JAVA 2M QUESTIONS WITH ANSWERS

1. **What are classes in java ?**

A class is a template that define the shape and behaviour of object.the class contains data and similar to collection of objects.

It defines a new datatype once defined can be used to create objects of that type.

e.x class fruit

{

// methods declaration

}

1. **What are java separators ?**

Separtors are symbol used to indication where groups of code are divided and arranged.

FOR EG :

1. Parenthesis ()
2. Braces {}
3. Brackets []
4. Semicolon ;
5. Comma ,
6. Period.
7. **Define variable?**

A variable is an identifier that denotes a storage location used to store a data value unlike constant they unchanged during the execution of the program.

A variable may take different values at different times during the execution of program.

e.x int i=10;

float f=3.19;

1. **Uses of bitwise and dot operator**

1. bitwise operators

2. dot operators

**Bitwise operator:**

Java has a distinction of supporting special operators known as bitwise operators for manipulation of data at values of bit level

These operators are used for testing the bits or shifting them to the right or left.

Operators meaning

& bitwise AND

! bitwise OR

^ bitwise exclusive OR

~ one’s comp

<< shift left

>> shift right

**Dot operator:**

The dot operator (.)is used to access the instance variables and method of class objects

FOR EG :

Person 1. Age//reference to the variable age

Person 2.salary//reference to the method salary

1. **What is method overriding?**

If subclass or child class has the same method as declared in the parent class it is known as method overriding in java.

Method overriding is used to provide specific implementation of a method that is already provided by its super class.

Method overriding is used for runtime polymorphism.

1. **What is vector how it is different from an array ?**

Vector implements a dynamic array it is similar to array but has 2 differences.

1.vector is synchronized

2.vector contains many methods

Vectors are very useful when we don’t know the size of the array in advance.

e.x Vector v=new Vector(10);

1. **Define thread?**

A thread is a smallest unit of dispatchable code. Multithreading enables us to write very efficient programs that make maximum use of the cpu.

The java runtime system depends on threads for many things and all the class libraries are designed with multithreading in mind.

1. **Define constructors?**

A constructor initializes an object immediately upon creation. It has the same name as the class in which it redies and is syntactically similar to a method.

The constructor is automatically called immediately after the object is created.

Constructor doesn’t have return type.

ex.

class student

{

student(){}// constructor

}

1. **What is method overloading?**

If a class have multiple methods by same name but different parameter it is known as method overloading.

Method overloading increase the readability of the program.

Ex

int add(int a,int b);

int add(int a,int b,int c);

1. **What is exception handling code in java, list the keywords ?**

The exception handling in java is one of the powerful mechanism to handle the runtime errors so the normal flow of the program can be maintained.

LIST THE KEYWORDS :

1. try
2. catch
3. finally
4. throw
5. throws
6. **What is exception ?**

Exception is an abnormal condition that arises in a code sequence at runtime. In other words an exception is a runtime error.

Ex

ArithmeticException

IOException

SQLException

1. **How to block a thread ?give an example ?**

A thread can also be temporarily suspended or blocked from entering in to running state.

FOR EX :

1. Sleep () //blocked for a specified time.
2. Suspend () //blocked until further orders.
3. Wait () //blocked until certain occurs.
4. **What is interface ?**

An interface in java is a blueprint of a class. It has static constants and abstract methods only.

The interface in java is a mechanism to active fully abstraction there can be only abstract methods. It is used to active fully abstraction and multiple inheritance in java.

Interface print

{

int MIN=5;

void print();

}

1. **What are byte stream classes ?**

Byte stream classes have been designed to provide functional features for creating and manipulating streams and files for reading and writing bytes.

BYTE STREAM

1.Input stream

2.Output stream

**15. Define java tokens ?**

A smallest individual unit in a program are known as tokens. a java program is a collection of tokens, commas and conite spaces. Java languages include five type of tokens.

THEY ARE :

Reserved keywords

Identifiers

Literals

Seperators

White spaces

Comments

**16. Define objects ?**

Object are the basic runtime entities in an object-oriented system. Any programming problem is analysed in terms of objects. When a program is executed the objects interact by sending message to one another.

FOR EXAMPLE :

Fruit mango

Fruit ---- class

Mango--- object

**17. What is oops?**

Object oriented programming is: a approach to program organization and development which attempts to eliminate some problems in conventional programming language. Concepts of oops are:

Object & classes

Data abstraction & encapsulation

Inheritance

Polymorphism

Dynamic binding

Message communication

**18.General syntax of the class ?**

A class is declared by use of the class keyword.

GENERAL FORM:

Class class name

{

Type variable 1;

Type variable 2;

//…..

Type variable N;

Type method name 1(parameter-list)

{

// body of method

}

Type method name 2(parameter-list)

{

// body of method

}

}

**19. Define array ?**

Array is a collection of similar type of element that have contigures memory location. Java array is an object that contains element of similar data type. It is a data structure where we store similar elements.

Ex int a[]=new int[10];

**20. What is the use of catch block ?**

Java catch block is used to handle the exception. It must be used after the try block only.

catch(ArithmeticException e)

{

}

**21. What is URL?**

URL is an acronym for uniform resource locator and is a reference (an address)to a resource on the internet. URL is a specific character string that is used to access data from the World Wide Web.

**22. What is literals?**

A constant value in java is created by using a literal representation of it java language specifies five major types of literals.

Integer literals

Floating point literals

Character literals

String literals

Boolean literals

**23. Compile time error ?**

The source code must be complied into machine code in order to become and executable program. This compilation process is referred to as compile time. (Think of a compiler as a translator) A compiled program can be opened and run by a user. When an application is running, it is called runtime.

**24. Use of paint methods ?**

Java .awt.Component class. The component class provides 1 life cycle method of applet. Public void paint (Graphics g): is used to paint the applet. It provides Graphics class object that can be used for drawing oval, rectangle, arc etc.

**25. What is drawoval() method ?**

The method drawOval() is one of the methods of a Graphics object.

drawOval(int X, int Y, int width, int height )

This draws a circle or an oval that fits within the rectangle specified by the X, Y, width and height arguments. The oval is drawn inside a rectangle whose upper left hand corner is at (X, Y), and whose width and height are as specified.

**26. What are input and output stream ?**

An I/O Stream represents an input source or an output destination. A stream can represent many different kinds of sources and destinations, including disk files, devices, other programs, and memory arrays.

**27. Write notes on socket ?**

  A socket is one endpoint of a two-way communication link between two programs running on the network. A socket is bound to a port number so that the TCP layer can identify the application that data is destined to be sent to. An endpoint is a combination of an IP address and a port number.

**28. Write a note on java character set?**

A character set is a set of textual and graphic symbols, each of which is mapped to a set of nonnegative integers. The first character set used in computing was US-ASCII. It is limited in that it can represent only American English.

**29. What is automatic type casting ?**

In some situations there is a need to store a value of one type into a variable of another type so tha we may cast the value to be stored by type casting.

Syntax

Type variablename=(type)variable2;

Eg

Long count=long(m);

**30. Java API packages?**

Java application programming interface (API) is a list of all classes that are part of the Java development kit (JDK). It includes all Java packages, classes, and interfaces, along with their methods, fields, and constructors. These prewritten classes provide a tremendous amount of functionality to a programmer.

**31. Write a note on: drawline() method ?**

The DrawLine method can be used for drawing straight lines between. Two points (x1, y1) and (x2, y2) data. Following example DrawLineshows how to  Draw a Line on Applet window using drawLine method of Graphics class.

**32. Define datagrams?**

A datagram is a basic transfer unit associated with a packet-switched network.Datagrams are typically structured in header and payload sections. ... The delivery, arrival time, and order of arrival of datagrams need not be guaranteed by the network.

**33. What is AWT ?**

Abstract Window Toolkit (AWT) is a set of application program interfaces ( API s) used by Java programmers to create graphical user interface ( GUI ) objects, such as buttons, scroll bars, and windows. AWT is part of the Java Foundation Classes ( JFC ) from Sun Microsystems, the company that originatedJava.

**34. List the names of commonly used stringbuffer methods ?**

append()-used to append the given string to the old string

replace()-use the replace the given string with the new string.

**35. Why java is platform independent ?**

When we compile your Java code then .class file is generated by javac compiler these codes are readable by JVM and every operating system have its own JVM so JVM is platform dependent but due to JVM java language is become platform independent.

**36. Diff b/w classes and object**

|  |  |
| --- | --- |
| Object | Class |
| Object is an instance of a class. | Class is a blueprint or template from which obje objects are created. |
| Object is a real world entity such as pen, laptop, mobile, bed, keyboard, mouse, chair etc. | Class is a group of similar objects. |
| Object is a physical entity. | Class is a logical entity. |
| Object is created through new keyword mainly e.g.  Student s1=new Student(); | Class is declared using class keyword e.g.  class Student{} |
| Object is created many times as per requirement. | Class is declared once. |
| Object allocates memory when it is created. | Class doesn't allocated memory when it is dcreadeclared |
| There are many ways to create object in java such as new keyword, newInstance() method, clone() method, factory method and deserialization. | There is only one way to define class in java using class keyword. |

**37. Write down the rules for naming classes? In JAVA, class name must always be the same as file name,** but sometimes file contains multiple classes. Only single class(or interface) in file can be public, and it must have the same name as file. But how is the file name determined if it has multiple classes (or interfaces) that are not public?

38. Write any 4 attributes of applet tag

|  |  |  |
| --- | --- | --- |
| Attribute |  | Description |
| Align |  | Defines the text alignment around the applet |
| alt |  | Alternate text to be displayed in case browser does not support applet |
| archive |  | Applet path when it is stored in a Java Archive ie. jar file |
| code |  | A URL that points to the class of the applet |
| Height |  | Defines height of the applet window |
| Width |  | Defines the width of the applet window |

**39. What are the method of thread?**

|  |  |
| --- | --- |
| Method | Description |
| Str getName() | Retrieves the name of running thread in the current context in String format |
| void start() | This method will start a new thread of execution by calling run() method of Thread/runnable object. |
| void run() | This method is the entry point of the thread. Execution of thread starts from this method. |
| void sleep(sleeptime() | This method suspend the thread for mentioned time duration in argument (sleeptime in ms) |
| void yield() | By invoking this method the current thread pause its execution temporarily and allow other threa other thread to execute. |
| void join() | This method used to queue up a thread in execution. Once called on thread, current thread will wait till calling thread completes its execution |
| Boolean isAlive() | This method will check if thread is alive or dead |

**40. List the several states of thread ?**

There are five type of several state of thread

They are :

1. Newborn state.

2. Runnablestate.

3. Runningstate.

4. Blocked state.

5. Dead state.

**41. What is thread synchronization?**

Thread synchronization is defined as a mechanism which ensures that two or more concurrent processes or threads do not simultaneously execute some particular program segment known as critical section. Processes' access to critical section is controlled by using synchronization techniques.

**42. What is use of super keyword?**

The super keyword in java is a reference variable which is used to refer immediate parent class object.

Whenever you create the instance of subclass, an instance of parent class is created implicitly which is referred by super reference variable.

Usage of java super Keyword

1. super can be used to refer immediate parent class instance variable.
2. super can be used to invoke immediate parent class method.
3. super() can be used to invoke immediate parent class constructor.

**43. Define stream?**

A stream can be defined as a sequence of data.

The InputStream is used to read data from a source and the OutputStream is used for writing data to a destination. InputStream and OutputStream are the basic stream classes in Java.

**44. What are character stream in java ?**

**Character Streams** are specially designed to read and write data from and to the Streams of Characters. We require this specialized Stream because of different file encoding systems. In our previous post of [Byte Streams](https://www.codingeek.com/java/io/read-and-write-file-using-byte-streams-in-java-example/)we discussed about why **we should not use Byte Streams for Reading and Writing character files**. Lets see this in detail and discuss about the advantages of Character Streams.

**45. How will find out the length of a string in java ?**

1. String Length in Java. String length returns the number of characters in a string.

2. Syntax. int length = stringName.length();

3. Notes. Spaces count as characters.

Example :

String name = "Anthony";

int nameLength = name.length();

System.out.println("The name " + name + " contains " + nameLength + "letters." );

**46. What is an internet address ?**

**Java InetAddress** class represents an IP address. The java.net.InetAddress class provides methods to get the IP of any host name.

 for example :

 www.javatpoint.com, www.google.com, www.facebook.com etc.

**47. Define proxy server ?**

In [computer networks](https://en.wikipedia.org/wiki/Computer_Network), a proxy server is a [server](https://en.wikipedia.org/wiki/Server_(computing)) (a computer system or an application) that acts as an [intermediary](https://en.wikipedia.org/wiki/Intermediary) for requests from [clients](https://en.wikipedia.org/wiki/Client_(computing)) seeking resources from other servers.[[1]](https://en.wikipedia.org/wiki/Proxy_server#cite_note-1) A client connects to the proxy server, requesting some service, such as a file, connection, web page, or other resource available from a different server and the proxy server evaluates the request as a way to simplify and control its complexity. Proxies were invented to add structure and [encapsulation](https://en.wikipedia.org/wiki/Encapsulation_(networking)) to distributed systems.[[2]](https://en.wikipedia.org/wiki/Proxy_server#cite_note-2) Today, most proxies are web proxies, facilitating access to content on the [World Wide Web](https://en.wikipedia.org/wiki/World_Wide_Web), providing anonymity and may be used to bypass [IP address blocking](https://en.wikipedia.org/wiki/IP_address_blocking).

**48. List the two methods of URL class ?**

1. get port() ----to get the port number.

2. get host() ----to get the host name specified.

3. get file ----to get the file name.

**49. List the AWT controls ?**

1. label.

2. button.

3. checkbox.

4. choice.

5. list.

6. scrollbar.

**50. What is push button ?**

Button is one of the simplest UI components that is used to generate events when the user clicks or presses on it. Swing button can display text, icon or both. ... In this tutorial, we will show you how to use JButton class to create simple buttons and add event handlers to them.

**51. Write a note on border layout ?**

BorderLayout is the default layout manager for the content pane of a JFrame, JWindow, JDialog, JInternalFrame, and JApplet. Place components against any of the four borders of the container and in the center. The component in the center fills the available space.

**52.what is byte code? What is JVM?**

Byte code is a set of instructions designed to be executed by the java run time system which is called java virtual machine(JVM).

JVM is an interpreter for byte code.

**53.Two types of java program?**

1.Java application program

2.Java applet program.

**54.what is application program and applet program?**

**Application program:**

An application program is a program that runs on the computer under the operating system of the computer

**Applet program:**

An applet program is designed to be transmitted over the internet and executed by a compactable web browser. An applet is actually a tiny program dynamically downloaded across network