1)Explain oops concept in java(OOPs pool)

2)What is the use of Collection framework.

→**Collection framework represent the group of classes and interfaces.**

Collection framework enables to perform data manipulation operations like storing data, sorting, searching, deletion, insertion and updating data on the group of elements.

3)how we use collection framework in springBoot,hibernate

→**Spring framework allow to inject of collections object into bean, through constructor dependancy injection and setter injection using <list><map><set>**

4) difference between List and Set

→

List interface	**Set Interface**
1)List can allow duplicate element	1)Set cant allow duplicate element
2)List maintained insertion ordered to stored element	2)Set can't maintained insertion order to store element
3)List can be store multiple null value	3)Set can store only one null value
4)List implementation is ArrayList , LinkedList, vector, stack	4)Set implementation is hashSet, LinkedHashSet
5)List is often use when we need to frequently access the element using their indices	5)Set is used when we need to store distinct data
6)listiterator( ) is used to iterate the list element	6)iterator( ) method is used to iterate set element

5)SpringBoot Annotation

→

@Controller	@Autowired	@RequestMapping

@GetMapping	@PostMapping	@PutMapping
@PatchMapping	@Delete	@RequestBody
@Service	@Repository	@Controller
@RestController	@PathVariable	@RequestParam

6)**use of @Controler and @RestCtroller**

→@Controller: is used to mark a class as Spring MVC controller

To handle web request.

Returns view(html response with model view)

Introduced in spring 2.5

@RestController: is the combination of @controller and @resposnseBody

To handle rest api request

Return JSON/Xml respose

Introduced in Spring 4.0

7) Explane DDL

→DDL stands for Data Defination Language ,ddl statements includes create , drop and alter command.

8) difference between JDBC and Hibernate

→

JDBC	Hibernate
1)Jdbc is a database connectivity technology	1)Hibernate is aa framework
2)It does not support lazy loading	2)Its support lazy loading

3)We need to maintain explicitly database connection transaction	3)Hibernate itself maintain all type of transaction
4)We need to write code for implementing caching	4)hibernate provide two type of cache first level cache and second level cache
5)Low performance	5)High performance

9)steps of Jdbc

→ 1) Register the driver class: forName("driver class path"); method

Class.forName(); is used to load the driver class.

2)create connection: getConnection(); method

Connection con=DriverManager.getConnection("jdbc url","username","password"); is used to establish the connection with database.

3)create statement object: createStatement();

Statement stm=con.createStatment(); object of a statement is responsible to execute query.

4)execute query: executeQuery()

ResultSet re=stm.executeQuery("select * from table"); is used to execute the query to the database.

5)close Connection: Close()

con.close() is used to close the connection with database

10)**Jdk8 / Java 8 feature**

→1**) Lambda Expression**:

It is a new feature in java 8

It provides the clear way to represent the method interface using expression

It is very useful in collection library, it is used to iterate, filter or extract data from collection.

It provides the implementation of interface which has functional interface

It saves the lot of code

Java lambda function treated as a function

It provides the implements of functional interface, an interface have only one abstract class is called functional interface, java provide @FunctionalInterface annotation to denotate the interface as functional interface .

(argument-list)->{body}

Argument-list: it can be empty or not-empty as well

Arrow-token: it is used to link argument-list and body of expression

Body: it contains expression arguments or statements.

11)create map and integer as a key and string as a value and iterate it using jdk 8

```
-->import java.util.*;
public class MapClass {
	public static void main(String[] args)
	{
		Map<Integer, String> mp=new HashMap<Integer, String>();
			mp.put(1,"vidya");
			mp.put(2,"nalawade");

			mp.forEach((k,v)->System.out.println(k+" "+v));
	}
}
```

12)What is object.

→ Object is a instance of a class.

Object is a real world entity.

An entity it has its own state and behaviour is called object.

It can be physical or locgical.

13)**how to create object.**

→1)Using New keyword

2)Object initialization in a single line

3)Using constructors with parameter

4)Object Array

5)Cloning objects

14)methods of object class and their return types.

→toString()—return type is 'String'

equals()--return type is 'boolean'

getClass()

hashcode()--return type is 'Integer'

wait()

notify()

notifyAll()

15)What is encapsulation

→Encapsulation is mechanism to binding a data(variable) and code(methods) in a single unit.

In encapsulation class's variable is hidden from another class . It can be access by the methods of the class in which they are found.

16)difference between local and global variable

→local variable:Method level

Global variable : Class level

17)how to distroyed object? what is garbage collection.

→Main perpose of garbage collection is to free heap memory to destroying object which don't contain reference.

Garbage collection destroyed object which no longer needed.

Java virtual machine uses automatically memory management and process to destroyed unused object using system.gc()

18)why in java multiple inheritance are not allowed.

→Multiple inheritance are not allowed in java because its prevent ambiguity

Consider class B extends class A and class C , both have same display() method, that time java compiler cannot decide which method should inherit. That's why multiple inheritance not allowed in java.

19)What is maven?

→1. Maven is a dependency management tool.

2. Its helps to brings jar, internet to our project.

20)Find smallest no in array.

-->

```
public class SmallestNoInArray {
public static void main(String[] args) {
    int array[]= {100,8,2,9,23};
    int small=array[0];
    for(int i=0;i<array.length;i++) {
```

```
                if(small>array[i])
                {
                      small=array[i];
                }
          }
          System.out.println(small);
     }
}
```

21)Find the maximun number in array.

-->

```
     public class MaxValueInArray {
     public static void main(String[] args) {
          int array[]= {100,8,2,9,23};
          int max=array[0];
          for(int i=0;i<array.length;i++) {
                if(max<array[i])
                {
                      max=array[i];
                }
          }
          System.out.println(max);
     }
}
```

22)Generate the number in 5 series up to user input no.

-->

```
     import java.util.*;
public class NoOf5Series {
     public static void main(String[] args) {
          Scanner sc=new Scanner(System.in);
          int n;
          System.out.println("Enter the no: ");
          n=sc.nextInt();
          for(int i=0; i<=n; i++) {
               if(i%5==0) {
                    System.out.println(i);
               }
          }

     }
}
```

O/P:

```
     Enter the no: 20
0
5
10
15
```

23)Why use exception in java?

→Exception is mechanism to handle run time error and maintain the normal flow of application or program

Type of exception:

1)Checked Exception:

Exception checked at compiled time.

Inherits the direct throwable class.

Exemple is IOException, SQLException

2)Unchecked Exception:

Exception checked at run time.

Inherit RuntimeException.

Exemple is ArithmeticException, NullPointerExcepption,ArrayIndexOutOfBoundException.

3)Error:

It is irrecoverable.

Example is OutOfMemoryError, VirtualMachineError

24)What is synchronize.

→In multi-threaded environment synchronization is allowed only one thread to execute at any given time.

25)What is abstraction?

→Abstraction is the process to hiding the implementation details and show the fuctionality.

Another way, Abstraction shows only essential things to user and hide the internal details.

Example, sending SMS you type the text and send the messege , you don't know the internal process of message delivery.

To types of abstraction abstract class and interface.

26)difference between abstract class and interface?

→

Abstract Class	Interface
1)Abstract class can have abstract and non-abstract method	1)Interface can have only abstract method , since java 8 it have default and static method
2)Abstract class can not support multiple inheritance	2)Interface can support multiple inheritance
3)Abstract class can have final , non-final , static , non-static variable	3) Interface can have final and static variable
4)Abstract class extends the using keyword extends	4)Interface implements the using keyword implements
5)abstact keyword is used to declared abstract class	5)interface keyword is used to declared interface class
6)Abstract class can have protected and private class member	6)Member of java interface is public by default

27)Difference between overloading and overriding.

→

Method Overloading	Method Overriding
1)In method Overloading method name should be same but parameter must be different	1)In method overriding method name should be same as well as parameter must be same
2)Method overloading perform within the class	2)Method overriding occurs in two classes that have is-A relationship
3)Method overloading is the example of compile-time	3)method overriding achive run time polymorphism

polymorphism	

28)Difference between HashMap and HashTable.

→

HashMap	HashTable
1)HashMap is non-synchronized	1)HashTable is synchronized
2)HashMap is not thread safe	2)HashTable is thread safe
3)HashMap can allow null key or null value	3)HashTable can't allow null key or null value
4)HashMap introduced in java 1.5	4)HashTAble introduced in java 1.2

30)Statements in SQL.

→

SELECT	SELECT *	CREATE TABLE	CREATE DATABASE
DELETE	DROP TABLE	TRUNCATE TABLE	BETWEEN
GROUP BY	ORDER BY	LIKE	FULL JOIN
INNER JOIN	LEFT JOIN	RIGHT JOIN	UNION
WHERE	UPDATE	INSERT INTO	EXIST
ALTER TABLE	AS	AND/OR	IN

31)What is rollback in sql

→ rollback is a transaction statement.

Rollback is used to undo all the changes during transaction for occurring any issue such as power failure, wrong data.

And returns current transaction its initial phase.

32)Difference between primary key foreign key and unique key

→

Primary Key	Unique key	Foreign key
1)Primary key does not contained null value	1)Unique key contained only one null value	1)foreign key contained null value
2)only one primary key present in single table	2)one or multiple unique keys are present in table	3)multiple foreign keys are present in table.
3)primary key is a foreign key of another table.		3) foreign key is a primary key of another table.
4)Primary key does not allow duplicate value	4)unique key does not allow duplicate value	4)foreign key allow duplicate values
5)primary key supports auto-increament value	5)Unique does not support auto-increament value	
6)we can not change or delete primary key value from is parent table	6) we can change or delete value of unique key	6)we can change the foreign key value from its child table
7)Primary key can be a unique key	7)unique key can not be primary key	7)foreign key can not be primary key
8)Example, student roll no	8)Example, city_code, Home_no, adhar no etc.	

33)Why to use springboot?

→ 1. Spring boot is a project that is build top on spring framework.

2. spring boot provide the RAD(Rapid application development) feature to the spring framework.

3. The dependency injection approach is used to spring boot.

4. spring boot is a combination of spring framework and embedded server.

5. It contains powerful database management capability.

6. It simplifies integration with other framework like JPA/hibernate, ORM, strut.

7. It reduced the cost and application time.

8. it creates Stand-Alone application that started using java -jar.

9. It provided different embedded server like tomcat and jetty. It test the web application easily.We does not need to deploy war file

10. it provides the opinionated starter POMs that simplifies our maven configuration.

11. There is no requirement for XML configuration.

12. It also minimize the writing of multiple boilerplate code.(reduce repetation of code).

13. Increase the productivity and reduce deployment time.

34)What is rest ApI and web application?

→Rest Api just return data a form of Json and Xml format because most of rest clints are programs.

Web application generally view (html +css) because they are intended for human viewers.

35)What is use of tamcat server?

36)Difference between application server and web server

→1. Web server deliver static contains like html pages, images, video and files.

2. Application server deliver dynamic contains like real-time updates, personalized information, customer support.

37)Why use hibernate.

→

1. Hibernate reduced boiler plate code.
2. Maintaining object-table mapping itself and return result to application in form of java object.
3. Hibernate supports inheritance, association and collection
4. Hibernate is database-independent and the same code can work for many database with minor changes.

38)What is build in methods of hibernate

→1. Save()
2. update()
3. saveOrUpdate()
4. merge()
5. delete()

39)how to Integrate Springboot and hibernate

→Use JPA(Java Persistence Api) dependency in pom.xml file of maven project

40)Methods in http

→1.GET
2.POST
3.DELETE

4. PUT

5. PATCH

6. CONNECT

41) What is @Override annotation?

→@Verride annotation denotes the child class methods overrides the base/parent class method.

42) what is threads?

1. Threads is a subprocess with lightweight with smallest unit of process and also has separate paths of execution
2. It is used for multithreading.
3. Multithreading concepts applied in gaming and animation.
4. Threads are provide lightweight nature and share the same address space.
5. The cost of communication between threads also low.
6. Another benefit of the thread is if one thread is get exception or error at the time of its execution. It doesn't affect the execution of another threads.
7. When multiple thread are executed in parallel at the same time its called multithreading.
8. Model of thread
    a. New:
        i. Thread in new state when it gets CPU time.
    b. Running:
        i. Thread is in a running state when it is under execution.

c. Suspended:

   i. Thread is in suspended state when it is temporarily inactive or under execution.

d. Blocked:

   i. Tread is in blocked state when it is waiting for resource.

e. Terminated:

   i. Thread comes in this state in any given time, it halts its execution immediately.

9. Thread is created either by implementing Runnable interface or by using extends Thread class.

10. Thread class extends object class an object class implements Runnable interface.

43)Synchronized and non-synchronized

→

Synchronized	Non Synchronized
1.Synchronized only one thread can access method at the given particular time.	1.Non-Synchronized two or more thread can access method at the given particular time
2.It is thread safe.	2.It is not thread safe.
3.Example is StringBuffer	3.Example is StringBuilder

44)difference between wait and sleep

→

1. Sleep(): this method is used to pause the execution of current thread for a specific time in millisecond. Here thread does not lost its ownership of the monitor and resume's it.

2. Wait(): this is object class method. it tells the calling (current thread) to wait until another thread invoke.

Sleep()	Wait()
1.Sleep() method belongs to thread class	1.Wait() method belongs to object class.
2.Sleep() method does not release lock on object during synchronization	2.Wait() method release lock on object during synchronization.
3.Sleep() is static method	3.Wait() is not static method
4.Two overloaded method a. sleep(long millis) b. sleep(long nanos)	4.Three overloaded method a. wait() b. wait(long timeout) c. wait(long timeout, int nanos)
5. public static void sleep(long millis)throws Inturrepted_Exception	5. public final void wait(long timeout)

45)difference between String builder and StringBuffer

→

StringBuffer	StringBuilder
1.Stringbuffer is synchronized and thread safe	2.StringBulder is nonSynchrinized and not thread safe
2.Two threads cant call the method of stringBuffer simultaneously	2.Two threads can call the method of stringBuilder simultaneously
3.StringBuffer is less efficient than stringBuilder.	3.StringBuilder is more efficient than stringBuffer.

4.Introduce in java 1.0	4.Introduced in java 1.5

46)how to deploy tomcat server

→

47)difference between array and arrayList

→

Array	**ArrayList**
1.Array is dynamically-created object. Holds the constant number of values of same data type	1.ArrayList is a class of java Collection framework contains popular classes like vector, hashTable, hashMap
2.Array is static in size	3.ArrayList is dynamic in size.
3.Array is fixed-length data structure.	3.ArrayList is variable-length data structure it can be resize itself when needed
4.It perform fast as compare ArrayList because its fixed size	4.Its performance is slow than Array
5.Use for or foreach to iterate the value of array	5.Use Iterator to iterate element of arrayList.
6.Length is provide to denote length of array	6.size() method is used to denote size of ArrayList
7.Array can be multi-dimensional	7.ArrayList always single-dimensional

48)difference between collection and collections

→

1. Collection:
    a. It is an interface of java.util.package
    b. It represent the group of individual object in single unit.

c. Collection does not have all static method in it.

2. Collections:

a. It is utility class introduce in java.util.packege.

b. It defines several utility methods which used to operate on collection. Like searching , sorting

c. Collection consist all methods that are static.

49)difference between super and this keyword

→1. This: Its refers to the current object of the class

2. super: its refers to the current object of the parent class.

50)Explain concepts of joins in database

→Sql Join means combination of two or more tables

1.Inner join

2.Left join

3.Right join

4.Full join

1. Inner Join:

a. Inner join selects the matching values of both tables as long as condition is satisfied.

b. It returns the combination of all rows from both the tables where the condition satisfies.

c. Example:

```
SELECT Orders.OrderID, Customers.CustomerName

FROM Orders
```

```
INNER JOIN Customers
ON Orders.CustomerID = Customers.CustomerID;
```

2. Left Join:
    a. Returns the all values from the left table and matching values from the right table.
    b. If there is no matching join it returns the Null.
    c. Example:

```
SELECT Customers.CustomerName, Orders.OrderID
FROM Customers
LEFT JOIN Orders
ON Customers.CustomerID = Orders.CustomerID;
```

3. Right Join:
    a. Returns the all values from right tables and matching values from left table
    b. If there is no matching join it returns the Null.
    c. Example:

```
SELECT Orders.OrderID, Customers.CustomerName
FROM Orders
RIGHT JOIN Customers
ON Orders.CustomerID = Customers.CustomerID;
```

4. Full Join:
    a. Returns the all values from left and right table.
    b. If there is no matching it returns the Null values.
    c. Example:

```
SELECT Customers.CustomerName, Orders.OrderID
FROM Customers
FULL JOIN Orders
ON Customers.CustomerID = Orders.CustomerID;
```

51)What is API?

→API stands for Application Programming Interface.

52)What is github?

→

1. Github is open source for programmer where they can store, share or collaborate the code and work together.
2. Depending on how a repository set up, you also might be create your own branch and make your own commits there.
3. And once you made some changes , you could submitted that code back to branches by making a pull request.

53)Explain your project

54)why we use angular technology?

55)which is the best hibernate or jdbc

→

1. Hibernate better suit for more complex application.
2. If an application going on straightforward database that won't need to be migrated , then jdbc is better option.

56)difference between commit and rollback

→

1. COMMIT: commit is used to save the changes successfully. Changes saves permanently we can't undo it.
2. ROLLBACK: rollback is used to undo changes if transaction occurs failure and transaction backs to its initial state.

57)Difference between equal() and ==

→equal(): equal() method is used for compaire actual value or content of object.

==: == operator is used for compaire reference address or location of objects.

Both are return Boolean value.

58)program for stack operation push() pop() peek().

→

```
import java.util.*;

public class StackOperation {

	public static void main(String[] args) {
		Stack stk=new Stack();

		stk.push(98);
		stk.push(56);
		stk.push(21);
		stk.push(45);

		System.out.println(stk);

		System.out.println(stk.pop());
		System.out.println(stk);

		Integer number=(Integer) stk.peek();

		System.out.println(number);
```

```
	}

}
```

59)Coding example on factory pattern

60)coding on find duplicate String using.

→

```
	public class DuplicateCharactersInToString {

	public static void main(String[] args) {
		String str="To find the duplicate character from the string, we count
the occurrence of each character in the string";
		int count;

		char string[]=str.toCharArray();

		for(int i=0;i<string.length;i++) {
			count=1;

			for(int j=i+1;j<string.length;j++) {
				if(string[i]==string[j]&& string[i]!=' ') {
					count++;
				}
			}

			if(count>1) {
				System.out.println(string[i]);
			}
		}

		}

}
```

61)Can Static method is override?

→

1. No, static method is not override.
2. Because static method is not associated with instance of a class.
3. That’s why when subclass inherits the static method from their

patent class it cannot be modify the behavior of the static method in any way.

62) What is rest API?

→

1. A restful api is an architectural style of Application Programming Interface.
2. That use http request for access and use data
3. The data can be used to GET, POST, Put and DELETE data types, which refers to the reading , updating , creating and deleting of operations concerning resources.

63)Difference between ArrayList and LinkedList.

→

ArrayList	LinkedList
1.ArrayList internally used dynamic array.	1.LinkedList internally used doubly linkedList.
2.Manipulation of arrayList is slow because internally it used array. If any element is remove from array , all other elements are shifted in memory.	2.menipultion od linkedList is fast because it used doubly linkedList. There is no need to shifting
3.ArrayList class can act as List	3.LinkedList class act as List and queue.
4.Better for storing and accessing	4.Better for manipulation

64)what is JVM, JDK and JRE

→

1. JVM:
    a. It is called java virtual machine because it doesn't exist
    b. It is specification that provide runtime environment.
    c. Which is used to execute java bytecode.
2. JRE:
    a. Stands for Java Runtime Environment. It is set of software tools which is used to developing java applications.
    b. It is implementation of JVM.
    c. It physically exist.
3. JDK:
    a. Stands for Java Development Tools.
    b. It is physically exist.
    c. It is a software development environment which is used to developing java applications.

65)Java is pure object oriented language or not and explain how?

→Java is not fully Object Oriented Programming Language. Because its support primitive data type like int, char, float, double . and this data type is not object oriented so java is not 100% object oriented language.

66)When we use finally keyword?

→Finally is used with exceptions try, catch statements . There is no matter exception is occur or not finally block compulsory execute.

67)how to create immutable class

→

1. We can create class as a final class.
2. There is no setter method so we have no option to change the value of instance.

68)what is static method?

→

1. Static method is a method that is part of a class rather than instance of an class.
2. Every instance of a class has access to the static method.
3. Only static data (static variable) can access static method, it cann't access non static data.
4. Static method can access variables(static variable) without using class object (instance of class)

69)can we declare main method as a final in java?

→Yes, we can declare the main method as a final.

The compiler does not throw any error.

The main use of final method is they are not overridden.

In inheritance we need not some method overridden in subclasses then we declare method as a final.

We can access final methods in subclass but we can not override final method.

70)What is Mongodb?

→

1. Mongodb is a open-source document-oriented database. That design for store large scale of data.

2. It is categorized under the noSQL database because storage and retrival of data in the mongodb are not in the form of tables.
3. The MongoDB database contains a collection just like MYSQL database contains tables. You are allowed to create multiple database and multiple collections.
4. Inside the collection we have documents. Documents contains the data. Single collection can contains multiple documents . it is not necessary that one documents is similar to another documents.
5. The documents are created using fields. Fields is a key-value pairs in the documents. Its just like the columns in the table of relational database.
6. The value of field can be any BSON data type like double, string, Boolean.
7. The data of MongoDB is stored in BSON format. BSON stands for Binary representation of JSON. In other word MongoDB server convert JSON data into Binary format that is called BSON. maximum size of BSON documents is 16MB.
8. Mongodb url:
    a. mongodb://user:password@localhost:27017/StudentDB
    b. mongodb://${username}:${password}@${host}:${port}/${db Name}
9. operations
    a. insert

```
db.getCollection('student').insert({
    "name": "Mahesh Dubal",
    "rollNumber": 1234,
    "address": {
        "city": "Pune",
        "state": "Maharashtra",
```

```
                "country": "India",
                "addressLine1": "Test",
                "addressLine2": "Test"
            }
        });
```

b. insertMany:

```
            db.getCollection('student').insertMany([{
                "name": "Mahesh Dubal",
                "rollNumber": 1234,
                "address": {
                    "city": "Pune",
                    "state": "Maharashtra",
                    "country": "India",
                    "addressLine1": "Test",
                    "addressLine2": "Test"
                },
                 {
                "name": "Mahesh",
                "rollNumber": 1234,
                "address": {
                    "city": "Pune",
                    "state": "Maharashtra",
                    "country": "India",
                    "addressLine1": "Test",
                    "addressLine2": "Test"
```

```
                }
                 ]
            });
```

c. update:

```
        db.getCollection('student').update(
        {"id":"6581ca4b994716120598e300"},
        {
             $set:{
                  "address.city":"Hyderabad"
             }
        },
        {
             upsert: true,
             multi: true
        }
        )
```

d. find:

i. Clause:

1. And:

```
             db.getCollection('student').find(
             {$and:
             [{"name":"Vidhya"},{"address.city":"Pune"}]
             })
```

2. Or:

```
        db.getCollection('student').find(
{$or:
   [{"name":"Vidhya"},{"address.city":"Pune"}]
 })
```

```
3. In:
        db.getCollection('student').find(
         {"name":{$in:["","",""]}}
         )
4. Sort:
        db.getCollection('student').find(
      {"name":{$in:["","",""]}}
      ).sort("name":-1)
```

```
      a. Where -1= sort data by descending order
                1= sort data by ascending order.
```

71) Steps of Spring mvc

→

1. Load the spring jar files or add the dependencies in case of maven.
2. Create controller class
3. Provide the entry of controller class in web.xml file.
4. Define bean in to separate xml file.
5. Display the message in the JSP page.
6. Start the server and deploy the project.

72)Difference between abstraction and encapsulation

→

Abstraction	Encapsulation
1.Abstraction is a mechanism to hide internal details and show only functionality	1.Encapsulation is mechanism to binding data and code into a single unit
2.In abstraction problem is solved at design level	2.In encapsulation problems are solved at implementation level
3.We can implement abstraction using abstract class and interface	3.We can implement encapsulation using access modifier (private, public, protected)
4.Abstraction is focus is on **What** should be done	4.Encapsulation is focus on **How** it should be done

73) Find first duplicate value in array (coding)

→

```
public class DuplicateElementIntoArray {

	public static void main(String[] args) {

		int[] arr= {1,8,9,10,85,89,100,1,100};
		int count=0;

		for(int i=0;i<arr.length;i++) {

			for(int j=i+1; j<arr.length;j++) {

				if(arr[i]==arr[j]) {

					System.out.println("Repeat element:
"+arr[i]);

					count++;
				}
			}
		}
		System.out.println("Number of Repeat element: "+count);
	}

}
```

74)What is Spring security

→

Spring security focus on the providing both authorization and authentication to the java applications.

75)Explain RabbitMQ

→

1. RabbitMQ is used for asynchronous communication .
2. RabbitMQ queue takes message from publisher and sends them to the consumer.
3. Basic concepts of RabbitMq:
    a. Producer : producer is one who sends the message to a queue based on the queue name.
    b. Queue : it is sequential data structure that is medium through which message are transfer and stored.
    c. Consumer: who subscribes and to received message from the broker .
    d. Exchange: An exchange is a entry point of broker because it takes the message from publisher and routes those message to the appropriate queue.
    e. Broker : It is message broker which provide data storage for data produced.
    f. Channel : offers lightweight connection to broker.

76)Explain polymorphism

→

1. Polymorphism is made up of 2 Greek word poly means many and morph means forms polymorphism many forms.

2. Single action performs many ways.
3. There are two types of polymorphism compile-time polymorphism and runtime polymorphism
4. Compile-time polymorphism achieve by method overloading and runtime polymorphism achieve by method overriding

77) What is microservices

→

1. Microservices is a small project or application.
2. By combining all the microservices , it construct the big service.
3. These are the service which exposed by REST.

78)Can you override static final main() method and why?

→

1. No, We can not override static method , because method overriding is based on dynamic binding at runtime time.
2. And static method is bonded using static binding at compile time.
3. So, we can not override static method.

79)difference between filter() and map() in java 8

→filter() and map() both are operations provided by stream api.

Filter()	**Map()**
1.It used to select element from stream based on codition or predicates	1.It used to transform element in stream from another form or value
2.Takes the predicates(return the true or false value), and produce the stream which	2.Takes functions and produce the stream of transform element

contains value that is satisfy the codition	
3.filtering element	3.transform element
4. List<Integer> evenNumbers = numbers.stream() .filter(n -> n % 2 == 0) .collect(Collectors.toList());	4.List<String> upperCase= list.stream().map(String::toUpperCase) .collect(Collector.toList());
5.is for selecting elements	5.is for transforming elements

80)Use of @springBootApplication.

→

1. @springBootApplication is a convenience annotation that add all of the followings
    a. @configuration
    b. @EnableAutoConfiguration
    c. @ComponentScan

81)explain try,catch and finally

82)what is default value of int and Integer.

→ int=0

Integer=null;

83)difference between int and Integer.

84)commands on linux and unix.

85)difference between hashMap and hashSet.

→

1. HashSet:
    a. HashSet is store unique elements without any associated value
2. HashMap:
    a. HashMap store key-value paire data where key is unique idetifire and value is associated data.

83) Difference between truncate and delete?

→Delete: It is Sql command it remove all rows from table using condition .

It is DML(Data Mainipulation Language) command.

Truncate: It is Sql command it removes all rows from table without any condition.

It is DDL(Data Defination Language command)

84)What is springBoot bean ?

85)What is POJO class and EJB?

→POJO: pojo don't have restriction

Simple java class use for data representation or as a DTO

EJB: Ejb java beans has pojo's with some restriction

Used for enterprised application with transaction and security

Feature	POJO	EJB
Definition	Plain Java object.	Enterprise Java component for business logic.
Framework	No dependency on any framework.	Part of the Java EE framework.
Complexity	Simple to create and manage.	Requires a server and annotations.
Features	Basic object functionality.	Built-in services like transactions, security, and messaging.
Usage	Used as data containers or DTOs.	Used for handling business logic or distributed tasks.
Scalability	No built-in scalability.	Designed for scalability and enterprise-level applications.

86)How change lowerCase and upperCase in sql query

→ UpperCase : SELECT UPPER(name) AS uppercase_name FROM employees;

LowerCase: SELECT LOWER(name) AS lower_case FROM employees;

87)What is java Generics?

88)Difference between spring and springboot

→

Spring	Spring boot
1.Spring is open source lightweight framework , widely use for develop enterprise application	1.Spring boot is build on top of spring mvc and widely used for develop REST APIs.
2.most important feature of spring is	2.Most important feature of spring boot is

dependency Injection.	autoconfiguration
3.developer need to write lots of boilerplate code.	3.spring boot reduce boilerplate code
4.to run the spring application we need set server explicitly.	4. Springboot provide embedded server like jetty , tomcat no need to configuration
5.developer need to add dependency into pom.xml file	5.pom.xml file manage dependencies internally it provides starters
6.we need to xml configuration	6.there is no need to xml configuration
7.Doesn't support in-memory database	7.Support in-memory database like h2

89)What is dependency Injection

→

1. Dependency injection is a fundamental aspects of spring framework, through which the spring container "injects" objects into other object or dependencies.
2. This allows for loosely coupling
3. Various types of Dependency injection
    a. Constructor injection
    b. Setter injection
    c. Field injection

90)Difference between Class and Interface.

91)What is api gateway?

92)Why we use lombok?

93)difference between entity class and bean class

94)**find all records of top 10 maximum marks of student table**

→ SELECT * FROM student

ORDER BY marks DESC

LIMIT 10;

95)find second highest mark of student table

→ SELECT MAX(marks) AS second_highest_mark

FROM student

WHERE marks < (SELECT MAX(marks) FROM student);

96)What is JPA?

97)What is hashTable?

98)Example of joins in database?

99)Is abstract class have constructor?

100)What is loosely couple and tight couple

101)Write a program to sort map according value?

→

```
import java.util.*;

public class SortedMapValueWise {

	public static void main(String[] args) {

		HashMap<Integer,String> hmap=new HashMap<Integer,String>();
		hmap.put(1,"Vidya");
		hmap.put(2,"Mahesh");
		hmap.put(3,"Vaibhav");

		LinkedHashMap<Integer,String> sortMap=new
LinkedHashMap<Integer,String>();

		hmap.entrySet().stream()
		.sorted(Map.Entry.comparingByValue())
		.forEachOrdered(entry->sortMap.put(entry.getKey(),
entry.getValue()));

		System.out.println("Sorted Map by Value:");
		sortMap.forEach((k,v)->System.out.println(k+" : "+v));
	}
```

}

102)write a program to find a avg salary of employee with department wise

103)When we use requestParam and requestBody

→@RequestBody: it is used to extract http request body value in json or xml format

@RequestParam: is used to extract individual parameter value

104)Can we use @Controller and @RestController

→Yes, We can use both in same service class for entity class

105)What is wrapper class?

106)difference between @pathVariable and @RequestParam

→@pathVariable:Extract/ retrive data from Url path

@RequestParam: Extract/ retrive data from query parameter in request url

107) Difference between hashmap and ConcurrentHashMap

→HashMap:- Hashmap is non-synchronized and not thread safe

Performance of hashmap is relaptively higher

Allows null key and values

ConcurrentHashMap:- It is Synchronized or thread safe

Performance of ConcurrentHashMap is relatively lower

Not allows null key and values

108)what is thread

109)Difference between comparable and comparetor

→Comparable : It is use to sort single elements

Use comparaTo() method for sorting

Java.lang introduce comparable concept

Comparetor: It is use to sort multiple elements like collection elements

Compare() method is used for sort

Java.util introduce comparable concept

110)Difference between throw and throws

111)What is springboot achtuetor

112)What is loggs in springboot

113)convert map value into list and find the value which is greater than 20

114)difference between Autorization and autontication

115)Query find the second largest mark

116)java 8 features

118)now you are working on which model

119)What is springBoot admin

120)how you check bug

121)Thread implementation

122)explain explicite

123) implements Exception