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Why we use args[] array in main method of java?

 Answer:

The args array contains all command line parameters passed in to your Java application.
Passing arguments from the command Line.Which can be used by the program as a set of parameters to operate upon or produce a result based on a set of known parameters.

Web Pages Vs Web Services

Answer:

The web page is based on data submitted by the user. e.g. results page from search engines and order confirmation pages at on line stores.

The Web page is derived from data that changes frequently. e.g. a weather report or news headlines page

Web services are Web-based enterprise applications that use open, XML-based standards and transport protocols to exchange data with calling clients.
Web Service is becoming one of those overly overloaded buzzwords these days. Due to their increasing popularity, Java platform Enterprise Edition (J2EE) provides the APIs and tools you need to create and deploy interoperable web services and clients.

Web page

Has a UI

Interacts with user

Works with web browser client

Web Service

No GUI
Interacts with application
Works with any type of client

Custom tags type
Answer:

Types of Tags
Three types of can be constructed. These are:
1 Simple Tag

2 Tag with Attribute

3 Tag with Body

Java bean Class

Answer:

public class PersonInfo **implements Serializable**{

private String name;

private String Id;

// no argument constructor
public PersonInfo()

{

name = "";

Id= "";

}

 void display

{

name = n;

}

void display

{

id= n;

}

}//end bean class

Alternative name of business class:

Answer:

Also called application layer, it is only concerned with the application specific functionality. It is used to implement business rules and to perform business tasks.

Q. Methods of paintComponent() any 3 ?

Answer:

— protected void paintComponent(Graphics g)

 — protected void paintBorder(Graphics g)

 — protected void paintChildren(Graphics g)

Data sorted as HTML comment and JSP comment?

Answer:

Comments Comments are ignored by JSP-to-servlet translator. Two types of comments are possibly used in JSP.

HTML comment: These comments are shown in browser, means on taking view source of the web page; these sorts of comments can be read. Format of HTML comments is like to

: <!-- comment text--> –

JSP comment: These comments are not displayed in browser and have format like:

<%-- comment text --%>

Q. Difference b/w Page-centric approach and page-with-bean approach.

Answer:

Pagentric Approach:

A web application that is collection of JSPs. Generally this approach is followed to get started with developing web application.

The page-centric approach has lot of draw backs such as the code becomes a mixture of presentation, business and data access logic. The maintenance and up-gradation of the application becomes a nightmarScaling of such kind of application is also difficult and lots of code is also get duplicated.

Page-with-Bean Approach (MVC Model1)

Answer:
This approach is different from page-centric approach in a way that all the business logic goes into JavaBeans. Therefore, the web application is a collection of JSPs and JavaBeans. But still this approach is insufficient to separate different kind of logics

Does EL support the automatic type conversion? support your ans

Answer:

EL also supports automatic type conversion; as a result primitive can implicitly wrap and unwrap

into/from their corresponding java classes

What is Boxing and un-boxing
Answer:
Conversion of a primitive type to the corresponding reference type is called boxing, such as an int to a java.lang.Integer.

Conversion of the reference type to the corresponding primitive type is called unboxing, such as Byte to byte.

Why JSP takes time to run when it runs 1st time.

Answer:

If you run a jsp file first time it will take a longer time, because at the very first time the jsp   file is converted in **JAVA**, then it is **compiled** and finally it is **loaded**. But the compilation **only happens once** so the next time it will be faster.

But every time you change a jsp file it will be re-complied.

Absolute method help to us to move cursor to any specific row in result set. If we call absolute method and give value-1 as argument which row our cursor will point after calling absolute(-1)?

Answer:

For example, calling absolute(-1) positions the cursor on the last row; calling absolute(-2) moves the

cursor to next-to -last row, and so on.

-Throws Exception if ResultSet type is TYPE_FORWARD_ONLY

Write impact a java beans can produce when it is stored in page scope?

Answer:

Each page has its own page scope. Therefore objects stored in page scope are only available to same pages on which they are created. Suppose page1 forwards the request to page2. Objects stored in request scope remains available to page1 as well to page 2. Similar case is true for page 3 & page 4. If user makes a visit to all these pages in one session, object's values stored in session scope remains available on all these pages.

Advantages of updatable and/or scrollable ResultSet? Any two. (2 MARKS)

Answer: **(PAGE 163)**

With the help of such ResultSet, it is possible to move forward as well as backward with in

ResultSet object.

• Another advantage is, rows can be inserted, updated or deleted by using updatable

ResultSet object.

Custom tag? (2 MARKS)

Answer: **(PAGE 378)**

"A user defined component that is used to perform certain action".

List of names scopes under EL implicit objects. (2 MARKS)

Answer: **(PAGE 454)**

pageScope

requestScope

sessionScope

applicationScope

How to track a user session in Servlet? (2 MARKS)

Answer: **(PAGE 297)**

Three typical solutions come across to accomplish session tracking. These are:

1 Cookies

2 URL Rewriting

3 Hidden Fields

Read data into buffer code example? (3 MARKS)

Answer:

For reading data from socket

As stated above, a socket has input stream attached to it.

InputStream is = s.getInputStream();

// now to convert byte oriented stream into character oriented buffered reader

// we use intermediary stream that helps in achieving above stated purpose

InputStreamReader isr= new InputStreamReader(is);

BufferedReader br = new BufferedReader(isr);

Comments of HTML and JSP? (3 MARKS)

Answer: **(PAGE 335)**

Format of HTML comments is like to:

<!-- comment text-->

These comments are not displayed in browser and have format like:

<%-- comment text --%>

Java Beans actions elements example codes? (3 MARKS)

Answer: **(PAGE 368)**

JSP useBean Action Element:

The format of this action element is:

<jsp:useBean id = "name" scope = "page|request|session|application" class="package.Class " />

JSP setProperty Action Element:

The format of this action element is:

<jsp:setProperty name = "beanName or id" property = "name" value ="value"/>

JSP getProperty Action Element:

The format of thisaction element is:

<jsp:getProperty name= "beanName or id"property = "name"/>

Can EL supports automatic type conversion? Support your answer? (3 MARKS)

Answer: **(PAGE 459)**
Yes, EL also supports automatic type conversion; as a result primitive can implicitly wrap and

unwrap into/from their corresponding java classes

What is the difference between java beans and EJB's?
Answer:

EJBs are special java class that are used to encapsulate business logic. They provide additional benefits in building up an application such as scalability, robustness, scalability etc

A java class that can be easily reused and composed to gether certain design conventions can be a JavaBean.

in an application. Any java class that follows
JavaBeans Design Conventions

Answer:
These conventions are:

A bean class must have a zero argument constructor

A bean class should not have any public instance variables/attributes (fields)

Private values should be accessed through setters/getters

A bean class must be serializable

JSP vs. Servlet

Answer: **page :333**

What is expression language Nuggets?

Syntax of EL Expressions & identifiers Arithmetic, logical & relational operators Automatic type conversion Access to beans, arrays, lists & maps Access to set of implicit objects

If we do nit set any scope element which scope element will be set as default scope element (368)

The scope attribute can have one possible value out of page, request, session and application. If this attribute is omitted, the default value of scope attribute is page. We'll discuss in detail about scope shortly.

Write format of EL (expression language)

Answer:

$ { validExpression }

Difference between static and non static inner class?

Answer:

A non-static inner class may have object instances that are associated with instances of the class's outer class. A static inner class does not have any object instances.

What is the alternate name of business layer?

Answer:

Also called application layer,

.Write any six EL(Expression Language) relational operators?

Answer:

What you know about EL(Expression Language)?Describe briefly.

Answer:

The Expression Language, not a programming or scripting language, provides a way to simplify expressions in JSP. It is a simple language that is geared towards looking up objects, their properties and performing simple operations on them. It is inspired form both the ECMAScript and the XPath expression language.

What is package and who to organize?

Answer:

Many times when we get a chance to work on a small project, one thing we intend to do is to put all java files into one single directory (folder). It is quick, easy and harmless. However if our small project gets bigger, and the number of files is increasing, putting all these files into the same directory would be a nightmare for us. In java we can avoid this sort of problem by using Packages.

In simple terms, a set of Java classes organized for convenience in the same directory to avoid the name collisions. Packages are nothing more than the way we organize files into different directories according to their functionality, usability as well as category they should belong to.

Value Binding:

Answer:

Value binding expressions can be used inside of JSF components to:

Automatically instantiate a JavaBean and place it in the request or session scope

Override the JavaBean's default values through its accessor methods

Quickly retrieve Map, List, and array contents from a JavaBean.

Synchronize form contents with value objects across a number of requests

Method Binding:

Answer:

Unlike a value binding, a method binding does not represent an accessor method. Instead, a method binding represents an activation method.

For example, binding an event handler to a method <h:commandButton ……
actionListener="#{customer.loginActionListener}" ……… />

Participants and Responsibilities of MVC:

Answer:

The individual's responsibility of three participants(model, view & controller) is given below

. Model

The model represents the state of the component (i.e. its data and the methods required to manipulate

it) independent of how the component is viewed or rendered...

View;

The view renders the contents of a model and specifies how that data should be presented. There can

be multiple views for the same model within single applications or model may have different views in different applications or operating systems.

. Controller:

The controller translates interaction with the view into action to be performed by the model. In a web application, they appear as Get and Post HTTP request. The actions performed by the model include activating business processes or changing the state of the model. Based on the user interactions and the outcome of the model actions, the controller responds by selecting an appropriate view.

Reading Cookies from the Client:

Answer:

To read the cookies that come back from the client, following steps are generally followed.

To read incoming cookies, get them from the request object of the HttpServeltRequest by calling

following method

Cookie cookies []=request.getCookies();

This call returns an array of Cookies object corresponding to the name & values that came in the HTP request header.

Correct the following object code   cookie c=new cookie ("visit",10) 2 marks

Answer:

Cookie c = new Cookie("name", "value");

10 should be in "".

Write Scope in order 3marks

Answer:

page|request|session|application

Q1:identify the following tag: <studenttagstudy> </studenttagstudy> 2

Answer:

Tag with Body

A tag with body has the following characteristics:

• Start and End of tag

• May be attributes

• Body enclosed within tag

Q2: write EL conditional operator 2

Answer:

Conditional   ?:

Write a code statement to remove the value associated with the "amazonsession"of object "session"

Answer:

        session.removeAttribute ("amazonsession");

Write any three features of java which are not presented in c/c++? 3

Answer:

•   Building an application in Java takes about 50% less time than in C or C++.
•   The core language is simpler than C++ -- no operator overloading, no pointers, no multiple inheritance

The following JSP tag is equivalent to which action element ? 3

<jspforward page="vu.jsp">

Answer:

jsp:forward is being equivalent to following code of scriptlet. For example to forward

the request to one.jsp, scriptlet code will look like:

<%

RequestDispatcher rd = request.getRequestDispatcher("vu.jsp");

rd.forward(request, response); %>

EL based XML and RT based XML 5

Answer:

STL comes in two flavors to support various skill set personal

• **Expression Language (EL) version**

o Dynamic attribute values of JSTL tags are specified using JSTL expression language (i.e.${ expression })

Library	URI	Prefix
Core	http://java.sun.com/jsp/jstl/core	c
SQL	http://java.sun.com/jsp/jstl/sql	sql
Internationalization/	http://java.sun.com/jsp/jstl/fmt	fmt
XML	http://java.sun.com/jsp/jstl/xml	x

• **Request Time (RT) version**

o Dynamic attribute values of JSTL tags are specified using JSP expression

(i.e.<%= expression %>)

o The RT based JSTL tag libraries along with URIs and preferred prefixes are given below in tabular format

Library	URI	Prefix
Core	http://java.sun.com/jsp/jstl/core_**rt**	c_**rt**
SQL	http://java.sun.com/jsp/jstl/sql_**rt**	sql_**rt**
Internationalization/	http://java.sun.com/jsp/jstl/fmt_**rt**	fmt_**rt**
XML	http://java.sun.com/jsp/jstl/xml_**rt**	x_**rt**

Q11: write the name of five event listener interface which are sub interface of java utility event listener interface 5

Answer:

Write program to read from file "file1.txt" following data (5 marks)

Welcome to Virtual University

Hello World

CS506 is very easy subject

then write to another file in reverse order it should look like this:-

CS506 is very easy subject

Hello World

Welcome to Virtual University

Answer: **#internet**

```java
import java.io.File;
import java.io.FileInputStream;
import java.io.InputStreamReader;
import java.io.RandomAccessFile;
import java.io.Reader;

public class Reverse {

    public static void main(String[] args) {

        FileInputStream fis = null;
        RandomAccessFile raf = null;
```

```java
        // by default, let's use utf-8
        String characterEncoding = "utf-8";

        // but if you pass an optional 3rd parameter, we use that
        if(args.length==3) {
            characterEncoding = args[2];
        }

        try{

            // input file
            File in = new File(args[0]);
            fis = new FileInputStream(in);

            // a reader, because it respects character encoding etc
            Reader r = new InputStreamReader(fis,characterEncoding);

            // an outputfile
            File out = new File(args[1]);

            // and a random access file of the same size as the input, so we can write in
reverse order
            raf = new RandomAccessFile(out, "rw");
            raf.setLength(in.length());

            // a buffer for the chars we want to read
            char[] buff = new char[1];

            // keep track of the current position (we're going backwards, so we start at
the end)
            long position = in.length();

            // Reader.read will return -1 when it reached the end.
            while((r.read(buff))>-1) {

                // turn the character into bytes according to the character encoding
                Character c = buff[0];
                String s = c+"";
                byte[] bBuff = s.getBytes(characterEncoding);

                // go to the proper position in the random access file
                position = position-bBuff.length;
                raf.seek(position);

                // write one or more bytes for the character
                raf.write(bBuff);
            }
        } catch (Exception e) {
            e.printStackTrace();
        } finally {
            // clean up
            try {
                fis.close();
            } catch (Exception e2) {
            }
            try {
                raf.close();
            } catch (Exception e2) {
            }
        }
```

6. Why we do session tracking in httpServlets? (2 marks)

Answer:

HttpServlet class

• Available in javax.servlet.http package

• Extends from GenericServletclass

• Adds functionality for writing HTTP specific servlets as compared to GernericServlet

• Extend your class from HttpServlet, if you want to write HTTP based servlets

You have your web project file in .WAR format inside dest directory. Explain how will you deploy your web application? (3 marks)

Answer: #no exact idea   #internet

Copy the web application archive file into directory $CATALINA_HOME/webapps/. When Tomcat is started, it will automatically expand the web application archive file into its unpacked form, and execute the application that way.

Explain why JAVA applets are better than Active-X components? (2 marks)

Answer: #internet

Java applets are downloaded in a machine-independent format and usually interpreted within the browser, while ActiveX controls are binaries. The typical target system for an ActiveX control is, not surprisingly, one based on an Intel Corp. processor that supports the Win32 interface, which generally means that it is running Windows 95 or Windows NT.

How many logic layer possible in one tire?

Answer:

Tiers are physically separated from each other. Layers are spread across tiers to build up an application. Two or more layers can reside on one tier.

What are the requirement which a java should full fill to be javabeans.5 marks

Answer:

A java class that can be easily reused and composed together in an application.

Any java class that follows certain design conventions can be a JavaBean.

Why java has remove pointers?   give solid reason 3 marks

Answer: #internet

It's quite difficult to manage. You need to allocate and deallocate carefully or you will find nasty error in your program. One thing though, it is not actually "removed". In java, in fact, everything is pointer. The difference is, java handles the allocating and de-allocating (the so called 'Garbage Collector'), not you

Why destructor has been eliminated in java?explain.5 marks

Answer: #internet

The purpose of a Destructor is usually to clear off unused variables and clean up the memory. Java has in built memory handling mechanisms (Garbage collection) that clear off unused memory automatically. Hence there is no requirement for destructors.

Why we use args[] array in main method of java?

The args array contains all command line parameters passed in to your Java application.

Passing arguments from the command Line. Which can be used by the program as a set of parameters to operate upon or produce a result based on a set of known parameters?

Web Pages Vs Web Services

The web page is based on data submitted by the user. e.g. results page from search engines and order confirmation pages at on line stores.

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Web page

Has a UI

Interacts with user

Works with web browser client

Web Service

No GUI
Interacts with application
Works with any type of client

Custom tags type

Types of Tags
Three types of can be constructed. These are:
1 Simple Tag
2 Tag with Attribute
3 Tag with Body

Java bean Class

public class PersonInfo **implements Serializable**{

private String name;

private String Id;

// no argument constructor
public PersonInfo()

{

name = "";

Id= "";
}

 void display

{

name = n;
}

void display

{

id= n;
}

}//end bean class

What is Servlet Problem generating html pages?

Answer:

With servlets, it is easy to

• Read form data

• Read HTTP request headers

• Set HTTP status codes and response headers

• Use cookies and session tracking

• Share data among servlets

• Remember data between requests

• Get fun, high-paying jobs

 write jsp page for the amount "amount" get from another page calculate zakat and display it.

note:use screplet,jsp coment,HTML coment 5

Answer: # an example similar to this scenario is given on page no : 330 ch#34

impact of object in java beans when using application scope? 3

Answer:

The bean objects stored in ServletContext is shared by all JSPs/servlets in the same web application.

Html code given insert spread sheet ms excel code to show id on another page? 3

Answer: sense of question is not clear Page no : 338

<%@page contentType="application/vnd.ms-excel" %>

In catch block any other exception catch before IOException? if no give reason 2

Answer:

Because exceptions are Evaluated in the order of the code.

o Bear in mind the Exception hierarchy when writing multiple catch clauses!

o If you catch Exception first and then IOException, the IOException will never be caught!

Jsp:useBean equivalent to which of the java code? 2

Answer:

jsp:useBean is being equivalent to building an object in scriptlet. For example to build an object of MyBean using scriptlet is:

<%

MyBean m = new MyBean( );

%>

 Achieving above functionality using jsp:useBean action element will look like this:

<jsp:useBean id = "m"

scope = "page"

class="vu.MyBean" >

Advantages of collections over array 2

Answer:

A collection represents group of objects know as its elements. Java has a built-in support for collections. Collection classes are similar to STL in C++. An advantage of a collection over an array is that you don't need to know the eventual size of the collection in order to add objects to it. The java.utilpackage provides a set of collection classes that helps a programmer in number of ways.

Write impact a java beans can produce when it is stored in page scope?

Answer:

In practice, beans created with page scopeare always accessed (their values) by jsp:getProperty, jsp:setProperty, scriptlets or expressions later in the same page.

Q . Try block?   internet

Answer:

The first step in constructing an exception handler is to enclose the code that might throw an exception within a try block. In general, a try block looks like the following:

```
try {
    code
}
catch and finally blocks . . .
```

Q. Problem persists in sturt framework?

Answer:

- Adds complexity and doesn't provide UI tags
- Very Java programmer centric

Write a code which shows the number of cookies that how many times that page been accessed ? (lec 31)

Answer:

```
Cookie[] cookies = request.getCookies();

// if cookies are returned from request object
if (cookies != null) {//search for cookie -- repeatfor (int i = 0; i < cookies.length; i++) {
        // retrieving one cookie out of array
        Cookie c = cookies[i];

        // retrieving name & value of the cookie
        String name = c.getName();
        String val = c.getValue();

        // confirming if cookie name equals "repeat" and
        // value equals "yes"
        if( name.equals("repeat") && val.equals("yes"))
        {

                msg= "Welcome Back";repeatVisitor = true;break;
        }
}
```
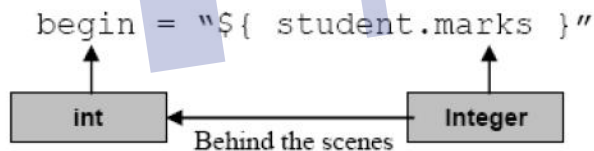
Q. Does EL support the automatic type conversion?

Answer:

EL also supports automatic type conversion; as a result primitive can implicitly wrap and unwrap into/from their corresponding java classes. For example

What is Boxing and un-boxing

Ans:

Conversion of a primitive type to the corresponding reference type is called boxing, such as an int to a java.lang.Integer. Conversion of the reference type to the corresponding primitive type is called unboxing, such as Byte to byte.

Q4.Being a java front end developer, write the characteristics of tag with body custom tag and also give example?   02

Answer: Page no : 366   Ch#38

In simplistic terms, "a user defined component that is used to perform certain action". This action could be simple as displaying "hello world" or it can be as complex as displaying course outline of selected course after reading it from database.

Q7.if we call the following methods in the following sequence and we refresh our page one time will the session expire?

Support your answer with the reason.

(i) Session.setMaxAge(160)

(ii) Session.invalidate()   03

Answer: # my view

Yes session will expire because of the fact that it lasts only for the current user session (i.e. until the user quits the session) and will not be stored on the disk. Once page refreshed session will be expired.

In which situation executeQuery() and executeUpdate methods of statement object can be used for SQL? 03

Answer: Page no :   Ch#

What you know about EL(Expression Language)?Describe briefly.   05

Answer: Page no :   Ch#

What type of information present in(.tld) file? Mension any five.   05

Instance speaker{}

Abstract class Teacher implements Speaker {

}

Do you find any problem in the above code? Explain your answer.   05

Answer: Page no :   Ch#

What are the two options through which we can assign unique session id to each user?

Answer: Page no : 299 Ch#32

Cookie: it is used to keep the unique sessionID associated with each user.

URL Rewriting :

URL rewriting provides another way for session tracking. With URL rewriting, the parameterthat we want to pass back and forth between the server and client is appended to the URL. This appended information can be retrieve by parsing the URL. This information can be in the form of:

• Extra path information,

• Added parameters, or

• Some custom, server-specific URL change

The extra information is usually limited to a unique session ID

Write java code that show output "Welcome to Web Design And Development Course" (5 MARKS)

Answer: Page no : 34 Ch#2

```java
public class HelloWorldApp {

public static void main(String[] args) {

                System.out.println("Welcome to Web Design And Development Course");

}

}
```

Does JSP support run time exception handling if yes then how?   2marks

Answer: Page no : 335 Ch#35

• exception

This variable is of type java.lang.Throwable. Represents the exception that is passed to JSP error page.

EJBs and JSP/servlet run on which server? 3marks

Answer: Page no : 422 Ch#41

EJBs and JSP/Servlets works in two different servers. As you already know, JSP and Servlets runs in a web server where as EJBs requires an application server.

What information can be appended to URL.   3 marks

Answer: Page no : 299 Ch#32

With URL rewriting, the parameter that we want to pass back and forth between the server and client is appended to the URL. This appended information can be retrieve by parsing the URL. This information can be in the form of:

- Extra path information,

- Added parameters, or

- Some custom, server-specific URL change

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Q.1

If we will not give width and height in applet tag then which one will get true?
- Applet will not run
- Applet will run but not visible
- Applet will run and visible

Answer: Page no : 182

Applet will run but not visible.

Q.2

How JSP's are efficient?

Answer: Page no : 325

- **Efficient**

o Every request for a JSP is handled by a simple JSP java thread as JSP gets converted into a servlet. Hence, the time to execute a JSP document is not dominated by starting a process.

Q.3

When we use Page centric approach?

Answer: **Page no : 397**

A web application that is collection of JSPs. Generally this approach is followed to get started with developing web applications.

Q.4

Write java code syntax which will create a cookie object c.

Answer: **Page no : 289**

Cookie c = new Cookie("name", "value");

Q.5

Write a statement to call an error page along with the "source not found" message using request dispatching technique.

Answer: **#internet**

```
request.setAttribute("errorMessage", "Source Not Found");
RequestDispatcher dispatcher = request.getRequestDispatcher("error.jsp");
dispatcher.forward( request, response);
```

Q.6

Write any six features that JSF provide?

Answer: **Page no : 461**

• Representing UI components

• Managing their state

• Handling events

• Input validation

• Data binding

• Automatic conversion

• Defining page navigation
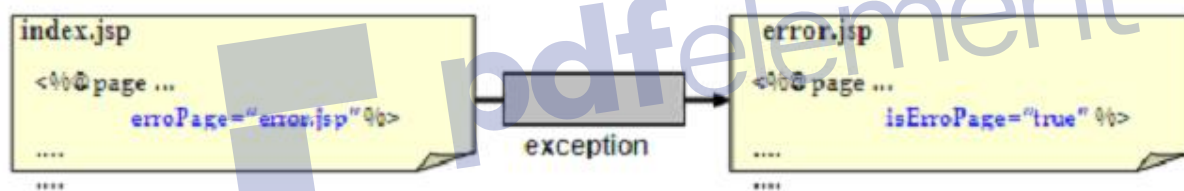
• Supporting internationalization and accessibility.

Q.7

Suppose you have two (index.jsp and error.jsp) files.

You want, when index.jsp file generate any exception user should automatically jump error.jsp page.

What you will write in page directive of index.jsp page to jump error.jsp page automatically. Also what you will write in page directive of error.jsp page to make it error page.

Answer: Page no : 381

Q.8

What is difference between socket and server socket? Also right java syntax to create socket and server socket. Write solution by filling given table.

Answer: Page no : 194

A socket is one endpoint of a two-way communication link between two programs running generally on a network.

• The server listens through a special kind of socket, which is named as server socket.

• The sole purpose of the server socket is to listen for incoming request; it is not used for communication

Q.9

What will be the output of following program?

MyServlet process request method:

```
protected void processRequest(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
response.setContentType("text/html");
```

Answer: **Page no : 277**

Question incomplete.

Q.10

Use the following Bean placed in "IslamRules" package using JSP action element. Value of amount is taken from the form field "amount".

```
public class ZakatBean implements Serializable {
private int amount;
private int zakat;
```

Answer: **#incomplete question**

Q.11

Draw and divide the components of internet banking(Client,web Server and DB server) into three layered approach?

Answer: **Page no : 420**

Q.12

What do setText () method and getText() do?

Answer:

setText() is used to set the value of a parameter.

getText() is used to retrieve the value from a parameter.

Q13

Write an expression language eqvilent to

1. **Out.implicit object of JSP**
2. **Request.getParameter("id");**

Answer: **Page no : 437   ch: 42**

$ {pageContext.out}

Evaluates to out implicit object of JSP.

$ {param.id}

This expression is equivalent to calling Request.getParameter("id");.

Q.14

If we do not want to include a controller in our application .Which layer of three layer architecture will control screen flow?

Answer: **#not sure**

Business/application layer will control screen flow.

Q.15

If you want to send an error redirect to a web page. What method you will use for it. Write complete code syntax of required method.

Answer: **Page no : 381**

<%@ page errorPage="error.jsp" %> // in index.jsp

<%@ page isErrorPage="true" %> // in error.jsp

Q.16

What is the advantage of having HTTP session?

Answer: **#internet**

The primary advantage of using the HttpSession is that this allows storing not just text strings but entire Java objects in the session. All the session-handling functionality of creating a session, checking the validity of a session, retrieving the data stored for a session, and terminating a session is wrapped in the HttpSession.

Q.17

Write a statement to use tag library "StudentInfo.tld" with prefix "student".

Answer: **Page no: 370 ch:38**

<%@ taglib uri="StudentInfo.tld" prefix="student" %>

Q.18

What is the difference between web server and application server?

Answer:

It is possible web server is running on one server machine while application server on another. Web server is used to execute web pages like JSPs whereas application server is used to run special business objects like Enterprise JavaBeans .

Q.19

How java provides security and safety for applications?.Also briefly explain JVM verifier.

Answer: **Page no : 5**

JVM

The JVM "verifier" checks the code when it is loaded to verify that it has the correct Structure -- that it does not use an uninitialized pointer, or mix int and pointer types. This is one-time "static" analysis -- checking that the code has the correct structure without running it.

Q.20

What is difference between Page-Centric Approach and Page-with-Bean Approach?

Answer: **Page no : 397**

In Page-Centric Approach

Page-with-bean approach is different from page-centric approach in a way that all the business logic goes into JavaBeans. Therefore, the web application is a collection of JSPs and JavaBeans.

Q.21

Arrange the following classes in packages. Use suitable name for package:
  1. Dbconn.java
  2. Input.jsp
  3. Home.html
  4. Insertdb.java
  5. AddUser.html

Answer: **Pageno:321**   **Chp:33**   **# answer can be based upon your perception.**

We Will create three packages with the name of

  1. Db
  2. Html
  3. Jsp

in main java folder.

"dbconn.java" , "deleted.java" and "insertdb.java" will be saved in this db folder.

"home.html" and "AddUser.html" will be saved in html folder.

"input.jsp" will be saved in jsp folder.

Q.22 In hash Map we can put method to add objects into Hash Map. Is the code given below correct or not. If there is problem then identify the problem

h.put(1, s1);

h.put(2,   s2);

h.put(3, s3);

Answer: **Pageno:64**   **Chp:6**

// adding elements (Student objects) where roll no are stored as keys and student objects as values

h.put("one". s1);

h.put("two". S2);

h.put("three". S3);

Q.23

Suppose an HTTP session objects s have an attribute std and std holds object of Student class. Write java code which will get Student object from session object. Write only necessary code, whole program is not required.

Answer: **Pageno:305**   **Chp:32**

String sid=(String)s.getAttribute("student");

Q.24

Write a single line to include a page "vuHome.java" using custom tags. You can use any name for tag but mention which you have chosen for which tag element.

Answer: **Pageno:379**   **Chp:38**

In customtags.tld file :

<tag>

<name>coursetag</name>

<tag-class>vutag.vuHome</tag-class>

<body-content>empty</body-content>

</tag>

-In any other file in which you wanted to include that vuHome file using custom tags :

<%@taglib uri="/WEB-INF/tlds/customtags.tld" prefix="vh" %>

The next step is to call the tag by its name as defined in TLD. For example, if tag name is hello then we write:

<%-- calling coursetag   value --%>

<vh:coursetag> where vh is the name of prefix specified in tag lib directive.

Q.25

If we do not set any scope in action element. Which scope element will be set as default scope?

Answer: **Pageno:354**   **Chp:37**

The scope attribute can have one possible value out of page, request, session and application. If this attribute is omitted, the default value of scope attribute is page.

Q.26

Why Type – 2 drivers are more efficient then Jdbc-Odbc bridge?

Answer: **Pageno:168**   **Chp:17**

• Converts JDBC calls into database-specific calls such as SQL Server, Informix, Oracle or Sybase.

• Partly-Java drivers communicate with database-specific API (which may be in C/C++) using the Java Native Interface.

• Significantly better Performance than the JDBC-ODBC Bridge.

Q.27

Why HTTP is made stateless protocol? Explain with example.

Answer: **Pageno:285**   **Chp:30**

HTTP is a stateless protocol. Every request is considered independent of every other request. But many applications need to maintain a conversational state with the client. A shopping cart is a classical example of such conversational state. For Example:

Suppose a user logs on to the online bookshop, selects some books and adds them to his cart. He enters his billing address and finally submits the order. HTTP cannot track session as it is stateless in nature and user thinks that the choices made on page1 are remembered on page3.

Q. 28

Modify this code to generate excel spread sheet for displaying the following page:

```
<html>
<body>
<marquee>
<h3> Web Design & Development </h3>
```

Q.29

If you want to distribute your application how will you do this? How will you make your application accessible?

Answer: **#not sure** **Page no 469 Chp#40**

By using "web Service" for your application. Using web service, service users and service providers can be dynamically connected.

Q.30

With the help of HTTP session we can track how many times a page is visited. Write simple java program in servlet which will show current visit number on a web page. You are not required to write complete program just code which see number of visit and display on web page.

Assume every time refreshing page will consider one visit.

Answer: **Page:435** **Ch#42**

Q.31

Write literals that can be used as an EL (expression language). Also write there possible values.

Answer: **Page:435** **Ch#42**

Literals	Literal Values
Boolean	true or false
Integer	Similar to Java e.g. 243, -9642
Floating Point	Similar to Java e.g. 54.67, 1.83
String	Any string delimited by single or double quote e.g. "hello" , 'hello'
Null	Null

Q.32

Write a code for three JSP classes in such a way:

- **TopView.jsp** get the id from user from some html form and displays "id: user id is on the page" message on the top in form of horizontal moving text .
- **BottomView.jsp** displays "Virtual University" as horizontal moving text at bottom.
- In between the two outputs it displays user name got from some html form and the following message using **VuHome.jsp**.
  Welcome!!"some name"
  You are on Virtual university site

Answer: **Ch#34 Page:329**

Input.jsp //extra file in which we will get input from user in html form, this file is optional.

I didn't write the complete code in this file because of the fact that it is not necessary.

<html>

<body>

<form name = "myForm" method="post" action="topView.jsp" >

<h3> Enter id: </h3>

<input type="number" name="id" />

<input type="submit" value="submit" /> </form>

  </body>

</html>

TopView.jsp

<html>

<body>

 <% String n = request.getParameter("id");

%>

<marquee><%=n%> : user id is on the page </marquee>

</body>

</html>

BottomView.jsp

<html>

<body>

<div style="position:absolute;bottom:0;">

<% String n = request.getParameter("id");

%>

<marquee><%=n%> : user id is on the page </marquee></div>

</body>

</html>

VuHome.jsp

<html>

<body>

<%String nm= request.getParameter("name");

%>

Welcome!! " <%=name%> "   </br>

You are on Virtual University Site.

</body>

</html>

Q.34:

You are required to write a Servlet code that will read the parameter passed from login page .in a login page **user will enter username in text field name and password in text field pass. If the user name is "vulms" and password is "admin"then the send the user to "welcome.jsp" else send the user to "Error.jsp".**

Note: you are not required to write complete code. Just write code which will read from data and send response to Welcome or Error page.

Answer: **Ch#29 Page:273**

Login page:
```
<%
       try{
 String id = request.getParameter("userid");
String pwd = request.getParameter("pwd");
// comparing id & password with fix values
if(id.equals("vulms") && pwd.equals("admin")) {
// redirectign user to welcome.jsp
response.sendRedirect("welcome.jsp");
} else {
// redirecting user to error.jsp
response.sendRedirect("error.jsp"); }catch (Exception e) {
    System.out.println(e.getMessage());
   }
%>
```

Q.35: Being a java developer you have given a task define two initialization parameters. Define first parameter for text file (out.txt) and other for DSN (studentDSN). You are required to write only necessary code.

Answer: **Ch#29 Page:267**

```
<init-param>//defining param 1
<param-name> out</param-name>
<param-value> out.txt</param-value>
</init-param>
<init-param> //defining param 2
<param-name> DSN </param-name>
<param-value> studentDSN </param-value> </init-param>
```

Q:36   Being a java developer you have given a task read two initialization parameters. Read first parameter for text file (out) and other for DSN (studentDSN). You are required to write only necessary code.

Answer: **Ch#29 Page:267**   **#question is self-made**

Syntax for reading initialization parameters:

public void anyMethod() // defined inside servlet

{ ServletConfig config = getServletConfig();

String name = config.getInitParameter("param_name"); }

TEXT FILE:

String out;

public void init(ServletConfig config) throws ServletException{

super.init(config);

// reading init-parameter "out" stored in web.xml

out = config.getInitParameter("out");

}

Student DSN:

String student;

public void init(ServletConfig config) throws ServletException{

super.init(config);

// reading init-parameter "DSN" stored inweb.xml

student = config.getInitParameter("DSN");

}

Q:37 Write the purpose of hash maps in session tracking through cookies?

Answer: **Ch#31**   **Page:294**

HashMap is used to store information as key and values pairs. It is used in session tracking to store values against keys and then retrieve that values when needed. Hash map has some advantages like it accept null values and faster.
In the session tracking the HashMap store the individual user session information and Cookie (like JSESSIONID, with unique value) is used to keep the unique "session ID" associated with each user. Then the session ID is passed back and forth between user and the server and is used to retrieve the HashMap (session Information) of the user from the HashMap at the server.

Q.38: What is other technique to remove server side over head while maintaining the state of user?

Answer: **Ch#31** **Page:287**

Once an HTTP transaction is finished, the server forgets all about it. Even if the same remote user connects a few seconds later, from the server's point of view it's a completely new interaction and the script has to reconstruct the previous interaction's state. The main issue in preserving state information is where to store it. They can be broadly broken down into client-side and server-side.

Three typical solutions come across to accomplish session tracking and saving state of user. These are:

1. Cookies

2. URL Rewriting

3. Hidden Fields

Q.39: Being a java web developer you know each tag handler class must inherit from another class .what is the name of that class?

Answer: **Ch#38** **Page:369**

Tag Handler is also a java class that is implicitly called when the associated tag is encountered in the JSP. Must implement **SimpleTag** interface. Usually extend from **SimpleTagSupport** class that has already implemented SimpleTag interface.

Q.40: What is use of [] operator in EL? Give one example?

Answer: **Ch#42** **Page:441**

This operator can be applied to arrays & collections implementing List interface e.g. ArrayListetc.

o Index of the element appears inside brackets

o For example,${ personList[2] }returns the3rd element stored in it

Moreover, this operator can also be applied to collections implementing Map interface e.g. HashMapetc.

o Key is specified inside brackets

o For example,${ myMap["id"] }returns the value associated with the id.

Q.41:Is it necessary that every try block must be followed by a catch block given reason to support your answer?

Answer: **Ch#7** **Page:72** **#not exact answer is in book**

It is not necessary that each try block must be followed by a catch block. It should be followed by either a catch block OR a finally block. And whatever exceptions are likely to be thrown should be declared in the throws clause of the method.

Question No: 41   (Marks: 2)

If a method is declared as protected, where can be the method accessed?

Answer

The method can be accessed in same class, sub-class and same package.

Question No: 42   (Marks: 2)

What are the advantages of JSP over PHP?

Answer

JSPs offer better language for dynamic part

JSPs offer better tool support

Question No: 43   (Marks: 2)

How many types of comments are used in JSP?

Answer

In JSP two types of comments are used e.g.

<%.—Comments--%>

There are comments that are not visible in browsers.

The second type of comments is HTML comments

<! Comments >

These comments are visible in browsers.

Question No: 44   (Marks: 2)

What are the drawbacks of Page-centric approach?

Answer

The page centric approach has the following drawbacks

1. The maintenance of the application becomes a nightmare.
2. A lot of code is also get duplicated.
3. The code becomes a mixture of presentation, business and data access logic.

Question No: 45   (Marks: 2)

What steps will we take in order to test whether the tomcat server is running or not?

Answer

First of all set the path variable and then type http://local host:8080/tomcat in the browser, the tomcat default page should appear.

Question No: 46   (Marks: 3)

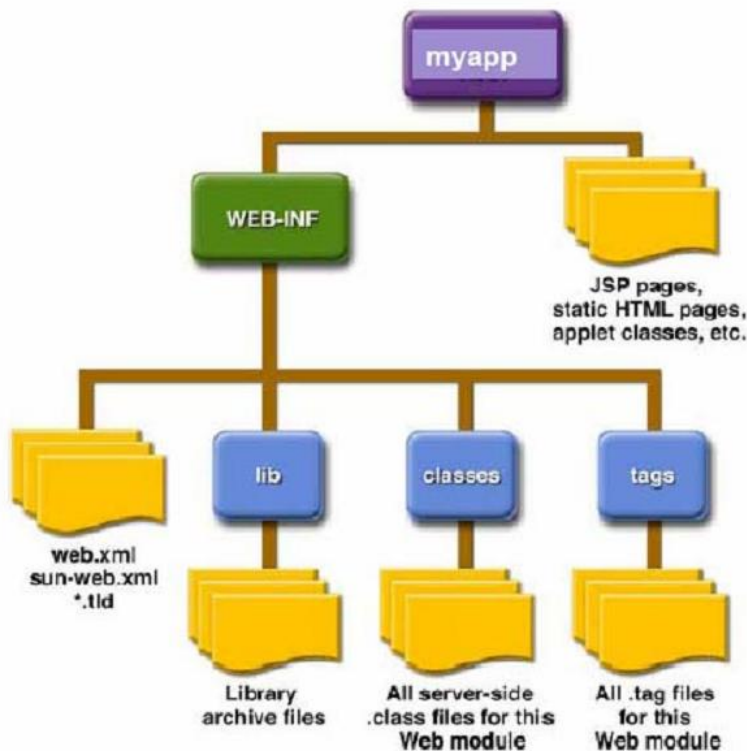**Write the forms of Standard Directory Structure; which is used for the development of the web components?**

Answer

A web application is defined as a hierarchy of directories and files in a standard layout. Such hierarchies can be used in two forms

- Unpack
    - Where each directory & file exists in the file system separately
    - Used mostly during development

- Pack
    - Known as Web Archive (WAR) file
    - Mostly used to deploy web applications

Question No: 47   (Marks: 3)

Which four tag libraries are combined to form a single JSTL?

- **Core** - contains tags for conditions, control flow and to access variables etc.
- XML manipulation - contains tags for XML parsing and processing
- SQL - contains tags for accessing and working with database.
- Internationalization and formatting - contains tags to support locale messages, text, numbers and date formation

Question No: 48   (Marks: 3)

What is the difference between the getRequestDispatcher(String path) method of javax.servlet.ServletRequest interface and javax.servlet.ServletContext interface?

Answer

Question No: 49   (Marks: 3)

Suppose we have a program with main() method having static declaration and in another scenario without static declaration. What could go wrong in either case?
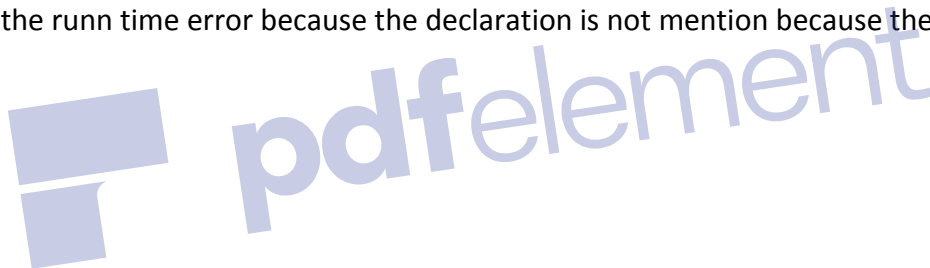
Answer

We should declare the main( ) as

    Public static void main(){

            ………

                    }

Compiler generate the runn time error because the declaration is not mention because the P is small in declare as public

Question No: 50   (Marks: 3)

What impact a JavaBeans object can produce when it is stored in Page scope?

Answer

This is the default value of scope attribute, if omitted. It indicates, in addition to being bound to local variable, the bean object should be placed in the pageContextobject. The bean's values are only available and persist on JSP in which bean is created.

In practice, beans created with page scope are always accessed (their values) by jsp:getProperty, jsp:setProperty, scriptlets or expressions later in the same page. This will be more cleared with the help of following diagram:

Question No: 51   (Marks: 5)

What impact a JavaBeans object can produce when it is stored in Session object?

Answer

This value means that, in addition to being bound to local variable, the bean object will be stored in the HttpSession object associated with the current request. As you already know, object's value stored in HttpSession persists for whole user's session. The figure below helps in understanding this concept.

In the diagram above, MyBean is instantiated by specifying scope = "session"that results in storing object in HttpSession. A value "ali" is also stored in m using setter method.

Irrespective of request forwarding or new request generation from second.jsp to other resources, the values stored in HttpSession remains available until user's session is ended.

Question No: 52   (Marks: 5)

Which technology is used in JAVA to support following layers?

4. Presentation Layer
5. Business Layer
6. Data Layer

Answer

J2EE technology

Client Presentation	HTML/Applets
Server Presentation	JSP / Servlets Frameworks(Struts, JSF etc)
Business	JavaBeans / EJB
Data	DAO / Connectors

Question No: 53   (Marks: 5)

What are the advantages of Cookies over URL rewriting?

Answer

Advantage of cookies over URL rewriting:

7. Cookies are persistent as URL rewriting is not persistent and lost for the current secession.
8. Cookies are appropriate for both types of requests e.g. get and post where as the URL rewriting is limited to get method only.
9. Does not produce any harm if the page is bookmarked.
10. Cookies are created by server just one therefore not communication and computational overhead as in URL rewriting with every request.
11. If the server does not assign unique ID in URL rewriting the really creates problem where as this problem does not exist in cookies.