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**Rapid Start Guide For**

**Sun exam CX310-019 Sun Certified Associate for the  
Java Platform, Standard Edition**



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**The Fastest Way to IT Certification**

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## ***Introduction***

IT certification exams require a lot of study and practice. Many of our customers spend weeks, if not months preparing for the exam. It can be confusing and daunting to begin this rewarding journey. This book is intended to help you get started by answering smoothly navigate IT certification waters. Here is an overview of what you will find in this RapidStart guide.

- The typical IT certification process
- Benefits of this certification
- About this exam
- Exam pre-requisites
- Who should take this exam
- Sample practice questions
- Exam Preparation Tips
- Free Trial - Download uCertify PrepKit CX310-019
- And much more

## ***Table of Contents***

Introduction .....	4
Table of Contents .....	5
About Us .....	6
Getting Certified. Is it worth it? .....	6
The IT Certification Process.....	7
Registering for the exam .....	7
Scheduling the exam .....	7
Preparing for the exam .....	8
About Exam CX310-019 .....	9
Registration.....	9
Skills Expected.....	9
Who should take this exam.....	13
Pre-Requisites.....	13
Exam Format .....	13
Sample Practice Questions.....	14
Answer and Explanation .....	18
Test Taking Tips.....	29
Before the test.....	29
The Big Day.....	29
Related Exam .....	30
About uCertify PrepKit.....	30
Preparing for the exam .....	32
Advantages of test preparation software.....	32
How uCertify can help .....	33
Top 3 reasons to choose uCertify .....	34
12 more excellent reasons to choose uCertify .....	34
Try it! Our free demo .....	35
Contact Us .....	35
What Our Customers are Saying.....	36
100% money back guarantee.....	37

## ***About Us***

uCertify is a leading provider of IT certification exam preparation software. For over a decade, we have been preparing top quality preparation guides for over 200 IT certification exams. Our software Preparation Kits (PrepKits, as we call them), contain exhaustive study material, tips, study notes and hundreds of practice questions that culminate in a full length simulated preparation exam.

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## ***Getting Certified. Is it worth it?***

IT certification is an industry wide, internationally standardized, highly recognized method that demonstrates your technical problem skills and expertise in a given area. By passing a certification exam, an individual shows to his current or potential employer that s/he recognizes the value of staying current with the latest technology. The certification process helps you gain market relevant skills culminating in an industry respected certificate in one or more areas offered for certification. While not all employers require certification, getting certified is tangible proof of your motivation and skills as an IT professional. Surveys consistently show that certified professionals earn more than their counterparts who do not have a formal certification. Most certified professionals have found that their financial investment in training and certification is paid off by gains in salary, job opportunities, or expanded roles, typically over a short period of time.

In addition, there are several perks provided by vendors to certified professionals.

## ***The IT Certification Process***

For most IT certifications, the process is to register for an exam that includes scheduling the date of your exam. Give yourself as much time as possible to prepare for the exam. Even a candidate with years of experience in the subject needs to get familiar with the exam format and be able to complete the questions within the stipulated time. Candidates not as familiar with the subject first need the time to study the subject, so plan in advance. Here's a high level overview of the process.

### ***Registering for the exam***

Each exam is conducted by a vendor or vendor testing partner for the exam. You will first need to register for the exam. For example, for the Sun SCJA Exam CX310-019 exam, you will need to register with [Prometric](#), the testing partner for SUN. When you register, you pay for the exam. IT certification exam prices vary from US \$80-\$350 or equivalent worldwide. Payment is made directly to the authorized test delivery partner - in this case, Prometric. Note that refund policies vary by testing delivery partner.

### ***Scheduling the exam***

Exams are to be scheduled directly with the testing partner, Prometric in this case.

Students may register in one of two ways: 1) by registering in person at a Prometric testing center or, 2) by calling Prometric at 800-755-3926; Please see link for the numbers in your appropriate regions:

#### **America**

<http://prometric.com/Sun/Americas.htm>

#### **Asia Pacific**

<http://prometric.com/Sun/APACIT.htm>

#### **Europe, Middle East and Africa**

<http://prometric.com/Sun/EMEAIT.htm>

### ***Preparing for the exam***

IT certification exams can be challenging to navigate. However, with professional guidance and plenty of practice, practice and yet more practice, thousands of candidates have successfully gained a certification. Please read section B for more information on preparing for the certification exam.



## ***About Sun SCJA Exam CX310-019***

### **Sun Certified Associate for the Java Platform, Standard Edition**

Sun's CX310-019 test is designed to measure your ability to design applications using Java technology. Upon passing this test, you will become a Sun Certified Java Associate. Passing this test will also help you to prepare for other advanced certification such as SCJP, SCJD, SCWCD and SCBCD. On successful completion of the exam, you will be a Sun Certified Associate for the Java Platform, Standard Edition, Exam Version 1.0.

### ***Registration***

Sun exams can be registered and taken in Prometric testing centers.

Name	Phone (US & Canada)	Phone (Other Countries)
Prometric: <a href="http://www.prometric.com">http://www.prometric.com</a>	1-800-775-3926	1-410-843-8000

### ***Skills Expected***

Sun has specified more than thirty objectives for the CX310-019 exam, which are grouped under eight topics. Following are some important areas in which an individual should possess good knowledge before taking the CX310-019.

#### **Section 1: Fundamental Object-Oriented Concepts**

- **Describe, compare, and contrast primitives (integer, floating point, boolean, and character), enumeration types, and objects.**
- **Describe, compare, and contrast concrete classes, abstract classes, and interfaces, and how inheritance applies to them.**
- **Describe, compare, and contrast class compositions, and associations (including multiplicity: (one-to-one, one-to-many, and many-to-many), and association navigation.**

- **Describe information hiding (using private attributes and methods), encapsulation, and exposing object functionality using public methods; and describe the JavaBeans conventions for setter and getter methods.**
- **Describe polymorphism as it applies to classes and interfaces, and describe and apply the "program to an interface" principle.**

## **Section 2: UML Representation of Object-Oriented Concepts**

- **Recognize the UML representation of classes, (including attributes and operations, abstract classes, and interfaces), the UML representation of inheritance (both implementation and interface), and the UML representation of class member visibility modifiers (-/private and +/public).**
- **Recognize the UML representation of class associations, compositions, association multiplicity indicators, and association navigation indicators.**

## **Section 3: Java Implementation of Object-Oriented Concepts**

- **Notes: code examples may use the 'new' operator.**
- **Develop code that uses primitives, enumeration types, and object references, and recognize literals of these types.**
- **Develop code that declares concrete classes, abstract classes, and interfaces, code that supports implementation and interface inheritance, code that declares instance attributes and methods, and code that uses the Java access modifiers: private and public.**
- **Develop code that implements simple class associations, code that implements multiplicity using arrays, and recognize code that implements compositions as opposed to simple associations, and code that correctly implements association navigation.**
- **Develop code that uses polymorphism for both classes and interfaces, and recognize code that uses the "program to an interface" principle.**

## **Section 4: Algorithm Design and Implementation**

- **Describe, compare, and contrast these three fundamental types of statements: assignment, conditional, and**

iteration, and given a description of an algorithm, select the appropriate type of statement to design the algorithm.

- Given an algorithm as pseudo-code, determine the correct scope for a variable used in the algorithm, and develop code to declare variables in any of the following scopes: instance variable, method parameter, and local variable.
- Given an algorithm as pseudo-code, develop method code that implements the algorithm using conditional statements (if and switch), iteration statements (for, for-each, while, and do-while), assignment statements, and break and continue statements to control the flow within switch and iteration statements.
- Given an algorithm with multiple inputs and an output, develop method code that implements the algorithm using method parameters, a return type, and the return statement, and recognize the effects when object references and primitives are passed into methods that modify them.
- Given an algorithm as pseudo-code, develop code that correctly applies the appropriate operators including assignment operators (limited to: =, +=, -=), arithmetic operators (limited to: +, -, \*, /, %, ++, --), relational operators (limited to: <, <=, >, >=, ==, !=), logical operators (limited to: !, &&, ||) to produce a desired result. Also, write code that determines the equality of two objects or two primitives.
- Develop code that uses the concatenation operator (+), and the following methods from class String: charAt, indexOf, trim, substring, replace, length, startsWith, and endsWith.

#### Section 5: Java Development Fundamentals

- Describe the purpose of packages in the Java language, and recognize the proper use of import and package statements.
- Demonstrate the proper use of the "javac" command (including the command-line options: -d and -classpath), and demonstrate the proper use of the "java" command (including the command-line options: -classpath, -D and -version).
- Describe the purpose and types of classes for the following Java packages: java.awt, javax.swing, java.io, java.net, java.util.

## Section 6: Java Platforms and Integration Technologies

- **Distinguish the basic characteristics of the three Java platforms: J2SE, J2ME, and J2EE, and given a high-level architectural goal, select the appropriate Java platform or platforms.**
- **Describe at a high level the benefits and basic characteristics of RMI.**
- **Describe at a high level the benefits and basic characteristics of JDBC, SQL, and RDBMS technologies.**
- **Describe at a high level the benefits and basic characteristics of JNDI, messaging, and JMS technologies.**

## Section 7: Client Technologies

- **Describe at a high level the basic characteristics, benefits and drawbacks of creating thin-clients using HTML and JavaScript and the related deployment issues and solutions.**
- **Describe at a high level the basic characteristics, benefits, drawbacks, and deployment issues related to creating clients using J2ME midlets.**
- **Describe at a high level the basic characteristics, benefits, drawbacks, and deployment issues related to creating fat-clients using Applets.**
- **Describe at a high level the basic characteristics, benefits, drawbacks, and deployment issues related to creating fat-clients using Swing.**

## Section 8: Server Technologies

- **Describe at a high level the basic characteristics of: EJB, servlets, JSP, JMS, JNDI, SMTP, JAX-RPC, Web Services (including SOAP, UDDI, WSDL, and XML), and JavaMail.**
- **Describe at a high level the basic characteristics of servlet and JSP support for HTML thin-clients.**
- **Describe at a high level the use and basic characteristics of EJB session, entity and message-driven beans.**
- **Describe at a high level the fundamental benefits and drawbacks of using J2EE server-side technologies, and describe and compare the basic characteristics of the web-tier, business-tier, and EIS tier.**

### ***Who should take this exam***

The Sun Certified Associate certification (SCJA Certification) test prepares you for entry-level positions to work as an application developer or a software project manager. If you would like to know more about the SCJA test CX 310-019, please visit the Sun Website.

The test CX310-019 is appropriate for you if you have a basic understanding of OO concepts, the Java programming language and general knowledge of Java platforms and technologies. There are no prerequisites for this exam.

### ***Pre-Requisites***

There is no prerequisite for the SCJA exam. However, you must be well experienced with the language before you take the exam. Even if you are new to the Java field, you can still pass the exam with self-study.

### ***Exam Format***

This test consists of three types of questions:

- Single answer type questions
- Multiple choice type questions
- Drag and drop questions

There are instructions to choose the number of correct answers (for example, choose 2 or choose 3). You will be asked to click the exhibit button to display the code for drag and drop. You will be required to attempt approximately 51 questions in 115 minutes. To pass the exam, you need to score at least 68% (i.e. 35 out of 51).

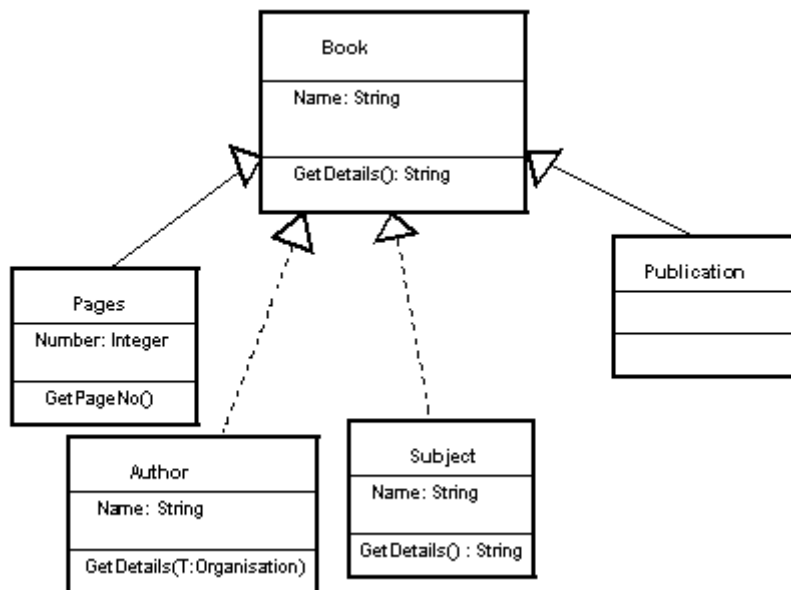
## Sample Practice Questions

**Q 1.** Which of the following statements are true about abstract classes and interfaces?

Each correct answer represents a complete solution. Choose all that apply.

- A. An abstract class cannot be instantiated.
- B. An interface can extend multiple interfaces.
- C. All methods in an abstract class must be abstract.
- D. If an abstract class Book1 extend directly extends an abstract class Book, class Book1 has to implement all abstract methods of class Book.
- E. The final and abstract class modifiers can be used in combination with interfaces.

**Q 2.** According to the given class diagram, which of the following classes successfully implements the Book interface?



- A. Subject
- B. Publication
- C. Author
- D. Pages

**Q 3.** Mark works as a Programmer for InfoTech Inc. He wants to develop an application that supports a wide range of features, such as icons and pop-up tool-tips for components that can

automatically have the look and feel of any OS platform. Which of the following technologies/Web services will he use to meet the desired requirements?

- A. Swing.
- B. AWT
- C. JAX-RPC
- D. WSDL

**Q 4.** Which of the following J2EE components are parts of the EIS tier in a multitier J2EE application?

Each correct answer represents a complete solution. Choose all that apply.

- A. Java Transaction API (JTA)
- B. Java Persistence API entity
- C. Java Database Connectivity API
- D. Servlets
- E. JavaServer Pages

**Q 5.** Which of the following statements are true about JDBC?

Each correct answer represents a complete solution. Choose all that apply.

- A. It enables Java programs to execute SQL statements.
- B. It provides methods for querying and updating data in Oracle.
- C. JDBC can be used instead of ODBC.
- D. It helps users connect to a database.

**Q 6.** Mark works as a Software Developer for Blue Well Inc. He has been assigned the task of developing a Java application having the following properties:

- JSP for processing and responding to an HTTP request
- RMI for bare-bones client/server implementation
- JMS for distributed communication
- OMG protocols for communicating with CORBA objects

Which of the following Java platforms should he select before developing the application?

- A. J2EE
- B. J2ME
- C. J2SE
- D. J2MEE

**Q 7.** Mark works as a Programmer for TechPerfect Inc. He has been assigned the task of developing an application using enterprise java beans. He uses statelful session beans to develop the application. Which of the following is true about a stateful session bean?

- A. It remembers the previous request and responses.
- B. It maintains a conversational state with a client.
- C. It offers better performance than stateless session beans.
- D. It is removed when its session ends and the state is destroyed

**Q 8.** Which of the following options for javac sets the destination directory for class files?

- A. -classpath
- B. -d
- C. -g
- D. -nowarn

**Q 9.** Bin works as a Software Developer for Zenpac Inc. He has been given an assignment to create a class named Employee such that the name and age attributes are seen as read-only by other portions of the code. It provides encapsulation and implements the JavaBean naming convention. Which of the following actions will he adopt to accomplish the task?

- A. Create getName and setName methods as private and name and age attributes as private.
- B. Create getName/setName and getAge/setAge methods as private and name and age attributes as private.
- C. Create getName/setName and getAge/setAge methods as public and name and age attributes as private.



- D Create getName/setName and getAge/setAge methods as protected and name and age attributes as private

**Q10.** George creates a file named Dat.java with the following code:

```
class Dat {  
    public static void main(String args[]) {  
        Date d=new Date();  
        System.out.print(d);  
    }  
}
```

Which of the following packages will George import in order to successfully compile and run the Dat.java file?

- A. java.util
- B. java.net
- C. javax.swing
- D. java.awt

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**<http://www.ucertify.com/download/CX310-019.html>**

## ***Answer and Explanation***

### **A1. Answer options A and B are correct.**

An abstract class is a class that is partially implemented. An abstract class consists of one or more abstract methods that are declared but left unimplemented. It is the responsibility of subclasses that extend an abstract class to implement the unimplemented part of the abstract class. As the implementation of an abstract class is not complete, it is not possible to directly create objects of an abstract class.

An interface is a reference type that defines a contract. An interface body consists of method declarations and constants. All methods and constants in an interface are public. Interfaces are left completely unimplemented, i.e., no method in the interface is implemented. All methods of an interface are abstract and the method body is absent. A class may access one or more interfaces simultaneously. An interface can extend another interface by using the keyword `extends`.

Answer option C is incorrect. An abstract class can include both abstract and non-abstract methods. It is not necessary that all methods of an abstract class must be abstract. However, it is necessary that the subclasses that extend an abstract class must implement the unimplemented part of the abstract class. A class containing one or more abstract methods must be declared as abstract. However, a class can also be declared as abstract even if it has no abstract methods. An abstract class may also have non-abstract methods.

Answer option D is incorrect. It is necessary for a class to implement all the methods of its super class if its super class is an abstract class. However, the sub class of an abstract class can be abstract if it does not implement the methods of the super class.

Answer option E is incorrect. The `final` and `abstract` modifiers cannot be used in combination with interfaces.

### **A2. Answer options A is correct.**

The class `Subject` points the `Book` interface with a closed headed arrow and a dotted line. The class `Subject` implements the `Book` interface because it has the same overriding method as `Book`. To properly implement an interface, the methods in the implementing class must match in both name and method signature with the method in the interface being overridden.

Answer option B is incorrect. The Publication class does not implement interface because it is connected to Book by using a solid line and a solid line represents inheritance.

Answer option C is incorrect. The class Author looks like it is overriding the GetDetails() method but it takes parameters, as the method defined in the interface does not take any argument. Hence, it is not implementing the interface.

Answer option D is incorrect. The Page class does not implement interface because it is connected to Book by using a solid line and a solid line represents inheritance.

### A3. Answer options A is correct.

Swing uses a set of GUI components that are built on AWT technology. It provides a pluggable look and feel. Swing is implemented entirely in the Java programming language and is based on the JDK 1.1 Lightweight UI Framework.

There are two basic sets of components that a user uses to build Java programs. These two groups of components are called Abstract Window Toolkit (AWT) and Swing. Both of these groups of components are part of the Java Foundation Classes (JFC).

AWT (Abstract Window Toolkit)	Swing
Use of native peers speeds component performance of AWT.	Swing components are generally slower and buggier than AWT.
AWT components more closely reflect the look and feel of the OS they run on.	The pluggable look and feel lets a user design a single set of GUI components that can automatically have the look and feel of any OS platform.
AWT applets can run without the Java plug-in.	Most Web browsers do not include the Swing classes, so the Java plug-in must be used.
Use of native peers creates platform specific limitations. Some components may not function at all on some platforms.	Pure Java design provides for fewer platform specific limitations.
AWT components do not support features such as	Swing supports a wider range of features such as icons and pop-

icons and tool-tips.	up tool-tips for components.
There is a much smaller set of AWT components available; thus, it places the burden on the programmer to create his or her own AWT-based components.	There is a huge set of Swing components available; thus, it removes the burden on the programmer to create his or her own AWT-based components.
The majority of component makers base their new component development on Swing components.	Swing development is more active. Sun puts much more energy into making Swing robust.

Answer option B is incorrect. AWT components do not support features, such as icons and tool-tips for components. Hence, AWT cannot be used to create the application mentioned in the scenario.

Answer option C is incorrect. Java API for XML-based RPC (JAX-RPC) allows invoking from a Java application a Java-based Web Service with a known description while still being consistent with its WSDL description. It can be seen as Java RMIs over Web Services. JAX-RPC 2.0 was renamed to JAX-WS 2.0 (Java API for XML Web Services).

JAX-RPC provides a programming model for the development of SOAP (Simple Object Access Protocol)-based applications. The JAX-RPC programming model simplifies development by abstracting SOAP protocol-level runtime mechanisms and providing mapping services between Java and the Web Services Description Language (WSDL).

The following are the advantages of JAX-RPC:

- Platform independence of the Java programming language.
- JAX-RPC is not restrictive: a JAX-RPC client can access a Web service that is not running on the Java platform, and vice versa.
- JAX-RPC uses technologies defined by the World Wide Web Consortium (W3C): HTTP, SOAP, and the Web Service Description Language (WSDL).
- WSDL specifies an XML format for describing a service as a set of endpoints operating on messages.
- It is possible to send a wide variety of messages through JAX-RPC.
- It provides extensible type mapping, which gives JAX-RPC still more flexibility in what can be sent.

Answer option D is incorrect. Web Services Description Language is an XML-based language that provides a model for describing Web services. WSDL defines services as collections of network endpoints, or ports. The WSDL specification provides an XML format for documents for this purpose. The abstract definition of ports and messages are separated from their concrete use or instance, allowing the reuse of these definitions. XLang is an extension of the WSDL such that "an XLANG service description is a WSDL service description with an extension element that describes the behavior of the service as a part of a business process".

**A4. Answer options A and C are correct.**

The enterprise information systems (EIS) tier consists of database servers, enterprise resource planning systems, and other legacy data sources, like mainframes. These resources typically are located on a separate machine than the Java EE server, and are accessed by components on the business tier. The Java Transaction API (JTA) and Java Database Connectivity API components belong to the EIS tier.

A multi-tier application is a distributed application that is hosted by different machines for creating enterprise applications. The functionality of the tier is divided into isolated functional areas and these functional areas are known as tiers. A multi-tier application consists the following four tiers:

Client tier: The client tier consists of a client program that makes requests to the middle tier. It consists of application clients that access a Java EE server and that are usually located on a different machine from the server. It performs the following tasks:

The clients make requests to the server.

The server processes the requests and returns a response back to the client. Many different types of applications can be Java EE clients, and they are not always, or even often Java applications. Clients can be a web browser, a stand-alone application, or other servers, and they run on a different machine from the Java EE server.

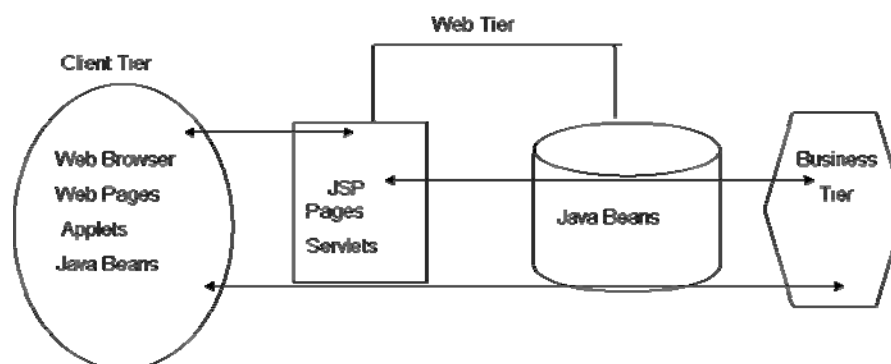
Web tier: The web tier consists of components that handle the interaction between clients and the business tier. It performs the following tasks:

- Generates content in various formats for the client dynamically.

- Collects input from users of the client interface and returns appropriate results from the components in the business tier.
- Controls the flow of screens or pages on the client.
- Maintains the state of data for a user's session.
- Performs some basic logic and holds some data temporarily in JavaBeans components.

The following technologies can be used with the web tier:

- Servlets
- JavaServer Pages
- JavaServer Faces technology
- JavaServer Pages Standard Tag Library
- JavaBeans Components



**Business tier:** The business tier performs the following tasks:

It provides the business logic for an application. Business logic is code that provides functionality to a particular business domain, like the financial industry, or an e-commerce site.

It provides the core functionality that exists in the business tier components.

The following technologies can be used with the business tier:

- Enterprise JavaBeans (enterprise bean) components
- JAX-WS web service endpoints
- Java Persistence API entities

**Enterprise Information Systems tier:** The enterprise information systems (EIS) tier consists of database servers, enterprise resource planning systems, and other legacy data sources, like

mainframes. These resources typically are located on a separate machine than the Java EE server, and are accessed by components on the business tier. This tier performs the following tasks:

It handles enterprise information system software and includes enterprise infrastructure systems such as enterprise resource planning (ERP).

It provides database connectivity for J2EE application components that might need access to enterprise information systems.

The following technologies can be used with this tier:

- The Java Database Connectivity API (JDBC)
- The Java Persistence API
- The J2EE Connector Architecture
- The Java Transaction API (JTA)

**A5. Answer options A, B, and D are correct.**

JDBC stands for Java Database Connectivity. It is a Java application programming interface that allows Java programmers to access a database management system from Java code. It was developed by JavaSoft, a subsidiary of Sun Microsystems. It enables Java programs to execute SQL statements. It is an application programming interface that defines how a Java programmer can access the database in tabular format from Java code using a set of standard interfaces and classes written in the Java programming language.

JDBC can use SQL insert, update, and delete, and methods for querying and updating data in Oracle. It helps users connect to a data source. It also helps in sending queries and updating statements to the database, as well as in retrieving and processing the results received from the database based on the query.

Answer option C is incorrect. JDBC cannot be used instead of ODBC because JDBC is designed specifically for Java programs, whereas ODBC is not dependent upon any language

**A6. Answer option A is correct.**

Mark has been assigned the task of developing an application that is compatible with the JSP, RMI, JMS, and OMG protocols. In all the platforms, only J2EE is applicable because it provides all the core classes that are used for developing applications and supports the OMG protocols. In the other platforms, it is possible to run the same Java bytecode in each edition, providing the classes referred to by the bytecode are available in all two platforms. However, the support for OMG protocols is not available because only J2EE is capable of supporting these protocols.

Answer option B is incorrect. Java Platform Micro Edition, or J2ME, is a specification of a subset of the Java platform aimed at providing a certified collection of Java APIs for the development of software for tiny, small, and resource-constrained devices based on microcontrollers such as ARM7, ARM9, and AVR32.

Answer option C is incorrect. Java Platform Standard Edition, or J2SE, is a widely used platform for programming in the Java language. It is the Java Platform used to deploy portable applications for general use.

Answer option D is incorrect. There is no such platform as J2MEE for programming in the Java language.

**A7. Answer option A is correct.**

A session bean is a type of EJB (Enterprise JavaBean) that encapsulates the logic of a business process and business rules. There are two types of session beans, as classified on the basis of state mode, namely stateless session bean and stateful session bean.

A state of an object refers to the value in the instance variable.

A stateless session bean does not maintain a conversational state for a particular client, whereas a stateful session bean maintains a conversational state for a particular client.

A stateful session bean is well suited for implementing a business task dedicated to a single client that maintains a conversational state between the bean and the client. For example, a stateful session bean is required to build an online shopping cart in an e-commerce application. The information is maintained during a session. It is based on multiple calls from the client. The information includes: customerid, a list of items, customer buys, etc.



Stateless Bean	Stateful Bean
It maintains a conversational state with a client.	It will not maintain conversational states for specific clients.
When the client removes the stateful session bean, its session ends and the state is destroyed.	After a method has finished running either successfully or unsuccessfully, the states of all its instance variables are dropped.
Stateless session beans are able to service multiple clients. They tend to be more scalable when applications have a large number of clients.	Stateful session beans usually require more instantiation.
Stateless session beans may offer greater performance than stateful session beans.	Stateful session beans may offer lower performance than stateful session beans.
An EJB container will never move a stateless session bean from RAM out to a secondary storage.	An EJB container will move a stateful session bean from RAM out to a secondary storage.
Stateless session beans do not remember the previous request and responses.	Stateful session beans remember the previous request and responses.

**A8. Answer options B is correct.**

It sets the directory in which class files should be stored. The java compiler, javac, by default stores the .class files in the same directory as the .java files. However, if the -d option is set then the specified directory is treated as the root of the class hierarchy and .class files are placed in this directory or in the

appropriate subdirectory below it. For example, the following command:

**javac -d c:\java cat.java**

places the file cat.class in the java directory

Answer option A is incorrect. It sets the user class path, overriding the user class path in the CLASSPATH environment variable. If neither CLASSPATH nor -classpath is specified then the user class path consists of the current directory.

Answer option C is incorrect. It generates all debugging information, including local variables. By default, only line number and source file information is generated.

Answer option D is incorrect. It tells the java compiler to not display warning messages. Errors will be reported as usual.

**A9. Answer option C is correct.**

The first condition is that the name and age attributes must appear read-only to other portions of the code.

These variables must be declared as private to implement encapsulation. Since these variables are private, the only way they can be accessed, outside their class, are through the methods of its class.

The naming convention for setter methods is that they should be prefixed with set and the name of the variable. The name of the variable should begin with upper case. Therefore, to set the value of the name and age attributes the following methods are required:

**setName and setAge**

The naming convention for getter methods is similar to that of setter. It should begin with get and the name of the variable. The name of the variable should begin with upper case. Therefore, to get the value of the name and age attributes the following methods are required:

**getName and getAge**

What are JavaBeans setter and getter methods?

JavaBeans are Java classes that have properties. Properties are private instance variables. According to JavaBeans, the methods that set the values of these variables are known as setter

methods, and the methods that retrieve the values of these variables are known as getter methods.

The naming convention for setter methods is that they should be prefixed with set and the name of the variable. The name of the variable should begin with upper case.

The naming convention for getter methods is similar to that of setter. It should begin with get and the name of the variable. The name of the variable should begin with upper case.

The setter method must be declared public, with a void return type and an argument that represents the property type.

The getter method must be declared public. It takes no arguments, and should have a return type that matches the argument type of the setter method for that property.

**A10. Answer option A is correct.**

George will import the java.util package in this file to successfully compile and run it. The code will successfully execute and display the current system date and time.

The java.util package is the most widely used package. It contains classes and interfaces that provide wide range of functionalities such as manipulating date and time, observing events, manipulating set of bits, etc. Some of the classes of this package are listed below:

- Date
- TimeZone
- Dictionary
- Random
- ArrayList

Answer option B is incorrect. The java.net package contains classes that provide support for networking. Some of the classes of this package are listed below:

- Socket
- Authenticator
- ServerSocket
- URL

These classes contribute to Java's popularity for networking applications.

Using the Socket class, users can communicate with any server on the Internet or implement their own Internet server. A number of classes are provided in the java.net package to make it convenient to use Universal Resource Locators (URLs) to retrieve data on the Internet.

Answer option C is incorrect. The javax.swing package is similar to the java.awt package. It provides classes to support GUI (Graphical User Interface) features in an application. It contains more powerful and flexible components than those in AWT (Abstract Window Toolkit), and includes tabbed panes, scroll panes, trees, and tables. Some of the classes of this package are listed below:

- JTabbedPane
- AbstractButton
- JApplet
- ButtonGroup

Answer option D is incorrect. The java.awt package contains classes to implement user interfaces and for painting graphics and images in applications. It is one of the largest packages of Java. Some of the classes of this package are listed below:

- Button
- BorderLayout
- Canvas
- Label

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## ***Test Taking Tips***

- As you start the test, be calm and read the question and ALL its options carefully even if you think you know the answer.
- If you are taking an adaptive test, REMEMBER you will not get a chance to change your answer once you move on, so be sure before you mark the answer. In a linear test, you will have a chance to change the answer.
- If you know the correct answer, attempt the question and move on. If you are not sure, still mark your best guess and move on. If it is a linear test, you should also bookmark the question so that you can return to it afterwards.
- Sometimes related questions help you get the right answers for the questions you were unsure of, so it is always a good idea to bookmark the question.
- If you are unsure of the correct answer, read all the options and eliminate the options that are obviously wrong. Then choose from the options left.
- Once you have finished answering all the questions, check the time left. If you have time, review the book marked questions.
- Never leave a question unanswered. All certification tests that we know are timed and count unanswered questions as wrong. If you don't have time, take a blind guess.

## ***Before the test***

- Be confident and relaxed.
- Sleep well the night before the exam.

## ***The Big Day***

It is advisable to arrive at the exam site at least 15 minutes before the exam is scheduled. Do not forget to bring two pieces of identification with you, one of which must be a photo I.D., such as a driver's license. You will be required to show the identification when you sign in at the test center. The center-in-charge will explain the examination rules that you will have to follow during the exam. Then, you will be asked to sign a document, which states that you fully understand and abide by the rules of the exam.

After you've signed in for the exam, you'll be directed into the exam room. Carrying anything into the room is strictly prohibited. You will be given a few blank pieces of paper and a pen upon entering the room. Once you complete the exam, your score will be tabulated and you will know immediately whether you passed or failed. If you fail an exam, you can retake it as soon as you are ready, even the same day. It is a good idea to note down all the difficult topics you faced during the exam and revise the study guides and other training material before retaking the exam. If you fail the same exam a second time, you must wait at least 14 days before you will be allowed to reschedule.

In case you have a problem regarding the process of testing, you can take help of the center-in-charge.

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You may be interested in the following Sun Exams:

- CX310-065: Sun Certified Programmer for the Java Platform
- CX310-083: Sun Certified Business Component Developer for the Java Platform
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## ***Preparing for the exam***

You know what they say. Practice makes perfect. The same is true for certification exams. Be prepared to practice, practice, and then practice some more! We are not kidding. Certification exams are challenging. Vendors want to know if you have all the skills expected of someone who they are going to certify as being an expert in their field. However, practice alone is not enough. You need to know what to learn first and then practice the skills to help you completely understand and retain what you learned. You will need frequent feedback on your progress. What should you focus on? What are your areas of strength and weakness? Don't short change yourself. Invest the time to review your options and choose the one that best meets your needs. Then invest your time in practicing!

Preparing for a certification may seem daunting, but there's help. Classroom training, online courses and certification preparation software can all help. More and more candidates are choosing to go the self-paced route using the latter method. Wondering if a computer based training is right for you? Or if it has the same benefits as classroom learning? In our years of experience and student testimonials, we have proved the old adage "Good teaching is good teaching, no matter how it's done." Ever find yourself dozing during a classroom led training? Or wish the instructor would slow down or speed up? Does your instructor know your weak areas? Can s/he customize your preparation for the final exam based on what you know or don't know? Probably not. If you are self-motivated (which you probably are if you are reading this article), then computer-based preparation software may well be your answer, at a fraction of the cost of classroom training.

## ***Advantages of test preparation software***

A good test preparation tool will guide you through the steps required to pass a certification exam, starting from exam objectives to the final simulation exam that helps you determine if you are truly ready for the actual exam. Many combine step-by-step, guided learning with realistic exam simulation. The guided learning is critical to candidates unfamiliar with the subject or the exam. Test preparation software such as the award winning ones from uCertify, will help you get familiar with the exam format, the exam objectives, reference notes for each topic and dozens of practice questions that are key to passing the exam. Even professionals experienced in the area of certification



need to practice. Often, their problem is not the subject matter, it is the format of the exam or the time limits that stump them. Practice tests help you get familiarized with the types and format of questions you are likely to see on the exam. Using test preparation software will also force you to pay attention to time. How many questions can you answer in the stipulated time? It doesn't matter if you do know all the answers, what matters is that if you run out of time and have not answered the majority of the questions, you are not likely to pass. Test preparation software forces you to practice not just the subject material, but also practice budgeting time. Another big advantage of test preparation software is assessment. How else would you know what to practice?

Important: Not all test preparation software is equal. Weigh your choices carefully. Some factors to consider:

- What is the company's track record?

- Do they simply provide practice questions or actually help you learn the subject? This is critical when you need to apply the skills at your job.
- Quality of test questions - what is their pass rate?
- What is the user interface like? Is it conducive to effective studying? See if they have a free demo you can download.
- How many practice tests? Can you customize them to your level of knowledge, time, and more?
- How confident are they about their product? Many offer a 100% guarantee, but beware. Check the comparison at:

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