the corresponding instance variables.
4. Add getter and setter methods for the location and description variables.
5. Add another class called Monster and make the Monster class a sub-class of the Item class.
6. Add a constructor method to the Monster class that takes an integer and a String argument just like the Item class constructor.
7. Use these arguments to call the Item super class constructor from within the Monster class constructor so that the instance variables in the superclass are instantiated correctly.

Answer code and output,

code:

item class,

package com.mycompany.project2;

public class item {

protected int location;

protected String description;

public item(int loc,String desc)

{

location=loc;

description=desc;

}

public void setLoc(int loc)

{

location=loc;

}

public int getloc()

{

return location;

}

public void setDesc(String desc)

{

description=desc;

}

public String getDesc()

{

return description;

}

}

monster class,

package com.mycompany.project2;

public class monster extends item {

public monster(int location,String description)

{

super(location,description);

}

}

main class,

package com.mycompany.project2;

public class Project2 {

public static void main(String[] args) {

monster m1=new monster(1,"i'm not a robbot");

System.out.println(m1.location+" "+m1.description);

m1.setLoc(2);

m1.setDesc("i'm not a robbot");

System.out.println(m1.getloc() +" "+m1.getDesc());

item t1=new item(3,"i'm not a robbot");

System.out.println(t1.location+" "+t1.description);

t1.setLoc(4);

t1.setDesc("i'm not a robbot");

System.out.println(t1.getloc()+" "+t1.getDesc());

}

}

**PART 02**

1. Which of these keywords is used to refer to member of base class from a sub class?  
 a) upper b) super c) this d) None of the mentioned

1. The modifier which specifies that the member can only be accessed in its own class is a) public b) private c) protected d) none
2. Which of these is a mechanism for naming and visibility control of a class and its content?  
   a) Object b) Packages  
   c) Interfaces d) None of the Mentioned.
3. Which of the following is correct way of importing an entire package ‘pkg’?  
   a) import pkg. b) Import pkg.  
   c) import pkg.\* d) Import pkg.\*
4. Which of these method of class String is used to extract a single character from a String object?  
   a) CHARAT() b) charat()  
   c) charAt() d) CharAt()
5. Which of these method of class String is used to obtain length of String object?  
   a) get() b) Sizeof()  
   c) lengthof() d) length()

**PART 03: Fill in the blanks using appropriate term.**

1. Real-world objects contain state and behavior.
2. A software object's state is stored in fields.
3. A software object's behavior is exposed through methods.
4. Hiding internal data from the outside world, and accessing it only through publicly exposed methods is known as data encapsulation.
5. A blueprint for a software object is called a class.
6. Common behavior can be defined in a super class and inherited into a sub class using the extends keyword.
7. A collection of methods with no implementation is called an interface.
8. A namespace that organizes classes and interfaces by functionality is called a packege.
9. The term API stands for Application Progamming Interface.