

Q1. Consider below code and find the output:

```
public static void main(String[] args) {  
    try {  
        test();  
    } catch (Exception ex) {  
        System.err.print("exception1"); // line 1  
    }  
    System.out.print("end");  
}  
  
static void test() throws Error { // line 2  
    if (true)  
        throw new Exception("exception 2"); // line 3  
    System.out.print("test"); // line 4  
}
```

Options

testend

Compilation fails at line 2.

Compilation fails at line 1.

Compilation fails at line 3.

Q2. Using gulp, we want to run build task. Below have 2 approaches of writing gulp task:

// approach 1

```
var gulp = require('gulp');
```

```
gulp.task('build', function(done) {
```

```
    console.log("build");
```

```
    done();
```

```
});
```

// approach 2

```
const { series } = require('gulp');
```

```
function build(done) {
```

```
    console.log("build");
```

```
    done();
```

```
}
```

```
exports.build = series(build);
```



On running "gulp build" command, build function should be executed. Find correct approach which will not have any error and will execute fine.

Options

Approach 1

Both are correct

Approach 2

None

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Q3. Consider below code and find the output:

```
ArrayList < String > names = Arrays.asList("Tom", "Miley", "Mark"); // line 1  
  
for(int i=0;i < names.size();i++){  
  
    if(names.get(i).equalsIgnoreCase("emily")){  
  
        names.remove(i); // line 2  
  
    }  
  
}  
  
System.out.println(names.get(i));
```

Options

line 1: compilation problem

line 2: java.lang.UnsupportedOperationException

line 2: java.lang.ClassCastException

No error/exception and below is the output on console:

Tom
Miley
Mark

nd Programming Languages

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Q4. Computer systems are often used to store large amounts of data from which individual records must be retrieved according to some search criterion. Thus the efficient storage of data to facilitate fast searching is an important issue.

However, if we place our elements in an array and sort them in either order on the key first, then we can obtain much better performance with an algorithm called _____.

Options

Sequential Search

Binary Search

Direct Search

Bubble Search

Skipped Current Question

Skipped Review

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Q5. Select correct option explaining "Data type mismatch in predicates" in terms of SQL.

Options

Data type mismatch in predicates

It could be in a stored procedure where the parameter is passed as one data type and then used in a query to filter data on a column of different data types.

All of the above

It is very easy to mismatch data types in predicates.

It could be in joining tables on columns with different data types, or simply using a predicate where data types are mismatched.

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Q6. Consider below table data from movies table.

Id---Title---Director---Year---Length_minutes

- 1.Toy Story---John Lasseter---1995---81
 2.Monsters, Inc---Pete Docter---2001---92
 3.Finding Nemo---Andrew Stanton---2003---107
 4.The Incredibles---Brad Bird---2004---116
 5.Cars---John Lasseter---2006---117
 6.Ratatouille---Brad Bird---2007---115
 7.WALL-E---Andrew Stanton---2008---04
 8.A Bug's Life---John Lasseter---1998---95
 9.Demo Movie---Mark John---2004---92

Find correct sql query to find all movies directed by John after year 2000.

Options

select title from movies where year > 2000 and UPPER(director) LIKE UPPER('%john%');

select title from movies where year > 2000 and LOWER(director) LIKE LOWER('%john%');

select title from movies where year > 2000 and director LIKE '%john%';

All above queries are same and will fulfill the requirement.

Queries A and B will fulfill the requirement.

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jrfse/app/course-player/MC8wLzAvNTEyMzEvMC9teWxIYXJuaW5n

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- 0 Skipped

Q7. Binary Search Tree is a Binary Tree with additional properties given in the options.

Find the option which is not a valid additional property for binary search.

The left subtree of a node contains only nodes with keys less than the node's key.

The right subtree of a node contains only nodes with keys greater than the node's key.

The left and right subtree each must also be a binary search tree.

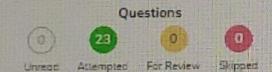
Options

None

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Q8. Consider below terms in networking:

A - Load balancer

B- Virtual network

C- Gateway

Below are the definitions for above terms, in random order:

- 1- It enables a data center or service provider network to provision the most suitable and efficient networking structure for the applications it hosts.
- 2- It acts as the "traffic cop" sitting in front of your servers and routing client requests across all servers capable of fulfilling those requests in a manner that maximizes speed and capacity utilization and ensures that no one server is overworked.
- 3- It is a piece of networking hardware used in telecommunications for telecommunications networks that allows data to flow from one discrete network to another.

Find the correct option to match terms and their respective definitions.

Question Nav



A-2, B-1, C-3

A-3, B-1, C-2

Options

A-1, B-2, C-3

A-1, B-3, C-2

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Q9. The _____ is an approach for solving problem where we have multiple options to select from, and we select the one with immediate best result, without worrying about future results. In other words, the locally best choices aim at producing globally best results.

Select the correct option to complete above statement.

Options

Greedy Algorithms

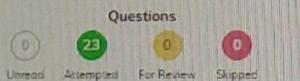
Pattern searching

Dynamic Programming

Backtracking

Section 1

Q10. What allows the programmer to destroy an object?



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Options

When an "System.gc();" gets executed, current instance will be destroyed.

Objects can be garbage collected if placed in the heap and Runtime.getRuntime().gc(); method called.

Call java.lang.Object.finalize() method to destroy current Object.

Programmer can never destroy an object. Programmer can only request to destroy and JVM will destroy Object.

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Q11. Let's consider a simple example with two classes' student and address where the required field in student is only name and the required fields in address are city and pin. The task is to find the ZIP code of the student with the given id. If any of the non-required values are missing, then an empty string should be returned. Assume that a StudentRepository is also provided/written.

Find the correct way to implement this task when the requested values are not guaranteed from the repositories.

Options

```
public String findZip(String studentId) {<br>
    Student student = studentRepository.findById(studentId);<br>
    if(student != null) {<br>
        Address address = student.getAddress();<br>
        if(address != null) {<br>
            String zipCode = address.getZipCode();<br>
            if(zipCode != null) {<br>
                return zipCode;<br>
            }<br>
        }<br>
    }<br>
    return "";<br>
}<br>
```

```
public String findZipCode(String studentId) {<br>
    return studentRepository.findById(studentId)<br>
        .flatMap(Student::getAddress)<br>
        .flatMap(Address::getZipCode)<br>
        .orElse("");<br>
}<br>
```

```
public String findZipCode(String studentId) {<br>
    Optional< Student > optStudent = studentRepository.findById(studentId);<br>
    if(optStudent.isPresent()) {<br>
        Student student = optStudent.get();<br>
        Optional<Address > optAddress = student.getAddress();<br>
        if(optAddress.isPresent()) {<br>
            Address address = optAddress.get();<br>
            return address.getZipCode().orElse("");<br>
        }<br>
    }<br>
    return "";<br>
}<br>
```

All above works



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```
Q12. class Friend{  
    private String name;  
    public Friend(String name){  
        this.name = name;  
    }  
    public String toString(){  
        return "name=" + name + "  
    }  
}  
  
public class Demo{  
    public static void main(String[] args){  
        Friend f1 = new Friend("Miley");  
        Friend f2 = new Friend("Miley");  
  
        if(f1.equalsIgnoreCase(f2)){  
            System.out.println("Same object");  
        } else {  
            System.out.println("Not same");  
        }  
    }  
}
```

Consider above code and find the correct output.

Options

Some object

Compilation error

Not same

Runtime error

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0 Unread 23 Attempted 0 For Review 0 Skipped

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Q13. Find the option which is not a valid way to activate maven build profile.

Options

Explicitly using command console input

Through maven settings

Via OS Settings

Via a build artifact repository manager



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Q14. We have two tables in database (student and address). Consider below sql structure.

```
create table Student(  
    id int primary key auto_increment,  
    name varchar(50),  
    addressId int
```

```
);
```

```
create table Address(  
    id int primary key auto_increment,
```

```
    city varchar(50),  
    pin varchar(10)  
);
```

```
insert into address(city, pin) values
```

```
("tokyo", "124525"),
```

```
("new york", "654123"),
```

→

```
("melbourn", "365214"),
```

```
("delhi", "258963");
```

```
Insert into student(name, addressId) values
```

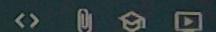
```
("miley", 3),
```

```
("emily", 1),
```

```
("mark", 4),
```

```
("tom", 1).
```

SQL Concepts and Programming Languages



```
insert into address(city, pin) values
```

```
("tokyo", "124525"),
```

```
("new york", "654123"),
```

```
("melbourn", "365214"),
```

```
("delhi", "258963");
```

```
insert into student(name, addressId) values
```

```
("miley", 3),
```

```
("emily", 1),
```

```
("mark", 4),
```

```
("tom", 1),
```

```
("carl", 2);
```

Our requirement is to find all student names and pin codes for students living in tokyo. Find valid sql statement to fulfil the requirement.



Options

```
select s.name, a.pin from student as s<br>
inner join address as a <br>
on a.id = s.addressId<br>
where a.city = 'tokyo';<br>
<br>
```

```
select s.name, a.pin from student as s<br>
inner join address as a <br>
on a.id == s.addressId<br>
where a.city = 'tokyo';<br>
```

```
select s.name, a.pin from student as s<br>
inner join address as a <br>
on a.id = s.addressId<br>
where a.city == 'tokyo';<br>
<br>
```

```
select s.name, a.pin from student as s<br>
inner join address as a <br>
on a.id == s.addressId<br>
where a.city == 'tokyo';<br>
```

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Q15. Consider below scenarios:

Scenario 1:

You have an online store with only a server. The site will provide a display where you can choose a product from. When you submit a query, the site performs a lookup and returns an HTML result back to its client. The server sends your query directly to the database.

Scenario 2:

Server will generate the results without sending the request to the database directly. This allows a real-time query where a second client can access the same info and receive real time, reliable information without sending query to the database. The server basically acts as an intermediate between the database and the Scenario 1 server.

What type of server is being used in which scenario ?

Options

Scenario 1 is using application server and Scenario 2 is using web server

For both situations web server is used



Scenario 1 is using web server and Scenario 2 is using application server

For both situations application server is used

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Q16. Below is the list of few important RESTful API Response Codes.

A- 201

B- 400

C- 405

D- 403

E- 204

F- 500

Below are the description for above response codes in random order.

1- Internal Server Error

2- No Content

3- Method Not Allowed

4- Bad Request

5- Created

6- Forbidden

Find correct set of pair where response codes are arranged with their respective description.

Options

A-5, B-6, C-3, D-4, E-2, F-1

A-2, B-4, C-3, D-6, E-5, F-1

A-5, B-4, C-3, D-6, E-2, F-1

A-2, B-1, C-3, D-4, E-5, F-6

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Q17. The _____ makes easy work out of managing all the API calls to our serverless backends. We had challenges with scaling and consolidation of different API call types prior to implementing the _____; not only we resolved the issues, but we have experienced improvement in API management by using a single platform that is easily accessible.

Find the correct option to complete the above statement

Questions



A grid of numbered circles arranged in three rows. The first row contains circles numbered 01 through 09. The second row contains circles numbered 10 through 18. The third row contains circles numbered 19 through 23. Circle 17 is highlighted with a blue background.

Subnets

Options

Security Groups

API Gateway

Load balancer

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Q18. HTTP defines a set of request methods to indicate the desired action to be performed for a given resource. Although they can also be nouns, these request methods are sometimes referred to as HTTP verbs. Some important http request methods are given below. You have to find correct option where request methods are paired with their respective description.

Http request methods:

A- GET

B- POST

C- PUT

D- DELETE

E- PATCH

Description:

1- Used to replace all current representations of the target resource with the request payload.

2- Used to delete the specified resource.

3- Used to apply partial modifications to a resource.

4- Used to submit an entity to the specified resource.

5- Used to retrieve resources.

Options

A-5, B-4, C-1, D-2, E-3

A-5, B-3, C-1, D-4, E-2

A-5, B-4, C-3, D-2, E-1

A-5, B-3, C-1, D-2, E-4

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Q19. Consider below code:

```
HashMap emps = new HashMap();
emps.put("emp45", new Employee("Mark", 34));
emps.put("emp42", new Employee("Carl", 29));
emps.put("emp39", new Employee("Miley", 28));
Set s = emps.keySet();
// line1
System.out.println(s);
```

Find code to be inserted at line1 to sort the keys in the emps.

Options

Arrays.sort(s);

Collections.sort(s);

s = new TreeSet(s);

s = new SortedSet(s);

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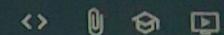
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Q20. Consider below code to find the time complexity:

```
String s = "";
int n = 5;
for (int r = 1; r <= n; r++) {
    for (int c = 1; c <= r; c++) {
        s += "* ";
    }
    for (int c = 1; c <= n-r; c++) {
        s += " ";
    }
    for (int c = 1; c <= r; c++) {
        s += "* ";
    }
    s += "\n";
}
print(s);
```

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```
for (int c = 1; c <= r; c++) {  
    s += "* ";  
}  
  
for (int c = 1; c <= n-r; c++) {  
    s += " ";  
}  
  
for (int c = 1; c <= n-r; c++) {  
    s += ". ";  
}  
  
for (int c = 1; c <= r; c++) {  
    s += "* ";  
}  
  
s += "\n";  
}  
  
print(s);
```

Options

 $O(N)$ $O(N * \text{Sqrt}(N))$ $O(N \log(N))$ $O(N^N)$

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Q21. We sent below rest request to server:

POST http://localhost:3000/tutorials

content-type: application/json

```
{"title": "Html Media", "author": "IIHT", "duration": 140, "level": "intermediate"}
```

And below was the response received from server:

HTTP/1.1 201 Created

... // headers

{

```
    "title": "Html Media",
```

```
    "author": "IIHT",
```

```
    "duration": 140,
```

```
    "level": "intermediate",
```

 "id": 1



Now we want to update title from "Html Media" to "Html Audio_Video" and remaining data must not be changed where id is 1.

What should be the standard request to achieve same ?

Options

PUT http://localhost:3000/tutorials/1
content-type: application/json
["title": "Html audio-video"]

PATCH http://localhost:3000/tutorials/1
content-type: application/json
["title": "Html audio-video"]

POST http://localhost:3000/tutorials/1
content-type: application/json
{ "id": 1, "title": "Html Media", "author": "IIHT", "duration": 140, "level": "intermediate" }

POST http://localhost:3000/tutorials
content-type: application/json
{ "id": 1, "title": "Html Media", "author": "IIHT", "duration": 140, "level": "intermediate" }

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Q22 _____ can be used to remove duplicates from a set of elements.

_____ can also be used to find frequency of all items.

_____ can be used in any situation where we want search() insert() and delete() in O(1) time.

Find the correct option to complete all above statements.

Options

Heap

Hashing

Matrix

Maps



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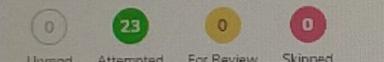
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Q23. We have below table in sql.

```
create table Country(  
    country_id varchar(10) not null,  
    country_name varchar(20),  
    region_id int  
);
```

We are running below queries to save country in country table. But one/more query(s) are getting failed. Find the failed query.

1. insert into country(country_id, country_name) values('C0001', 'India');
2. insert into country(region_id, country_name) values(1003, 'USA');
3. insert into country(region_id, country_id) values(1002, 'C0003');
4. insert into country(country_id) values('C0004');

Options



Only 1

Only 2

Only 4

1 & 4