OOP-SW-ESPE-2023-14575-Exam1

Puntos totales 36/51 ?

Object Oriented Programming - Universidad de las Fuerzas Armadas ESPE
Computer Science Department
Software Engineering
NRC: 14575

------------------->> Enjoy you must have
My young Padawan! <<-------------------

READ THE INSTRUCTIONS FIRST
Answer every theoretical question using this google form. In the exercise (there is one her in the theoretical exam, and there is another that will be assigned to you after this Google Form), please upload to the OOP course GitHub repository (Exams/lastname/unit1/question33/) "small letters" your Netbeans Project along with your json files and screen shots (png) of the program running and the json file. Also upload a zip ZIP ZiP ziP zip file with everything to this Google Form Evaluation where it is required. Also, the answer to question 27 must be uploaded to the repository, the vpp file and the pdf/jpg file. RAR files are worth zero points.

1 de 1 puntos

You must unlearn what you have learned

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```

Enter your Full Name: LastName FirstName MiddleName, for example: Lascano Jorge Edison *

García Galarza Mateo Jarén

Enter your number on the roster (your list number) *

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✓ Did you read the directions. If not, please do it. Por favor, lea las indicaciones antes de empezar su examen. Please make sure that your computer is plugged in and your Internet is OK Por favor asegúrese de tener electricidad conectada a su computadora. Y el Internet en buen estado. *1/1

● Yes ✓

○ No

OOP Fundamentals (10 minutes) 10 de 10 puntos

✓ 1. It is used to model the structure of objects in the system * 1/1

● Class Diagrams ✓

○ Use Case Diagrams

○ Flowcharts

✓ 3. An object includes another object as subpart of it * 1/1

● Aggregation ✓

○ Dependency

○ sub-object

✓ 2. Hiding of design decisions inside software appropriate components * 1/1

● Encapsulation ✓

○ Abstraction

○ Inheritance

✓ 5. A class is composed of * 1/1

○ Attributes and variables

● attributes and methods ✓

○ functions and methods

✓ 4. Leave unnecessary definitions out of the system implementation * 1/1

● Abstraction ✓

○ Encapsulation

○ Objects

✓ 6. Inheritance in Object Orientation is also known as * 1/1

● Generalization/Specialization ✓

○ Classification

○ Abstraction

✓ 7. Reviews of software artifacts are of two types * 1/1

○ Unit tests and Desk checks

○ Inspections and unit tests

● Inspections and Walkthroughs ✓

✓ 9. Aggregation, composition and association in a class diagram are relationships between classes that are implemented in code using *1/1

● attributes ✓

○ methods

○ packages

✓ 8. Encapsulation is implemented with the keyword * 1/1

○ public

○ void

● private ✓

✓ 10. Dependency in a class diagram, is a relationship between classes that are implemented in *1/1

○ variables

○ classes

● methods ✓

GitHub skills (5 minutes) 5 de 5 puntos

11. Match each of the following Git commands to its purpose *

	clone	add	commit	push	pull	Puntuación	
Put one or more new, changed, or deleted files under version control	○	●	○	○	○	1/1	✓
Create a replica of remote repository into folder on the local system	●	○	○	○	○	1/1	✓
Make a new version	○	○	●	○	○	1/1	✓
Sync any new versions on the local system with the remote system	○	○	○	○	●	1/1	✓
Sync any new versions on the remote system with the local system	○	○	○	●	○	1/1	✓

More OOP Fundamentals (5minutes)

5 de 5 puntos

✓ 13. A constructor is a * 1/1

○ variable

○ class

○ attribute

● method ✓

✓ 12. What does it mean to instantiate a class object? * 1/1

○ duplicate a class

○ delete a class

● create an object from the class ✓

○ connect two clases to each other

✓ 14. These diagrams help organize and model the requirements of a system showing the cases of use and actors? *1/1

○ sequence diagrams

○ collaboration diagrams

● use case diagrams ✓

✓ 15. A getter is a * 1/1

● method ✓

○ attribute

○ class

○ variable

✓ 16. In Java, What name must a constructor have? * 1/1

○ a verb

○ the name of the package

○ any name

● the same name as the class ✓

True or False (10 minutes)

7 de 10 puntos

✗ 17. Classification (the noun) is the process of group objects together into sets based on common properties *0/1

● True ✗

○ False

Respuesta correcta

● False

✗ 18. Classification (the verb) or “class” is a set of objects that have the same kinds of attributes and methods *0/1

● True ✗

○ False

Respuesta correcta

● False

✗ 19. One way to find potential classes in a system is to document a high-level description of the system and look for verbs. Those nouns are most likely to represent meaningful classes. *0/1

● True ✗

○ False

Respuesta correcta

● False

✓ 20. Use cases are used to document the requirements (the goals) of a system *1/1

● True ✓

○ False

✓ 21. C++, C# and Java are structured programming languages only * 1/1

○ True

● False ✓

✓ 22. Object Oriented code makes it easy to add new classes without modifying existing functions *1/1

● True ✓

○ False

✓ 23. C ++ and Java are declarative programming languages * 1/1

○ True

● False ✓

✓ 24. A method that is called from another method inside the same class should be defined later in the same class, i.e., after the method that called it *1/1

○ True

● False ✓

✓ 25. WheelsList is a good name for a variable * 1/1

○ True

● False ✓

✓ 26. A good programming practice is to use nouns to name the methods * 1/1

○ True

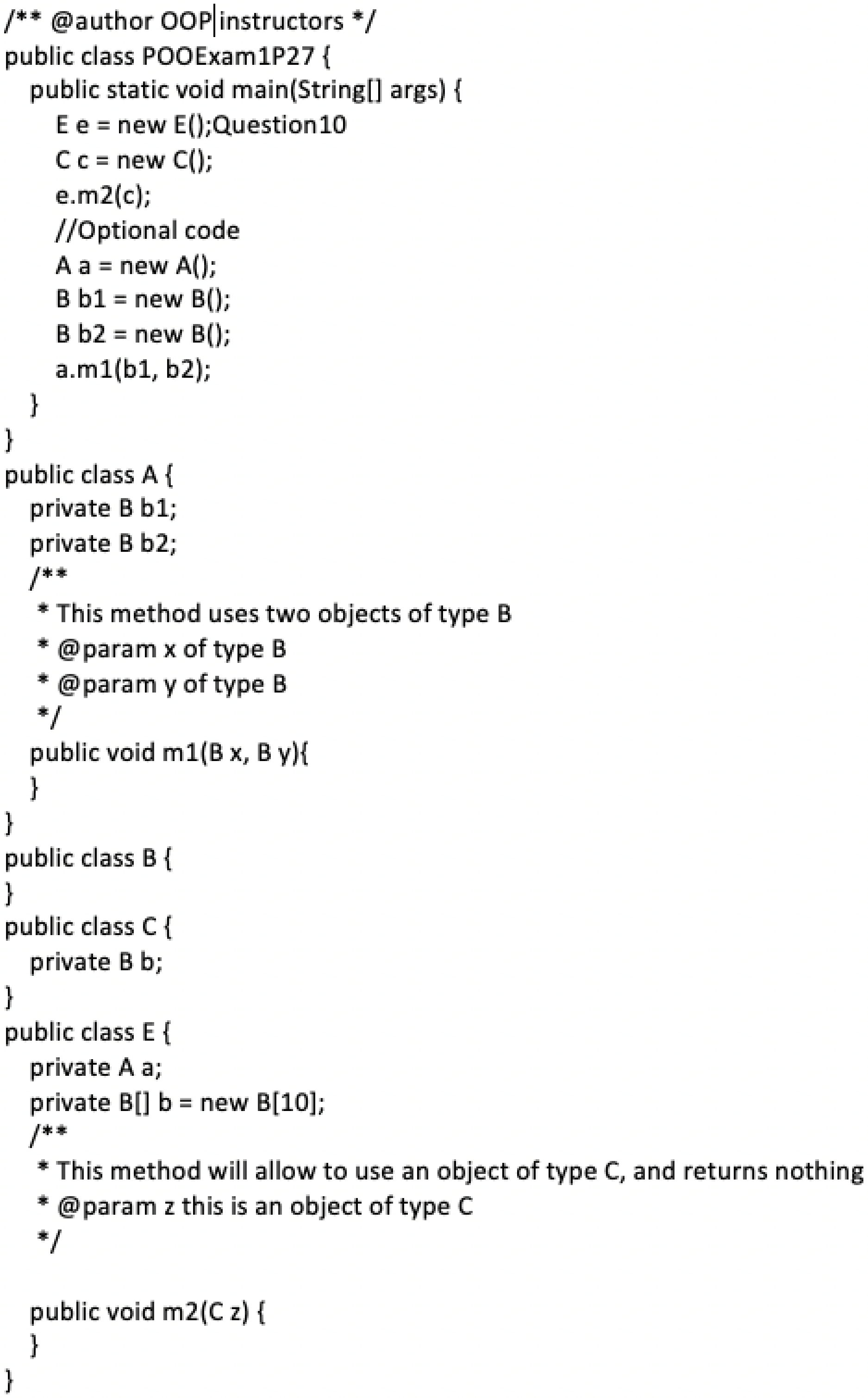
● False ✓

○ Otro: ________________

Reverse Engineering skills, from code to UML (15 minutes)

0 de 10 puntos

✕ 27. Classes + Relations (Reverse Engineering). Draw the class diagram corresponding to the following code. Convert every attribute to associations, aggregations, compositions or dependencies, with appropriate names and multiplicity constraints (Upload the Png/Jpg file here, and the vpp and png file to the repository): *.../10



```
/** @author OOP|instructors */
public class POOExam1P27 {
   public static void main(String[] args) {
      E e = new E();Question10
      C c = new C();
      e.m2(c);
      //Optional code
      A a = new A();
      B b1 = new B();
      B b2 = new B();
      a.m1(b1, b2);
   }
}
public class A {
   private B b1;
   private B b2;
   /**
    * This method uses two objects of type B
    * @param x of type B
    * @param y of type B
    */
   public void m1(B x, B y){
   }
}
public class B {
}
public class C {
   private B b;
}
public class E {
   private A a;
   private B[] b = new B[10];
   /**
    * This method will allow to use an object of type C, and returns nothing
    * @param z this is an object of type C
    */

   public void m2(C z) {
   }
}
```

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Comentarios

classes (attributes and methods) + relationships (dependencies, associations, aggregations, compositions, multiplicity constraints) -> 10 pts.

Reading UML (5 minutes)

8 de 10 puntos

Based on the previous answer (Class diagram). Answer the following questions with an integer number. use digits. DON'T use words

✓ 28. How many associations is the B class connected to? * 2/2

3 ✓

✗ 29. How many associations is the A class connected to? * 0/2

1 ✗

Respuesta correcta

2

✓ 30. The multiplicity constraint between C and B, on the class B is? * 2/2

1 ✓

✓ 31. How many dependencies is the A class connected to? * 2/2

1 ✓

✓ 32. The maximum value of the multiplicity constraint between E and B, on the B class is? * 2/2

10 ✓