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<https://swayam.gov.in>https://swayam.gov.in/nc_details/NPTEL

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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Software Engineering (course)

Course outline

About
NPTEL ()

How does an
NPTEL
online
course
work? ()

Week 0 ()

Week 1 : ()

Week 2 : ()

Week 3 : ()

Week 4 : ()

Week 5 : ()

Week 6 : ()

Week 7 : ()

Week 8 : ()

● Lecture 36 :
Aggregation/
Composition

Week 8 : Assignment 8

Your last recorded submission was on 2024-09-16, 13:00 Due date: 2024-09-18, 23:59 IST.
IST

1)

1 point

Consider the following sentence: "A square is a polygon". From an analysis of the sentence, identify the relations between the two classes Square and Polygon that can be inferred from the sentence.

- a. Inheritance
- b. Association
- c. Aggregation
- d. Composition
- e. Dependency

- ☒ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.

2)

1 point

Consider the sentence: A college has many Students. Which one of the following best characterizes the relationship that exists between the **College** class and the **Student** class?

- a. Inheritance
- b. Specialization
- c. Association
- d. Composition
- e. Dependency

- ☐ a.
- ☐ b.
- ☒ c.
- ☐ d.
- ☐ e.

and
dependency
relations (unit?
unit=73&lesso
n=74)

● Lecture 37 :
Interaction
Modelling
(unit?
unit=73&lesso
n=75)

● Lecture 38 :
Development
of Sequence
diagrams
(unit?
unit=73&lesso
n=76)

● Lecture 39 :
State-Machine
diagram (unit?
unit=73&lesso
n=77)

● Lecture 40 :
An Object-
Oriented
design
process (unit?
unit=73&lesso
n=78)

● Lecture
Material For
Week 8 (unit?
unit=73&lesso
n=79)

● Quiz: Week 8
: Assignment
8
(assessment?
name=194)

● Feedback
Form For
Week 8 (unit?
unit=73&lesso
n=80)

Week 9 : ()

**Download
Videos ()**

3)

1 point

Consider the following sentence: "100 paisa is one rupee". From an analysis of the sentence, identify the relation between the two classes Paisa and Rupee that can be inferred from the sentence.

- a. Inheritance
- b. Association
- c. Aggregation
- d. Composition
- e. Dependency

- ☐ a.
- ☐ b.
- ☐ c.
- ☒ d.
- ☐ e.

4)

1 point

Consider the following sentence: "Students live in hostels". From an analysis of the sentence, identify the relation between the two classes Student and Hostel that can be inferred from the sentence.

- a. Inheritance
- b. Association
- c. Aggregation
- d. Composition
- e. Dependency

- ☐ a.
- ☒ b.
- ☐ c.
- ☐ d.
- ☐ e.

5)

1 point

A collaboration diagram is used by the designers for its capability to effectively depict which one of the following types of information?

- a. The decision structure among the classes
- b. The looping structure
- c. The attribute values of the objects
- d. Structural information such as class association
- e. Times at which collaboration occurs among classes

- ☐ a.
- ☐ b.
- ☐ c.
- ☒ d.
- ☐ e.

6)

1 point

Text
Transcripts ()

Books ()

Live
Interactive
Session ()

How is an external system represented in a use case diagram?

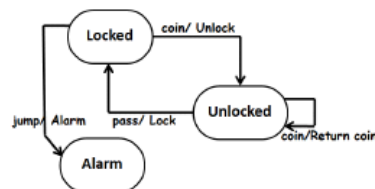
- By using a specific icon available for this purpose
- By using text description
- By using object constraint language (OCL)
- By stereotyping the actor icon
- By inheriting a special icon from the actor icon

- ☐ a.
- ☐ b.
- ☐ c.
- ☒ d.
- ☐ e.

7)

1 point

Consider the following state chart diagram modelling the behaviour of a turnstile gate. Based on the modelled behaviour, what would happen if a coin is inserted into the turnstile gate when the turnstile gate is in the unlocked state?



- The turnstile gate allows one person to pass and remains in the unlocked state
- The turnstile gate sounds an alarm and remains in the unlocked state
- The turnstile gate remains in the unlocked state
- The turnstile gate returns the coin and remains in the unlocked state
- The turnstile gate returns the coin and becomes locked
- The turnstile gate becomes locked

- ☒ a.
- ☐ b.
- ☐ c.
- ☐ d.
- ☐ e.
- ☐ f.

8)

1 point

Which of the following features of the state chart model are primarily responsible towards reduced number of states in the finite state modelling of a given problem?

- Nested states
- Concurrent states
- History state
- Broadcast messages
- Actions on state entry and exit

- ☒ a.
- ☒ b.
- ☐ c.

☐ d.☐ e.

9)

1 point

Consider the following statement: "India shares borders with Pakistan, Bangladesh, and China."

Which one of the following is the best way to implement this in an object-oriented program?

- a. Define a unary association on Country class
- b. Let **Country** class implement the Border interface
- c. Define **Country** class as an aggregate of **Border** classes
- d. Define a dependency of **Country** class on **Border** class
- e. Define a quaternary association relation between the Countries **India, Pakistan, Bangladesh, and China**

☐ a.☐ b.☐ c.☐ d.☒ e.

10)

1 point

In an informal (natural language) description of a programming problem, which parts of the description are likely represent objects?

- a. All of the nouns and all of the verbs.
- b. All of the verbs and some of the nouns.
- c. Some of the nouns.
- d. Some of the verbs
- e. Some of the nouns and some of the verbs

☐ a.☐ b.☒ c.☐ d.☐ e.

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers