

Sw Engg

Section Id : 64065349320

Section Number : 1

Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	31
Number of Questions to be attempted :	31
Section Marks :	100
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653103717
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 1 Question Id : 640653699192 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DEGREE LEVEL : SOFTWARE ENGINEERING (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?

CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE [TOP](#) FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406532334823. ✓ YES

6406532334824. ✖ NO

Sub-Section Number : 2
Sub-Section Id : 640653103718
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 2 Question Id : 640653699193 Question Type : MSQ Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time : 0
Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Presently a lot of software development takes place in a distributed environment, the developer is expected to write precise interface definitions. From the given options, which is/are TRUE about interface definition.

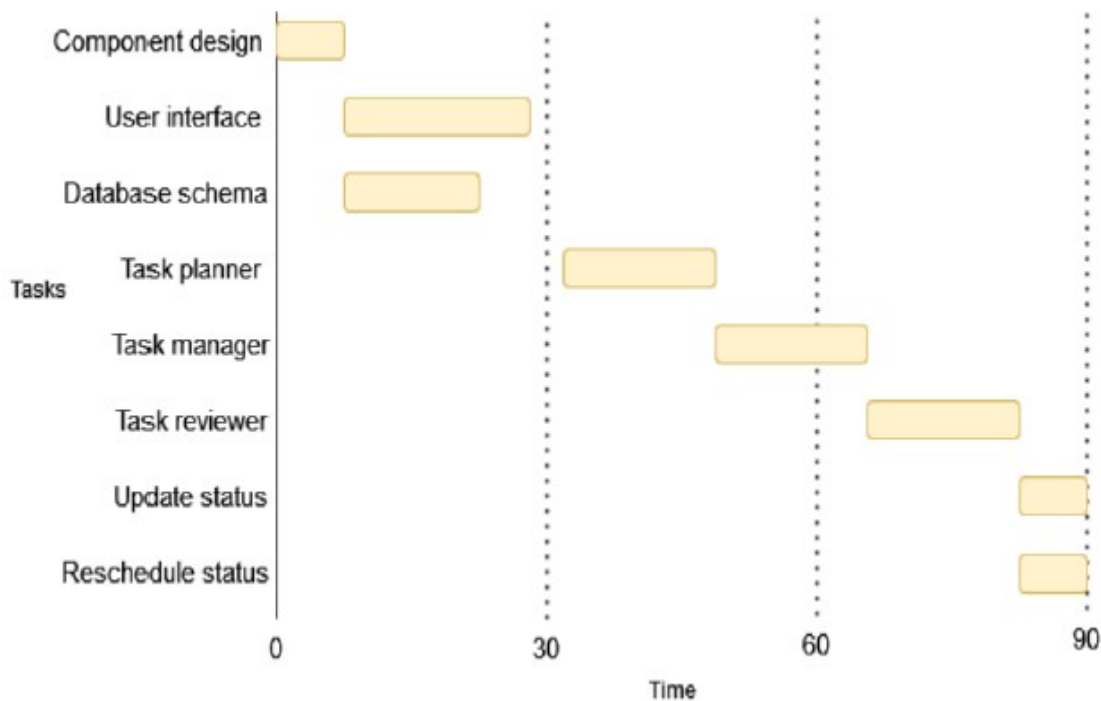
Options :

- 6406532334825. ✔ It describes the capabilities of a function
- 6406532334826. ✖ It provides the implementation details of a function
- 6406532334827. ✔ It tells which requests are allowed and specifies the format of the output
- 6406532334828. ✖ The code implementing the interface should remain unchanged for a given interface definition

Question Number : 3 Question Id : 640653699196 Question Type : MSQ Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time : 0
Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the Gantt chart as follows:



Select the correct observations from the given Gantt chart.

Options :

6406532334838. ✖ Component design starts once the user interface and database schema are completed

6406532334839. ✔ User interface and database design can start at the same time

6406532334840. ✔ Update status and reschedule task both are done concurrently

6406532334841. ✔ Task manager must complete before task reviewer starts

Question Number : 4 Question Id : 640653699208 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which kinds of integration testing approaches must require the use of stubs?

Options :

6406532334886. ✖ Big Bang approach

6406532334887. ✖ Bottom-Up approach

6406532334888. ✔ Top-down approach

6406532334889. ✔ Mixed approach

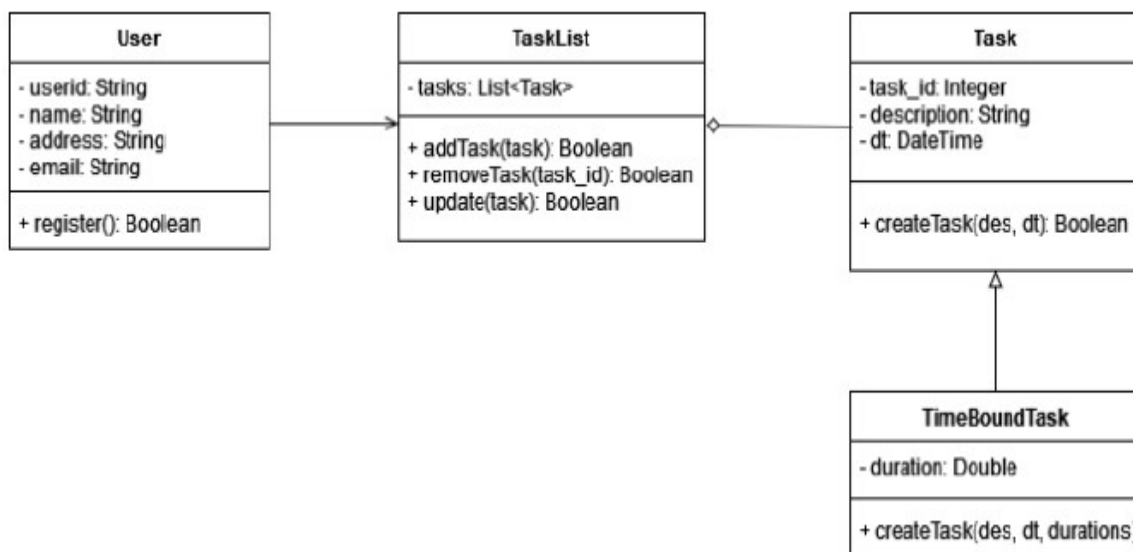
Sub-Section Number : 3
Sub-Section Id : 640653103719
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 5 Question Id : 640653699197 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the class diagram given below.



Which of the following is true about the class diagram?

Options :

6406532334842. ✔ There is an association relation between class User and TaskList

6406532334843. ✖ There is an inheritance relation between class User and TaskList

6406532334844. ✔ There is a composition relation between class Task and TaskList

6406532334845. ✖ There is an inheritance relation between class Task and TaskList

6406532334846. ✖ There is a composition relation between class Task and TimeBoundedTask

6406532334847. ✔ There is an inheritance relation between class Task and TimeBoundedTask

Question Number : 6 Question Id : 640653699198 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following are dynamic behavioural views?

Options :

6406532334848. ✖ Class diagram

6406532334849. ✔ State machine diagram

6406532334850. ✔ Activity diagram

6406532334851. ✔ Interaction diagram

Question Number : 7 Question Id : 640653699200 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following statements about the flask framework is/are correct?

Options :

6406532334856. ✖ It is a mobile application framework

6406532334857. ✔ It is a web application framework

6406532334858. ✔ It is a micro-framework

6406532334859.

✖ It imposes several restrictions on developing applications, like the kind of databases that can be used and the type of web servers that can be used

Question Number : 8 Question Id : 640653699214 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following software deployment strategies have the drawback of maintaining multiple versions?

Options :

6406532334907. ✖ Blue/Green deployment

6406532334908. ✔ Canary deployment

6406532334909. ✔ Versioned deployment

6406532334910. ✖ None of these

Question Number : 9 Question Id : 640653699220 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Choose the correct statements regarding software organizations.

Options :

6406532334932. ✔ In a flat organizational structure, there are fewer levels of hierarchy, promoting a more collaborative environment

6406532334933. ✖ Agile methodologies are primarily suitable for large, bureaucratic organizations

6406532334934. ✔ DevOps is a cultural and professional movement that aims to improve

collaboration between software development and IT operations

6406532334935. ✖ Waterfall model is an agile software development methodology

6406532334936. ✔ The Scrum framework defines roles, events, and artifacts for organizing and managing work

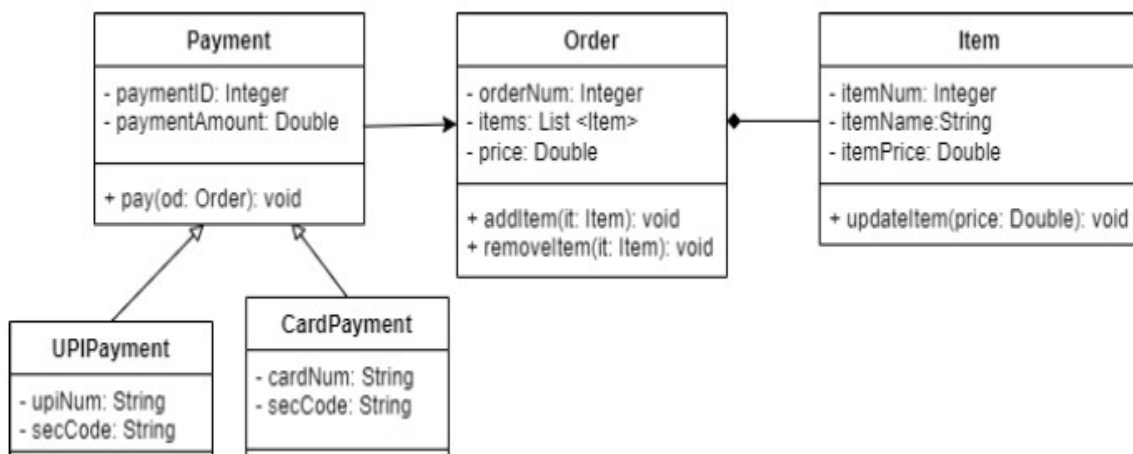
Sub-Section Number : 4
Sub-Section Id : 640653103720
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 10 Question Id : 640653699199 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Consider the class diagram given below.



Identify the statements that can be inferred from the given class diagram.

Options :

6406532334852. ✔ The relationship between class `Payment` and class `Order` is association

6406532334853. ✖ The relationship between class `Payment` and class `UPIPayment` is composition

6406532334854. ✖ The relationship between class `Order` and class `Item` is inheritance

6406532334855. ✔ The relationship between class Payment and class CardPayment is inheritance

Question Number : 11 Question Id : 640653699209 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following integration testing approaches may require drivers?

Options :

6406532334890. ✖ Big bang approach

6406532334891. ✔ Bottom up approach

6406532334892. ✖ Top down approach

6406532334893. ✔ Mixed approach

Question Number : 12 Question Id : 640653699222 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

What are the primary applications of knowledge sharing tools in software development?

Options :

6406532334941. ✔ The tools can be used for sharing documents and archiving decisions

6406532334942. ✖ The tools enable all members of the team to get a big picture of the project along with a detailed view of its progress

6406532334943. ✔ The tools can be used to apply the knowledge gained in one project to another project

6406532334944. ✖ The tools mainly include IDEs that help the developers to be more productive

Sub-Section Number : 5
Sub-Section Id : 640653103721
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 13 Question Id : 640653699213 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Choose the correct statements regarding Test-Driven Development (TDD).

Options :

6406532334902. ✖ TDD involves writing test cases after the implementation of the code

6406532334903. ✔ TDD follows the cycle of "Red-Green-Refactor"

6406532334904. ✖ TDD encourages developers to write production code without any testing

6406532334905. ✔ In TDD, tests are written to validate the expected behavior of the code before the code is implemented

6406532334906. ✖ TDD is not suitable for agile development methodologies

Question Number : 14 Question Id : 640653699219 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Choose the correct statements about continuous integration (CI).

Options :

6406532334927. ✔ CI is a software development practice where code changes are tested and integrated into the main codebase frequently

6406532334928.

✔ Jenkins and Travis CI are examples of CI tools

6406532334929. ✔ CI helps identify and fix integration issues early in the development process

6406532334930. ✖ Continuous Deployment (CD) is synonymous with continuous integration

6406532334931. ✖ CI is only beneficial for small development teams

Sub-Section Number :	6
Sub-Section Id :	640653103722
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 15 Question Id : 640653699194 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

An organisation decided to develop an online medicine selling app. So a team from the organisation visited some medical shops to observe the process of selling the medicines. Identify the type of requirement collection technique used in the given scenario.

Options :

6406532334829. ✖ Questionnaires

6406532334830. ✖ Focus group

6406532334831. ✔ Naturalistic observations

6406532334832. ✖ Documentations

Question Number : 16 Question Id : 640653699195 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

An employee payroll software provides its users with several services. For each service, a tutorial video is provided along with step-by-step examples. Which of the following **usability goals** is fulfilled by the payroll software?

Options :

6406532334833. ✖ Effectiveness

6406532334834. ✖ Efficiency

6406532334835. ✖ Safe to use

6406532334836. ✔ Learnability

6406532334837. ✖ Memorability

Question Number : 17 Question Id : 640653699207 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Which of the following types of testing determines whether a software product meets nonfunctional requirements or not?

Options :

6406532334881. ✖ Unit testing

6406532334882. ✖ Alpha testing

6406532334883. ✖ Beta testing

6406532334884. ✖ Smoke testing

6406532334885. ✔ Performance testing

Question Number : 18 Question Id : 640653699217 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

In which of the following hosting service, the provider is responsible for providing a part of the infrastructure without providing the software layer?

Options :

6406532334919. ✖ Bare Metal Servers

6406532334920. ✔ Infrastructure-as-a-Service

6406532334921. ✖ Platform-as-a-Service

6406532334922. ✖ All of these

Sub-Section Number :

7

Sub-Section Id :

640653103723

Question Shuffling Allowed :

Yes

Is Section Default? :

null

Question Number : 19 Question Id : 640653699201 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

A programmer is developing a module for a big software project. The module has 50 functions. After writing the code, the programmer has observed that he is not getting the desired output, and he suspects some of the functions are not getting called. In order to identify those functions, he places some print statements in all the functions.

What kind of debugging technique does the programmer employ in this case?

Options :

6406532334860. ✔ Logging

6406532334861. ✖ Dump & diff

6406532334862. ✖ Stepping in debugger

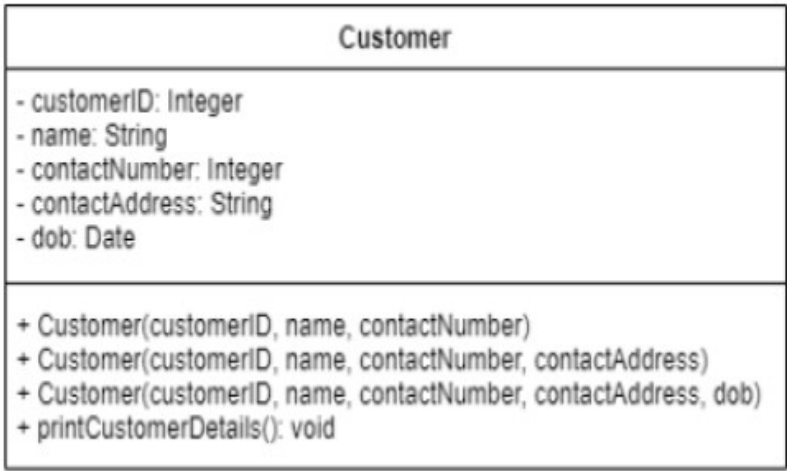
6406532334863. ✖ Profiling tool

Question Number : 20 Question Id : 640653699203 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

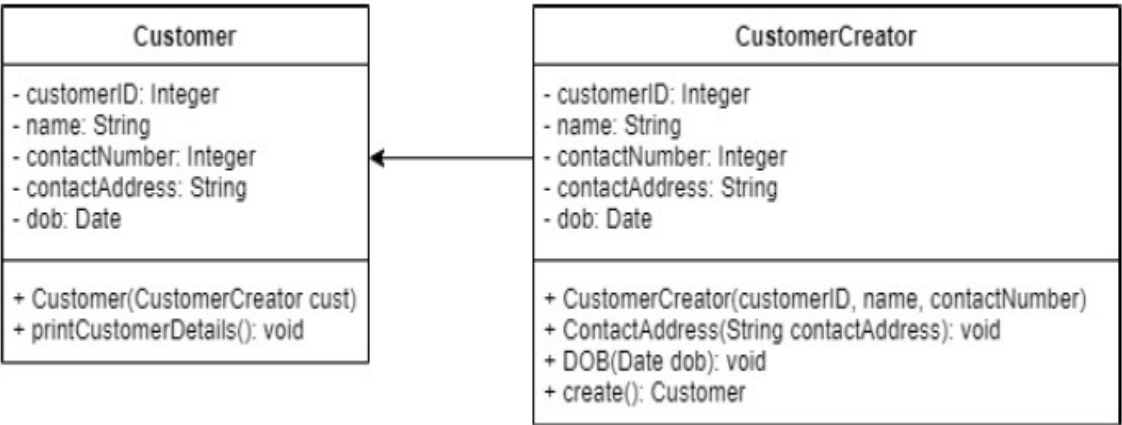
Correct Marks : 3

Question Label : Multiple Choice Question

Consider the following class diagram representing a class Customer.



We apply a design pattern X and the redesigned class diagram as given below:



Identify the design pattern referred to as X.

Options :

6406532334868. ✖ Factory design pattern

6406532334869. ✔ Builder design pattern

6406532334870. ✖ Adapter design pattern

6406532334871. ✖ Facade design pattern

Question Number : 21 Question Id : 640653699204 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider a program that has classes CashPayment , CardPayment and UPIPayment , which are derived from class Payment . However, in the functions, changing the object types from derived class to the base class causes various errors in the program.

Which of the SOLID principles is violated by the program?

Options :

6406532334872. ✖ Open-Closed principle

6406532334873. ✔ Liskov Substitution principle

6406532334874. ✖ Interface Segregation principle

6406532334875. ✖ Dependency Inversion principle

Question Number : 22 Question Id : 640653699218 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following statements are true about the staging environment?

Options :

6406532334923. ✖ It provides the local environment to a software developer which contains the tools like IDE

6406532334924. ✖ It provides an environment with several testing tools and focuses on

integration testing

6406532334925. ✔ It provides an environment that exactly resembles the production environment

6406532334926. ✖ It provides the actual production environment

Sub-Section Number :	8
Sub-Section Id :	640653103724
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 23 Question Id : 640653699202 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

During debugging, a developer finds out the event that triggers an incorrect behavior. He follows the data control flow ahead until the incorrect state is reached.

Which of the following debugging strategies was chosen by the developer?

Options :

6406532334864. ✖ Input manipulation

6406532334865. ✖ Backwards strategy

6406532334866. ✔ Forwards strategy

6406532334867. ✖ Blackbox debugging

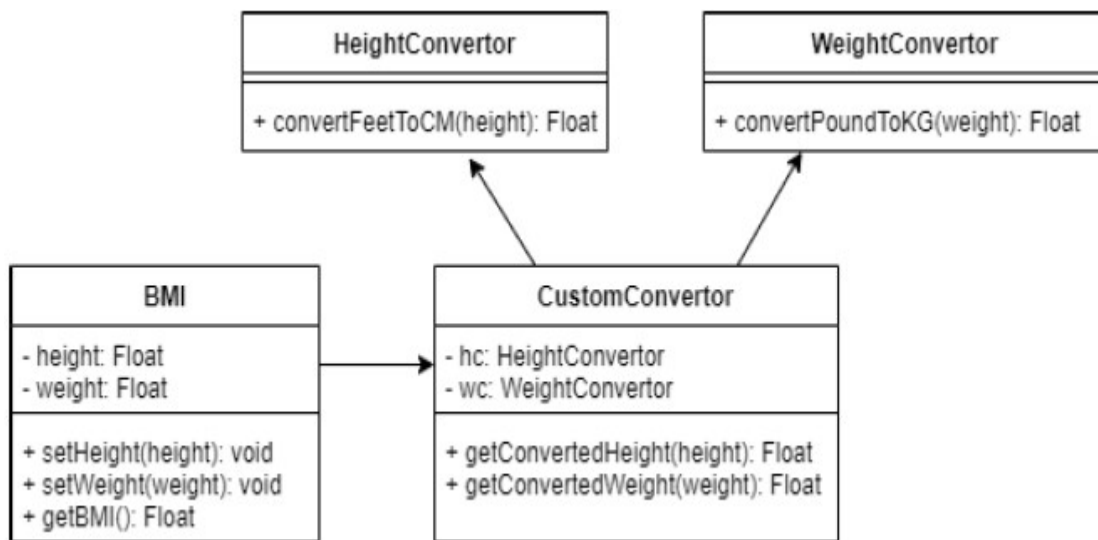
Question Number : 24 Question Id : 640653699205 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider the following classes: BMI, HeightConverter, and WeightConverter. Class BMI considers the height and weight of a person in CMs and KGs respectively and then computes the person's BMI(body mass index). However, the input is collected in the form of Feet and Pounds. Class HeightConverter converts the height from Feet to CM, and class WeightConverter converts weight from Pound to KG. But, unfortunately, the class BMI is not compatible with HeightConverter, and WeightConverter.

Therefore, we apply design pattern X to solve the problem, and represent the class diagram as follows:



Identify the design pattern referred to above as X.

Options :

6406532334876. ✖ Factory design pattern

6406532334877. ✖ Builder design pattern

6406532334878. ✔ Adapter design pattern

6406532334879. ✖ Facade design pattern

Question Number : 25 Question Id : 640653699215 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Match the following:

Deployment environment	Key activity
1. Caching	A. Generate reports, analyze page resources, calculate the performance score, etc.
2. Task Queues	B. Minify code and compress static pages
3. Loading and rendering Pages	C. Store results of common operations in memory
4. Monitoring tools	D. Applications execute resource- and time-consuming tasks asynchronously

Options :

6406532334911. ✖ 1-B, 2-D, 3-C, 4-A

6406532334912. ✖ 1-B, 2-A, 3-C, 4-D

6406532334913. ✔ 1-C, 2-D, 3-B, 4-A

6406532334914. ✖ 1-C, 2-A, 3-B, 4-D

Question Number : 26 Question Id : 640653699216 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Which of the deployment environments exactly resembles the production environment and is used for testing the web application for its performance before it goes live?

Options :

6406532334915. ✖ Development

6406532334916. ✖ Testing

6406532334917. ✔ Staging

6406532334918. ✖ Production

Question Number : 27 Question Id : 640653699221 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Identify the type of decision making required for the following situations:

Situation 1: To decide which software architecture to be used for developing a specific software system

Situation 2: To decide which data structure to be used for developing a specific software module

Options :

6406532334937. ✖ Both are macro decisions

6406532334938. ✖ Both are micro decisions

6406532334939. ✔ 1 is a macro decision, but 2 is a micro decision

6406532334940. ✖ 1 is a micro-decisions, but 2 is a macro decision

Sub-Section Number : 9

Sub-Section Id : 640653103725

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 28 Question Id : 640653699226 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

The current version of the local branch of your repository is given below. You have made some changes to the files `scan.py` and `run.py`.

```
1 $ tree
2 .
3 |-- config
4 | |-- initial.config
5 |-- log.py
6 |-- main.py
7 |-- scan.py
8 |-- run.py
9 1 directory, 5 files
```

Consider the below command output that gives the current status of your local repository. It shows that you have edited some files but have not added them to the staging area.

```
1 $ git status
2 On branch master
3 Untracked files:
4   (use "git add <file>..." to include in what will be committed)
5       log.py
6       scan.py
7       run.py
8
9 nothing added to commit but untracked files present (use "git add" to track)
```

You wish to finally push your changes to the remote branch. What sequence of the below commands can be executed to push your local changes to the remote branch? (Given below are just the commands for simplicity, without the arguments.)

- I. git clone
- II. git push
- III. git pull
- IV. git add
- V. git commit

Options :

6406532334953. ✖ I --> V --> IV --> II

6406532334954. ✖ I --> III --> II --> IV --> V

6406532334955. ✔ IV --> V --> II

6406532334956. ✖ III --> II --> V

Sub-Section Number :

10

Sub-Section Id : 640653103726
Question Shuffling Allowed : No
Is Section Default? : null

Question Id : 640653699210 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (29 to 30)

Question Label : Comprehension

Consider the following code segment.

```
1  if age >= 18 and age <= 60:  
2      print("eligible")  
3  else:  
4      print("not eligible")
```

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 29 Question Id : 640653699211 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following sets of test cases provide/s branch coverage of the given code segment?

Options :

6406532334894. ✖ {18, 60}

6406532334895. ✔ {30, 75}

6406532334896. ✖ {10, 75}

6406532334897. ✔ {10, 30, 75}

Question Number : 30 Question Id : 640653699212 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Which of the following sets of test cases provide/s multiple condition coverage of the given code segment?

Options :

6406532334898. ✖ {18, 60}

6406532334899. ✖ {30, 75}

6406532334900. ✖ {10, 75}

6406532334901. ✔ {10, 30, 75}

Sub-Section Number :	11
Sub-Section Id :	640653103727
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653699223 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (31 to 32)

Question Label : Comprehension

Answer the given subquestions.

Sub questions

Question Number : 31 Question Id : 640653699224 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

Which of the following teams in a software organization is primarily responsible for laying down the terms of service for its software products?

Options :

6406532334945. ✖ Sales team

6406532334946. ✖ Support team

6406532334947. ✔ Ethics and policy specialists

6406532334948. ✖ Data scientists

Question Number : 32 Question Id : 640653699225 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Multiple Choice Question

IDEs are very useful in the software development process, mainly because _____ .

Options :

6406532334949. ✖ they are useful in documenting and archiving knowledge of one project so that it can be reused in another project

6406532334950. ✖ they are useful for sharing documents and archiving decisions

6406532334951. ✖ they enable all the members of the team to get a big picture as well as a detailed view of progress in the software development

6406532334952. ✔ they help the developers become more productive

Sub-Section Number : 12

Sub-Section Id : 640653103728

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 33 Question Id : 640653699206 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Short Answer Question

Consider a program that takes a number as input. If the input number is not an integer it generates an error. Otherwise, it identifies the integer as even or odd.

Identify the number of equivalence classes for black box testing of the program.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

3