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Test Name: Ford Full stack Sr Developer(Angular/Java/Microservices)(5-9 Yrs Exp)

Taken On: 19 Jan 2024 17:14:41 IST

Time Taken: 59 min 57 sec/ 60 min

Work Experience: > 5 years

Contact Number: 8130250752

Invited by: DIS

Invited on: 18 Jan 2024 20:29:01 IST

Skills Score:

Angular (Basic)	0/5
CSS	5/5
Git (Advanced)	2.5/5
Git (Basic)	5.83/15
JUnit	20/20
Java (Basic)	5/5
Java (Intermediate)	20/25
Microservices	0/5
Problem Solving (Basic)	50/50
Spring Boot (Intermediate)	7.5/15

Tags Score:

Angular	15/20
Application Development	5/5
Arrays	5/5
CSS	5/5
Collections	10/10
Concurrency	5/5
Core CS	5/5
Distributed Systems	0/5
Easy	67.5/75
Game Theory	50/50
Garbage Collection	0/5
Generics	5/5
Git	5.83/15
HTTP	5/5
Hard	5.83/20
JUnit	20/20
Java	25/30
Language Proficiency	5/10
Medium	45/60
Microservices	5/10
Mockito	15/15
OOPS	5/5
Problem Solving	5/10
Programming	5/5
REST API	7.5/10
Real-World	50/50
Spring	2.5/10
Spring Boot	5/10
Spring Data	5/5
Spring MVC	2.5/5

76.7%

153/200

scored in **Ford Full stack Sr Developer(Angular/Java/Microservices) (5-9 Yrs Exp)** in 59 min 57 sec on 19 Jan 2024 17:14:41 IST

Strings50/50

Vectors5/5

final0/5

inner class0/5

static0/5

Candidate Feedback: bad

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	Java : Collections > Multiple Choice	1 min 8 sec	5/ 5	✔
Q2	How can the priority of a thread be set? > Multiple Choice	2 min 33 sec	5/ 5	✔
Q3	Java : Garbage Collection > Multiple Choice	43 sec	0/ 5	✘
Q4	Inner Class, Static and Final > Multiple Choice	3 min 50 sec	0/ 5	✘
Q5	Java Generics > Multiple Choice	2 min 18 sec	5/ 5	✔
Q6	Which of the following are true about the Error and Exception classes? > Multiple Choice	3 min	5/ 5	✔
Q7	The Map Interface > Multiple Choice	49 sec	5/ 5	✔
Q8	HTTP status codes > Multiple Choice	1 min 31 sec	5/ 5	✔
Q9	Controller Correct Definition Problem > Multiple Choice	3 min 6 sec	2.5/ 5	⚠
Q10	Spring Transactional > Multiple Choice	1 min 18 sec	0/ 5	✘
Q11	Spring Data Repository > Multiple Choice	1 min 20 sec	5/ 5	✔
Q12	Understanding Microservice > Multiple Choice	1 min 5 sec	0/ 5	✘
Q13	MICROSERVICES > Multiple Choice	16 sec	5/ 5	✔
Q14	advantange of microservices > Multiple Choice	4 sec	0/ 5	✘
Q15	difference between svc nd microsvc > Multiple Choice	10 sec	5/ 5	✔
Q16	challenges of microservice > Multiple Choice	29 sec	0/ 5	✘
Q17	constraints > Multiple Choice	4 sec	5/ 5	✔
Q18	joins > Multiple Choice	2 min 29 sec	5/ 5	✔
Q19	Java Mockito Usage Annotation > Multiple Choice	39 sec	5/ 5	✔
Q20	Mockito Inject Mock > Multiple Choice	13 sec	5/ 5	✔
Q21	Mockito Mock-Spy > Multiple Choice	15 sec	5/ 5	✔
Q22	Mockito Solution > Multiple Choice	34 sec	5/ 5	✔
Q23	Layout > Multiple Choice	1 min 27 sec	5/ 5	✔
Q24	_____ provide a mechanism to modify outgoing requests or incoming responses ? > Multiple Choice	1 min 49 sec	5/ 5	✔
Q25	Choose the correct code block > Multiple Choice	2 min 1 sec	5/ 5	✔
Q26	How would you display a list of Employees on a webpage along with where they were in the list? > Multiple Choice	19 sec	5/ 5	✔
Q27	Unique Tokens > Multiple Choice	2 min 4 sec	0/ 5	✘

Q28	System and Strings > Coding	16 min 21 sec	50/ 50	✔
Q29	Branch Names > Multiple Choice	4 min 35 sec	2.5/ 5	✔
Q30	git squash > Multiple Choice	11 sec	3.33/ 5	✔
Q31	How Many Branches? > Multiple Choice	2 min 8 sec	0/ 5	✘

QUESTION 1

✔

Correct Answer

Score 5

Java : Collections > Multiple Choice

Medium

Java

Collections

Arrays

Vectors

Language Proficiency

Problem Solving

QUESTION DESCRIPTION

Which of the statements is true about ArrayList and Vector in Java?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

✔

☐

Vector can be resized while ArrayList cannot be

☒

Vector is synchronized while ArrayList is not☐☐

No Comments

QUESTION 2

✔

Correct Answer

Score 5

How can the priority of a thread be set? > Multiple Choice

Java

Medium

Concurrency

OOPS

Core CS

Programming

QUESTION DESCRIPTION

How can the priority of a thread be set?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

✔

☒

By using the setPriority() method in the Thread class

☐

By passing the priority as an argument to a constructor of the Thread class☐☐

No Comments

QUESTION 3

✘

Wrong Answer

Score 0

Java : Garbage Collection > Multiple Choice

Java

Garbage Collection

Language Proficiency

Hard

Problem Solving

QUESTION DESCRIPTION

```
class Test
{
    private Demo d;
    void start()
    {
        d = new Demo(); /* Line 6 */
        this.takeDemo(d); /* Line 7 */
    } /* Line 8 */
    void takeDemo(Demo demo)
    {
        demo = null;
        demo = new Demo();
    }
}
```

```
}  
}
```

When does the "Demo" object instantiated at line 6 become eligible for garbage collection?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ After line 7
- ☐ After line 8
- ☐ After the start() method completes
- ☒ When the instance running this code is made eligible for garbage collection.

No Comments

QUESTION 4



Wrong Answer

Score 0

Inner Class, Static and Final > Multiple Choice

Medium

inner class

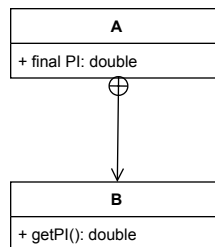
static

final

QUESTION DESCRIPTION

Consider the following UML class diagram

Note - Class B is *private*.



What is the correct way to access the value of PI through the *getPI()* method in the main?

INTERVIEWER GUIDELINES

Option A, and B are incorrect because the class B is private in class A. Hence its object cannot be created in main.

Option C is incorrect, because we still cannot access the value of PI through the *getPI()* method even by making the class B public. Because the *getPI()* method is static, so it can only access the static members of the class A.

Option D is correct, because we have to create the object of class B in main, therefore it should be made public. Secondly to access the static field of class A, the *getPI()* method of class B must also be made static.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐

```
A.B inner = new B();  
double piValue = inner.getPI();  
System.out.println("The value of PI is:  
"+piValue);
```

```
A.B inner = new B(); double piValue = inner.getPI();  
System.out.println("The value of PI is: "+piValue);
```

☐

```
B inner = new B();  
double piValue = B.getPI();  
System.out.println("The value of PI is:  
"+piValue);
```

☒ First, class B must be made public then we can use the following code.

```
A outerObj = new A();
A.B innerObj = outerObj.new B();
double piValue = A.B.getPI();
System.out.println("The value of PI is:
"+piValue);
```

- ☒ First, class B should be made public, and PI should also be declared as static then, we can use the following code.

```
A outerObj = new A();
A.B innerObj = outerObj.new B();
double piValue = A.B.getPI();
System.out.println("The value of PI is:
"+piValue);
```

```
A outerObj = new A();
A.B innerObj = outerObj.new B(); double piValue = A.B.getPI();
System.out.println("The value of PI is: "+piValue);
```

No Comments

QUESTION 5



Correct Answer

Score 5

Java Generics > Multiple Choice

Generics

Medium

QUESTION DESCRIPTION

What is the result of compiling and/or running this code?

```
public class Generic<T> {
    private T value;
    public Generic(T value) {
        this.value = value;
    }
    public T getValue() {
        return value;
    }
}
```

```
import java.util.ArrayList;
public class Main {
    public static void main(String args[]) {
        ArrayList<Generic> g = new ArrayList<>();
        Generic<?> g1=new Generic<>(10);
        Generic<?> g2=new Generic<>("Hello");
        g.add(g1);
        g.add(g2);
        int i=g.get(0).getValue();
        String s=g.get(1).getValue();
        System.out.println(s);
        System.out.println(i);
    }
}
```

INTERVIEWER GUIDELINES

In the program, we have created two generic objects with the wildcard ?, which means that the exact type is unknown/could be of any type. However, when retrieving a generic value with a wildcard in Java, we cannot directly assign it to a primitive data type, as primitive data types are not compatible with the Object type.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)



Compile-time error while retrieving the values from array list and assigning them to their respective datatypes.

- ☐ Compile-time error while creating the generic object with int value, because generics does not work with primitive data type int
- ☐ Hello 10
- ☐ Run-time error because an array list cannot contain generic objects of different types (string and int)

No Comments

QUESTION 6



Correct Answer

Which of the following are true about the Error and Exception classes? >

Multiple Choice

Application Development

Java

Medium

Score 5

QUESTION DESCRIPTION

Which of the following are true about the Error and Exception classes?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☒ ☒ Both classes extend Throwable.
- ☐ The Error class is final and the Exception class is not.
- ☐ The Exception class is final and the Error is not.
- ☐ Only the Exception class extends Throwable

No Comments

QUESTION 7



Correct Answer

The Map Interface > Multiple Choice

Easy

Java

Collections

Score 5

QUESTION DESCRIPTION

The map interface is implemented by which of the following classes:

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☒ ☒ HashMap
- ☐ DynamicList
- ☐ Stack
- ☒ ☒ TreeMap

No Comments

QUESTION 8



Correct Answer

HTTP status codes > Multiple Choice

Medium

REST API

HTTP

Score 5

QUESTION DESCRIPTION

HTTP uses status codes to indicate how a specific HTTP request was handled. Which of the following are true?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ HTTP status codes are divided into 4 main groups based on the kind of response they are related to.

- ☒ HTTP status codes are divided into 5 main groups based on the kind of response they are related to.
- ☒ In case of an unauthorized access attempt, the HTTP status code 401 should be returned. If access is authorized but the client is lacking required permissions, the HTTP status code 403 should be returned.
- ☐ In case of an unauthorized access attempt, HTTP status code 403 should be returned. If access is authorized but the client is lacking required permissions, the HTTP status code 401 should be returned.

No Comments

QUESTION 9



Correct Answer

Score 2.5

Controller Correct Definition Problem > Multiple Choice

- Multiple Choice

Spring

REST API

Easy

Spring MVC

QUESTION DESCRIPTION

Given the following controller code, which of the statements are true?

```
@RestController
public class ScoreController {
    @RequestMapping("/myScore/{id}")
    public void myScore(@PathVariable("id") int id, @RequestParam
Optional<String> name) {
    }
}
```

Note: Assume that application is running on `http://localhost:8080`

INTERVIEWER GUIDELINES

this method is identical to

```
public void myScore(@PathVariable("id") int id, @RequestParam
Optional<String> name) {
```

Starting from Java8 Optional can be used to substitute the "required" attribute in @RequestParam. Thus, the parameter is not required - B is correct, C is correct because the String argument name is marked as not required and the given URI will map to the method myScore but the value of the argument String name will be null.

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ The method is fine and `http://localhost:8080/myScore/id?name=Adam` maps to the method `myScore`.
- ☒ The method is fine, and `http://localhost:8080/myScore/1?name=Adam` maps to the method `myScore`.
- ☒ The method is fine, and `http://localhost:8080/myScore/23?surname=Adamson` maps to the method `myScore`.
- ☐ The mapping of the request param is invalid because `Optional` can't be used for mapping.
- ☐ The path param definition is invalid.

No Comments

QUESTION 10



Wrong Answer

Score 0

Spring Transactional > Multiple Choice

Spring

Spring Boot

Medium

QUESTION DESCRIPTION

```
@Transactional(propagation= Propagation.REQUIRED)
public void saveProduct(Product product) {
    productService.save(product);
    try{
```

```

        saveProductToLogService(product);
    }catch (Exception ex){
        log(ExceptionUtils.getStackTrace(ex));
    }
}
@Transactional(propagation=Propagation.REQUIRES_NEW)
public void saveProductToLogService(Product account) {
    productLogService.save(product);
}

```

Which of the following options describes the given code functionality with @Transactional annotation?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☒ saveProductToLogService will use the saveProduct's transaction to save the product.
- ☒ saveProductToLogService will use a new transaction for productLogService.save method.
- ☐ As soon as saveProduct method execution is done, saveProductToLogService.save method execution will be reflected to saveProductToLogService database.
- ☐ None of the above

No Comments

QUESTION 11



Correct Answer

Score 5

Spring Data Repository > Multiple Choice

Spring Boot

Medium

Spring Data

QUESTION DESCRIPTION

To use Spring data repositories within another jar module and to use them in a Spring Boot application, what annotation should be used in Spring Boot configuration/ SpringBootApplication classes?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☒ ☒ @EnableJpaRepositories(basePackages = {repositoryPackageOfJarModule})
- ☐ @EnableRepositories(basePackages = {repositoryPackageOfJarModule})
- ☐ @EnableEntities(basePackages = {repositoryPackageOfJarModule})
- ☐ @EnableHibernateRepositories(basePackages = {repositoryPackageOfJarModule})

No Comments

QUESTION 12



Wrong Answer

Score 0

Understanding Microservice > Multiple Choice

Medium

Distributed Systems

Microservices

QUESTION DESCRIPTION

Which of the following statements describe the properties of a microservice?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☒ ☒ Focuses on a single responsibility principle
- ☐ Too large and complex to fully understand and make changes fast and correctly.
- ☒ ☒ Responsible for its own task and communicates with other services through simple APIs to solve a larger complex business problem

☒ Should implement a fully testable end-to-end business use-case

No Comments

QUESTION 13



Correct Answer

Score 5

MICROSERVICES > Multiple Choice Microservices

QUESTION DESCRIPTION

Q. Which class needs to be extend in user defined class so that Spring Security can implement In A Spring Boot Application?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ WebSecurityAdapter
- ☐ WebSecurityConfigurer
- ☒ ☒ WebSecurityConfigurerAdapter
- ☐ All of the above

No Comments

QUESTION 14



Wrong Answer

Score 0

advantage of microservices > Multiple Choice

QUESTION DESCRIPTION

What is the primary advantage of using microservices architecture?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ Reduced complexity
- ☒ ☒ Easier maintenance
- ☒ ☐ Improved scalability
- ☐ Faster development time

No Comments

QUESTION 15



Correct Answer

Score 5

difference between svc nd microsvc > Multiple Choice

QUESTION DESCRIPTION

What is the difference between a service and a microservice?


CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☒ ☒ A service is a larger, monolithic component, while a microservice is a small, independent component.
- ☐ A service is a component that runs on a single machine, while a microservice is a component that runs on multiple machines.
- ☐ here is no difference between a service and a microservice.
- ☐ A service is a small, independent component, while a microservice is a larger, monolithic component.

No Comments

QUESTION 16



Wrong Answer

Score 0

challenges of microservice > Multiple Choice

QUESTION DESCRIPTION

Which of the following is a common challenge in implementing microservices architecture?

CANDIDATE ANSWER


Options: (Expected answer indicated with a tick)

☒

 Tight coupling between components

☐

 Slow development time




☐ Difficulty in debugging and testing

☐

 Centralized data storage

No Comments

QUESTION 17



Correct Answer

Score 5

constraints > Multiple Choice


QUESTION DESCRIPTION

Which of the following is a type of constraint in a relational database?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐ Primary key constraint




☒ All of the above

☐ Foreign key constraint

☐ nique constraint

No Comments

QUESTION 18



Correct Answer

Score 5


joins > Multiple Choice

QUESTION DESCRIPTION

What is a cross join in SQL?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)



☒ A join that retrieves all rows from both tables

☐


 A join that retrieves only matching rows from both tables

☐

 A join that uses the primary key of one table as the foreign key of another table☐

No Comments

QUESTION 19



Correct Answer

Score 5

Java Mockito Usage Annotation > Multiple Choice

QUESTION DESCRIPTION

PatientServiceImpl.java

```
@Service
public class PatientServiceImpl implements PatientService {

    private PatientRepository patientRepository;
    private PatientMapper patientMapper;
    private DoctorService doctorService;

    public PatientServiceImpl(PatientRepository patientRepository,
                             PatientMapper patientMapper,
                             DoctorService doctorService) {
        this.patientRepository = patientRepository;
        this.patientMapper = patientMapper;
        this.doctorService = doctorService;
    }

    @Override
    public PatientDto save(String name, boolean isPatientDoctor, Long
doctorId) throws DoctorNotFoundException {
        Patient patient = new Patient();
        patient.setName(name);

        if (isPatientDoctor) {
            Doctor doctor = doctorService.getEntityById(doctorId);
            patient.setDoctor(doctor);
            patient.setPatientType(PatientType.DOCTOR);
        } else {
            patient.setPatientType(PatientType.PATIENT);
        }

        patientRepository.save(patient);
        PatientDto dto = patientMapper.entityToDto(patient);
        return dto;
    }
}
```

PatientServiceTest.java

```
<X>
public class PatientServiceTest{

    <Y>
    private PatientServiceImpl patientService;
    <Z>
    private PatientRepository patientRepository;
    <T>
    private DoctorService doctorService;
    <S>
    private PatientMapper patientMapper;

    @Test
    void givenPatient_whenSave_thenCheckIfPatientSaved() throws
DoctorNotFoundException {
        //given
        String patientName = "doctor bambam";
        boolean isPatientIsDoctor = false;
        Long doctorId = Long.MIN_VALUE;
        //when
        patientService.save(patientName, true, doctorId);
        //then
        verify(patientRepository, times(1)).save(any(Patient.class));
    }
}
```

Which of the following X, Y, Z, and T values will result in the successful execution of the test?

INTERVIEWER GUIDELINES

To mock related tested objects class must be annotated with `@ExtendWith(MockitoExtension.class)`

And the patientService is the one used in test and all of it's related constructor parameters will be mocked. `@InjectMocks` annotations provide this ability to use other `@Mock` annotated objects into `@InjectMocks` annotated object. That means,

X must be `@ExtendWith(MockitoExtension.class)`

Y must be `@InjectMocks`

T, Z, X must be `@Mock` annotations

Answer C provides this

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ X= @ExtendWith
Y = @Mocked
Z = @Mock
T = @Mock
S = @Mock
- ☐ X= @ExtendWith
Y = @InjectMock
Z = @Mock
T = @Mock
S = @Mock
- ☒ X= @ExtendWith(MockitoExtension.class)
Y = @InjectMocks
Z = @Mock
T = @Mock
S = @Mock
- ☐ None of the above

No Comments

QUESTION 20



Correct Answer

Score 5

Mockito Inject Mock > Multiple Choice

JUnit

Mockito

Easy

QUESTION DESCRIPTION

Which of the following annotations can be used to inject mock attributes into the test object automatically?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ @Inject
- ☐ @MockInjects
- ☒ @InjectMocks
- ☐ @Mocks

No Comments

QUESTION 21



Correct Answer

Score 5

Mockito Mock-Spy > Multiple Choice

JUnit

Mockito

Medium

QUESTION DESCRIPTION

Which of the following statements is true about Mockito's mock and spy?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ While mock creates objects that simulate the behavior of real objects, spy creates a real instance of that class.
- ☐ With spy you can change stubbing specific methods of a given class.
- ☐ If you create a mock of an interface and try to configure a stub to call a real method, Mockito will throw an exception.
- ☒ All of the above

No Comments

QUESTION 22



Correct Answer

Score 5

Mockito Solution > Multiple Choice

JUnit

Mockito

Easy

QUESTION DESCRIPTION

DoctorServiceImpl.java

```
@Service
public class DoctorServiceImpl{

    private DoctorRepository doctorRepository;
    private DoctorMapper doctorMapper;

    public DoctorServiceImpl(DoctorRepository doctorRepository,
        DoctorMapper doctorMapper) {
        this.doctorRepository = doctorRepository;
        this.doctorMapper = doctorMapper;
    }

    public DoctorDto save(String name, String speciality, Double
hourlyRate) {
        Doctor doctor = new Doctor();
        doctor.setName(name);
        doctor.setSpeciality(speciality);
        doctor.setHourlyRate(hourlyRate);

        doctorRepository.save(doctor);
        DoctorDto dto = doctorMapper.entityToDto(doctor);
        return dto;
    }
}
```

DoctorServiceTest.java

```
//annotation here
public class DoctorServiceTest {

    @InjectMocks
    private DoctorServiceImpl doctorService;

    @Mock
    private DoctorRepository doctorRepository;

    @Mock
    private DoctorMapper doctorMapper;

    @Test
    void givenDoctor_whenSave_thenCheckIfDoctorSaved() {
        //given
        String name = "doctor bambam";
        String speciality = "bambam";
        Double hourlyRate = Double.MIN_VALUE;
        //when
        doctorService.save(name, speciality, hourlyRate);
        //
        verify(doctorRepository, times(1)).save(any(Doctor.class));
    }
}
```

To ensure DoctorServiceTest successfully runs and the test passes, what annotation should be used?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

- ☐ @Test
- ☒ @ExtendWith(MockitoExtension.class)
- ☐ @RunWith(JUnitPlatform.class)
- ☐ None of the above

No Comments

QUESTION 23

Correct Answer

Score 5

Layout > Multiple Choice

CSS

Medium

QUESTION DESCRIPTION

If you want to wrap a block of text around an image, which CSS property would you use?

INTERVIEWER GUIDELINES

Candidates's understanding on Layout and block level elements

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐ wrap

☐ align

☐ push

☒ float

No Comments

QUESTION 24

Correct Answer

Score 5

_____ provide a mechanism to modify outgoing requests or incoming responses ? > Multiple Choice

Angular

QUESTION DESCRIPTION

Choose the right answer

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐ Pipe

☐ Emitter

☒ Http interceptor

☐ Authguard

No Comments

QUESTION 25

Correct Answer

Score 5

Choose the correct code block > Multiple Choice

Angular

QUESTION DESCRIPTION

Choose the correct code block

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☒ this.router.navigate(["content-management"]);

☐ this.router.navigate("content-management");

☐ this.router.navigate(content-management);

☒ this.router.navigateByUrl("content-management");

No Comments

QUESTION 26

Angular

Correct Answer

Score 5

How would you display a list of Employees on a webpage along with where they were in the list? > Multiple Choice

QUESTION DESCRIPTION

How would you display a list of Employees on a webpage along with where they were in the list?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐ Loop through and print the index

☐ Loop through and print the employees

☒ Loop through and print the index and the employee

☐ Pass both the index and the employee to a web service

No Comments

QUESTION 27

Wrong Answer

Score 0

Unique Tokens > Multiple Choice

Easy

Angular

QUESTION DESCRIPTION

You have a requirement to define a token such that it is the same as a string token but generates a unique value every time, so there are no same token conflicts. Here is the sample code snippet:

```
import { Injector } from '@angular/core;
class DirectMessageService {};
class ErrorMessageService {};

let MessageToken = "DMServiceToken1";
let ErrorToken = "EMServiceToken1";

let injector = _____([
  { provide: MessageToken, useClass: DirectMessageService },
  { provide: ErrorToken, useClass: ErrorMessageService },
]);
```

Which option should fill in the blank to define the required token.

INTERVIEWER GUIDELINES

At the core of the DI framework is an injector.
An injector is passed a token and returns a dependency which means an injector resolves a token into a dependency.
The dependencies returned from injectors are cached. So multiple calls to the same injector for the same token will return the same instance

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☒ ReflectiveInjector.resolveAndCreate

☒ Injector.create

☐ Injector.get

☐ ReflectiveInjector.Create

No Comments

QUESTION 28

Correct Answer

Score 50

System and Strings > Coding

Strings

Easy

Game Theory

Real-World

QUESTION DESCRIPTION

15/19

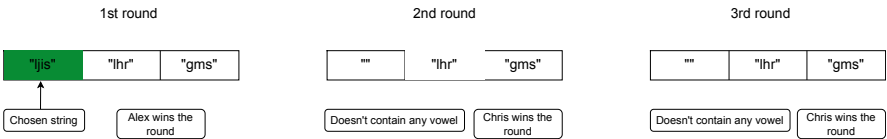
Alex and Chris are learning to infiltrate a secure system. Starting with a string of code, Alex will remove any substring with an odd number of vowels. Chris then removes any substring from the remaining code with an even number of vowels. This learning continues until one of them is unable to make a move. Given an array of n strings of code, determine the winner of each round and report the results as either "Alex" or "Chris" accordingly. Assume both act optimally.

Note: The vowels considered are 'a', 'e', 'i', 'o', and 'u'.

Example

Given $n = 3$ and $s = ["ljis", "lhr", "gms"]$.

- In the 1st round, the whole string "ljis" contains 1 vowel (odd), so Alex chooses the whole string. Now the string is "" (empty string), and Chris cannot make a move, hence Alex wins the round.
- In the 2nd round, the string "lhr" does not contain any vowel hence Alex cannot make a move. Therefore Chris wins the round.
- In 3rd round, the string "gms" does not contain any vowel, so again Chris wins the round.



Hence the answer is ["Alex", "Chris", "Chris"].

Function Description

Complete the function *getWho* in the editor below. *getWho* takes the following arguments:

str s[n]: the starting strings

Returns

str[n]: the name of the hackers

Constraints

- $1 \leq n \leq 100$
- $1 \leq |s[i]| \leq 10^5$
- All strings consist of lowercase English letters only.

▼ Input Format For Custom Testing

The first line contains an integer, n , the number of elements in s .
Each of the next n lines contains a string, $s[i]$.

▼ Sample Case 0

Sample Input For Custom Testing

STDIN		FUNCTION
-----		-----
3	→	n = 3
lgzpc	→	s = ["lgzpc", "lchxlo", "xrwzg"]
lchxlo		
xrwzg		

Sample Output

Chris
Alex
Chris

Explanation

Since in the first and the third string, the number of vowels is 0, Alex cannot make a move and Chris wins. In the second string, only a single vowel is present in the string and Alex removes the entire string to win the game.

▼ Sample Case 1

Sample Input For Custom Testing

STDIN		FUNCTION
-----		-----
1	→	n = 1
cim	→	s = ["cim"]

Sample Output

Alex

Explanation

Alex wins the game by removing the entire string as there is only a single vowel in it.

▼ Solution

Skills: Strings**Optimal Solution:**

If there is an odd number of vowels initially, the first hacker takes the whole string and wins in the first turn.

When there is an even number of vowels initially, a number greater than 0, the first hacker chooses a substring with an odd number of vowels and leaves an odd number of vowels in the remainder. Then the first player takes the remaining string and wins. The second hacker can only be in the situation when there are no vowels in the string.

```
def getWho(s):
    n = len(s)
    vowels = ['a', 'e', 'i', 'o', 'u']
    ans = []
    for i in range(n):
        cnt = 0
        for ch in s[i]:
            if ch in vowels:
                cnt += 1
        if cnt == 0:
            ans.append("Chris")
        else:
            ans.append("Alex")
    return ans
```

▼ Complexity Analysis

Time Complexity - $O(n)$

The only iteration over the string takes $O(n)$ time.

Space Complexity - $O(1)$

A constant amount of extra space is used by the solution.

CANDIDATE ANSWER

The candidate did not manually submit any code. The last compiled version has been auto-submitted and the score you see below is for the auto-submitted version.

Language used: **Java 8**

```
1
2 class Result {
3
4     /*
5      * Complete the 'getWho' function below.
6      *
7      * The function is expected to return a STRING_ARRAY.
8      * The function accepts STRING_ARRAY s as parameter.
9      */
10
11     public static List<String> getWho(List<String> s) {
12         // Write your code here
13
14         int l = s.size();
15
16         List<String> ans = new ArrayList<>();
17
18         for(int i = 0 ; i < l ; i++){
19             String str = s.get(i).toLowerCase();
20             int vow = findV(str);
21             if(vow%2 == 1){
22                 ans.add("Alex");
23             }else{
24                 if(vow != 0){
25
```

```

26         ans.add("Alex");
27     }else{
28
29         ans.add("Chris");
30     }
31 }
32 }
33
34 return ans;
35
36 }
37
38 public static int findV(String str) {
39     int start = 0;
40     int len = str.length();
41     int cnt = 0;
42
43     while(start < len){
44         char ch = str.charAt(start);
45         if(ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u')
46 {
47             cnt++;
48         }
49
50         start++;
51     }
52
53     return cnt;
54 }
55
56 }

```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
TestCase 0	Easy	Sample case	✔ Success	1	0.1033 sec	29.8 KB
TestCase 1	Easy	Sample case	✔ Success	1	0.0941 sec	29.8 KB
TestCase 2	Easy	Sample case	✔ Success	1	0.0941 sec	29.6 KB
TestCase 3	Easy	Hidden case	✔ Success	1	0.0888 sec	29.6 KB
TestCase 4	Easy	Hidden case	✔ Success	1	0.1435 sec	36.3 KB
TestCase 5	Easy	Hidden case	✔ Success	3	0.096 sec	30 KB
TestCase 6	Easy	Hidden case	✔ Success	3	0.1009 sec	30.4 KB
TestCase 7	Easy	Hidden case	✔ Success	3	0.1037 sec	30.4 KB
TestCase 8	Easy	Hidden case	✔ Success	3	0.103 sec	30.5 KB
TestCase 9	Easy	Hidden case	✔ Success	3	0.0969 sec	30.5 KB
TestCase 10	Easy	Hidden case	✔ Success	6	0.1251 sec	30.9 KB
TestCase 11	Easy	Hidden case	✔ Success	6	0.1388 sec	36.2 KB
TestCase 12	Easy	Hidden case	✔ Success	6	0.1293 sec	35.9 KB
TestCase 13	Easy	Hidden case	✔ Success	6	0.1264 sec	36.3 KB
TestCase 14	Easy	Hidden case	✔ Success	6	0.1358 sec	35.7 KB

No Comments

QUESTION 29



Correct Answer

Score 2.5

Branch Names > Multiple Choice

Git

Hard

QUESTION DESCRIPTION

Which of the following are valid branch names?

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐ new..branch

new branch

✓

☒

new_branch

✓

☐

new/branch

☐

.newbranch

☐

/new_branch

No Comments

QUESTION 30

✓

Correct Answer

Score 3.33

git squash > Multiple Choice

GitHard

QUESTION DESCRIPTION

Which command(s) will squash the last 3 commits into one commit? Pick all that apply.

INTERVIEWER GUIDELINES

git rebase interactive is one of the ways you can squash commits, “squash” & “fixup” are essentially the same command to squash commits inside the git rebase interactive window.
The other command to squash commits is `git reset --soft HEAD~3 && git commit`

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

✓

☒

git rebase -i HEAD~3 ; In the screen that opens up, change “pick” to “squash” for the 2 commits before the latest commit.

✓

☐

git rebase -i HEAD~3 ; In the screen that opens up, change “pick” to “fixup” for the 2 commits before the latest commit.

✓

☒

git reset --soft HEAD~3 && git commit

☐

git squash 3

No Comments

QUESTION 31

✗

Wrong Answer

Score 0

How Many Branches? > Multiple Choice

HardGit

QUESTION DESCRIPTION

You have just cloned a remote repository to your local disk. The remote repository has 5 branches. How many branches does your local repository have?

INTERVIEWER GUIDELINES

5 remote (or remote tracking) branches and 1 local branch for default branch master or main.

For a good explanation of local branches and remote-tracking branches please see here
- <https://stackoverflow.com/questions/16408300/what-are-the-differences-between-local-branch-local-tracking-branch-remote-branch/16408515#:~:text=A%20local%20branch%20is%20a,only%20on%20your%20local%20machine.&text=A%20remote%20branch%20is%20a,local%20branch%20is%20a>

CANDIDATE ANSWER

Options: (Expected answer indicated with a tick)

☐

5

✓

☐

6

☐

10

☐

15

No Comments