Do you consider writing unit tests as equally important as writing production code?

Select one:

- No, production code is more important. Unit tests are only needed if the production code if of poor quality
- No, production code is more important. Unit tests should only be created if time allows for that.
- Yes because the only way to easily maintain correctly working production code is by having a lot of unit tests for it.
- Yes and production code must be 100% covered with unit tests.

We've decided to override equals() method. And hashCode() made a constant value e.g. (return 1;) What will be in this case?

Select one:

- Compilation error
- Run-time exception
- No impact
- HashMap with such keys will handle only one element
- Time to get element from HashMap will be longer

Question 3

Not yet answered

Marked out of 1.00

Flag question

Which are legal Java statements from the following?

1. int num = (int)50.05L;
2. byte x = (byte)50L;
3. long y = (byte)50;
4. byte z = (byte)50L;

Select one:

- 1 and 2
- 2 and 3
- 2, 3 and 4 ✓
- All statements are correct.

Question 4

Not yet answered

Marked out of 1.00

Flag question

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

Select one:

- Vector can be resized while ArrayList cannot be
- Vector is synchronized while ArrayList is not ✓
- ArrayLists can grow but cannot shrink in size, while Vector can both grow and shrink
- Vectors allow duplicate values while ArrayList doesnot

Question 5

Not yet answered

Marked out of 1.00

Flag question

You have the following code in a file called Test.java

```
class Base {
   public static void main(String[] args){
   System.out.println("Hello");
   }
}
public class Test extends Base{}
```

What will happen if you try to compile and run this?

Select one:

- Fails to compile
- Runtime error
- Compiles and runs with no output ✓
- Prints "Hello"

Question 6

Not yet answered

Marked out of 1.00

Flag question

Which of the following is an example of an inline Javadoc tag?

Select one:

- <@code>
- /*@code*/
- {@code}
- @code
- /@code/

Question 7

Not yet answered

Marked out of 1.00

Flag question

Which of the following options best describes the output of the code shown below?

```
Object obj1 = new Object();
Object obj2 = new Object();
System.out.print("result: ");
System.out.print((obj1 == obj2) + " ");
System.out.print(obj1.equals(obj2) + " ");
obj1 = obj2;
System.out.print(obj1.equals(obj2) + "");
```

Select one:

- result: false false true
- result: true false true
- result: true false false
- result: false false false
- None of the above; an error occurs.

Question 8

Not yet answered

Marked out of 1.00

Flag question

Which of the following interfaces is helpful in message-passing applications, in which producers sometimes use the `transfer(E)` method and wait to receive elements by users who invoke the `take` or the `poll` command?

Select one:

- Collection
- BlockingQueue
- TransferQueue ✓
- Queue
- Iterable

Question 9

Not yet answered

Marked out of 1.00

Flag question

```
public class Test {
public synchronized void methodA(int i, String msg){
       log.writeln(Integer.toString(i));
       log.writeln(msg);
    }


    public void methodB(int i, String msg){
       synchronized(this){
          log.writeln(Integer.toString(i));
          log.writeln(msg);
       }
    }

}
```

Consider the above code snippet, what of the following statements is true?

Select one:

- synchronized keyword is applicable only to blocks and hence cannot be used for methodA.
- methodB is more efficient than methodA.
- Both the methods are equivalent.
- methodA is more efficient than methodB ✓

Question 10

Not yet answered

Marked out of 1.00

Flag question

Which of the following are legal with respect to:

```
final Collection<? extends Number> foo = new ArrayList<Number>()
```

Select one or more:

- foo.add(new Integer(4));
- foo.add(new Object());
- foo.add(null); ✓
- foo = null; ✓
- the code will not compile
- none of these are illegal

Question 11

Not yet answered

Marked out of 1.00

Flag question

Which data structure can be used for storing a set of integers such that each of the following operations can be done in O(log N) time, where N is the number of elements?

- deletion of the smallest element

- insertion of an element if it is not already present in the set

Select one:

- A heap can be used, but not a balanced binary search tree
- A balanced binary search tree can be used, but not a heap
- Both balanced binary search tree and heap can be used
- Neither balanced binary search tree nor heap can be used

Question 12

Not yet answered

Marked out of 1.00

Flag question

Which of the following prefixes can be added to a number in order to indicate a binary literal?

Select one or more:

- 0b
- 0B
- oA
- 0S
- 0s

Question 13

Not yet answered

Marked out of 1.00

Flag question

Five threads are accessing a shared resource.

The common variable being accessed by all Threads is 'x' and the common code being executed by them is:

```
for ( int i = 0; i < 10000000; i++ )
{
   x = x + 1;
}
```

Assuming that the original (initial) value of 'x' was zero, after each of the threads have finished running this loop, the value of 'x' is:

Select one:

- 50000000
- 10000000
- A specific value F, less than 50000000; which remains fixed across multiple runs.
- A specific value F, greater than 50000000; which remains fixed across multiple runs.
- The value may differ/vary each time, across runs.

Question 14

Not yet answered

Marked out of 1.00

Flag question

You have the following code in a file called "Gcd.java":

```
public class Gcd {
    private static int first(int a, int b) {
        if (b == 0) {
            return a;
        } else {
            return second(b, a - b);
        }
    }

    private static int second(int a, int b) {
        if (a == 0) {
            return b;
        } else {
            return first(b, a);
        }
    }

    public static void main(String[] args) {
        System.out.println(first(5, 3));
    }
}
```

What will happen if you try to compile and run this?

Select one:

- The code fails to compile.
- "1" will be printed to standard output.
- "-1" will be printed to standard output.
- A StackOverflowError will be thrown.

Question 15

Not yet answered

Marked out of 1.00

Flag question

Given the following class which updates a map, what risks exist when multiple threads instantiate and call the methods on the instance?

```
class Updater {
    static volatile Map<String, String> m;

    public synchronized void update(String k, Integer v) {
        if (m == null) {
            m = new HashMap<>();
        }
        Integer pv = m.getOrDefault(k, 0);
        m.put(k, pv + v);
    }

    public synchronized int calculateSum() {
        int sum = 0;
        for (Integer v : m.entries()) {
            sum += v;
        }
        return sum;
    }
}
```

Select one or more:

- The field **m** might be initialized more than once
- A call to **calculateSum** could enter an infinite loop
- A call to **update** may throw a runtime exception
- A call to **calculateSum** may throw a runtime exception
- The use of **synchronized** protects against threading issues.

Question 16

Not yet answered

Marked out of 1.00

Flag question

A situation where a bunch of threads cannot gain regular access to shared resources is described as:

Select one:

- Race conditions
- Livelock
- Deadlock
- Starvation

Question 17

Not yet answered

Marked out of 1.00

Flag question

You see a colleague write the following code, stating that since JDK1.6+ replaces string concatenation with StringBuilder, he does not need to use the append method. What are your thoughts?

```
String s = "";
for (int i = 0; i < 100; i++) {
        s += String.valueOf(i);
}
```

Select one:

- He is correct, append should be reserved for situations where the builder object is long lived.
- He is forgetting that the java compiler can only replace + with append for string literals
- He is forgetting that the java compiler will not optimize the use of + across loop iterations.
- He is correct, the JIT compiler will optimze this code to be identica to StringBuilder and his code is more readable

Question 18

Not yet answered

Marked out of 1.00

Flag question

How to make a custom type support for "foreach" syntax?

Select one:

- It is not possible using foreach within custom classes
- Extending from an existing java container type, e.g java.util.Map
- Implementing from java.lang.Iterable
- Implementing from java.util.Iterator

Question 19

Not yet answered

Marked out of 1.00

Flag question

Suppose there is a class named MyUser.@PersistenceUnit is already injected, which produces an EntityManagerFactory emf. Which of the following statements, when inserted into the method body, will retrieve the values from the database using Java Persistence API 2, and retrieve the 0th element from the list?

Select one:

- MyUser user = (MyUser)emf.createEntityManager().createQuery("SELECT u FROM MyUser u").getResultList();
- MyUser user = (MyUser)emf.createEntityManager().createQuery("SELECT u FROM MyUser u").setResultList(0);
- MyUser user = (MyUser)emf.EntityManagerFactory().createQuery("SELECT u FROM MyUser u").get(0).getResultList();
- MyUser user = (MyUser)emf.createEntityManager().createQuery("SELECT u FROM MyUser user").getResultList().get();
- MyUser user = (MyUser)emf.createEntityManager().createQuery("SELECT u FROM MyUser u").getResultList().get(0);

Question 20

Not yet answered

Marked out of 1.00

Flag question

Which of the following items is true for functional interfaces:

Select one:

- Must have exactly one abstract method
- Can have multiple abstract methods
- Must provide a default method
- Must have exactly one concrete method

Question 21

Not yet answered

Marked out of 1.00

Flag question

Which of the following allows you to mock private methods ?

Select one:

- Mocking of private methods is not allowed as only public methods should be tested.
- Mockito
- PowerMock
- Mockito.spy

Question 22

Not yet answered

Marked out of 1.00

Flag question

Which of the following libraries allow you to mock the private methods ?

Select one:

- mockito
- powermock
- Mocking private methods is not allowed.

Question 23

Not yet answered

Marked out of 1.00

Flag question

Which of the following is/are true about REST? (Select all that apply)

Select one or more:

- a. REST is a protocol
- b. REST allows the use of different data formats (e.g. JSON, XML)
- c. REST supports WS-Security
- d. REST has better performance and scalability over SOAP

Question 24

Not yet answered

Marked out of 1.00

Flag question

Which of the following HTTP methods are considered 'safe' AND 'idempotent'?

Select one or more:

- a. GET
- b. HEAD
- c. POST
- d. PUT

Question 25

Not yet answered

Marked out of 1.00

Flag question

Let's consider that we have a REST web service for handling interview questions deployed at *http://interview-questions.com*. What HTTP method should this web service support in order to allow clients to create new questions at a particular location (e.g. at *http://interview-questions.com/question/1*)?

Select one:

- a. PUT
- b. POST
- c. GET
- d. PATCH

Question 26

Not yet answered

Marked out of 1.00

Flag question

**Which of the following is/are true about client-side caching in regards to RESTful web services?**

Select one or more:

- a. Client-side caching refers to storing responses from a server in the client itself so that a client does not need to make a server request for the same resource(s) repeatedly.
- b. The server response should include information about whether caching should be performed.
- c. Only the client should determine if a specific resource should be cacheable or not (Most commonly done by HTTP method).
- d. The server response should include data on how long the client should cache each resource.
- e. Only clients should determine how long of a cache is appropriate for a given resource based on client needs.

Question 27

Not yet answered

Marked out of 1.00

Flag question

Characteristics of a Clustered Index?

Select one:

- a. The leaf pages do not contain data instead contain pointers to the data
- b. There can be multiple such indexes on a single table
- c. The data is arranged according to the index key
- d. None of the above

Question 28

Not yet answered

Marked out of 1.00

Flag question

Consider the this materialized view using DBMS_MVIEW.PMARKER function

```
CREATE MATERIALIZED VIEW sales_Product_mv
BUILD DEFERRED
REFRESH FAST ON DEMAND
ENABLE QUERY REWRITE AS
SELECT DBMS_MVIEW.PMARKER(p.rowid),t.calendar_yr,p.product_cat,COUNT(*),
      SUM(s.unit_price), SUM(s.units_sold),
      COUNT(s.unit_price), COUNT(s.units_sold)
FROM   FCTsales s, Dimtime t, Dimproduct p
WHERE  s.product_id = p.product_id AND s.time_id = t.time_id
GROUP BY  DBMS_MVIEW.PMARKER (p.rowid), p.product_cat, t.calendar_yr;
```

Which statement below is not correct?

Select one:

- a. This materialized view contains DBMS_MVIEW.PMARKER function on Dimproduct in Select statement.
- b. Partition Change Tracking is enabled on DimProduct table only.
- c. Use of DBMS_MVIEW.PMARKER function allows the cardinality of this materialized view to be increased only by number of partitions in DimProduct table.
- d. As presence of Calender_Yr join dependant expression in Select, PCT is enabled on FCTSales table.

Question 29

Not yet answered

Marked out of 1.00

Flag question

We can say from the 2 queries below that:

```
/* SQL Query */
SELECT Customer.CustNum, Customer.Name, Customer.ZipCode, Order.OrderNum, Order.OrderDate
FROM Customer, Order
WHERE Customer.CustNum = Order.CustNum
ORDER BY Customer.ZipCode ;

/* ABL Query */
FOR EACH customer
, FIRST Order WHERE Order.CustNum = Customer.CustNum
BY Customer.ZipCode :
  DISPLAY Customer.CustNum Customer.Name Customer.zipCode Order.OrderNum Order.OrderDate.
END.
```

Select one or more:

- [x] a. They produce the same result
- [ ] b. ABL result is slightly different - customers that don't have any orders are not displayed
- [x] c. ABL is record oriented while SQL is set oriented
- [x] d. SQL is faster than ABL

Question 30

Not yet answered

Marked out of 1.00

Flag question

What is wrong with the below query. Choose the correct options.

```
SELECT manager_name, mgr_last_name
FROM managers
WHERE comm_percent  = (SELECT min(comm_percent)
      FROM managers
      GROUP BY department_id);
```

Select one or more:

- [x] a. GROUP BY clause is not required in the sub-query
- [ ] b. A function cannot be used in a subquery SELECT statement
- [x] c. The single row subquery gives multiple records
- [ ] d. Use of "=" operator is invalid; an IN operator will work correctly

Question 31

Not yet answered

Marked out of 1.00

Flag question

When does NoSQL make sense?

Select one or more:

- [x] a. Unstructured data, flexible schema and flexible datatypes
- [ ] b. High transactional based systems
- [x] c. Streaming/big binary systems
- [ ] d. Complex query intensive environment
- [x] e. Big data analytics systems

Question 32

Not yet answered

Marked out of 1.00

Flag question

Which of the following are use cases where a NOSQL database should be avoided.

Select one or more:

- [ ] a. Your data is supplied in small updates spread over time due to which the number of tables required has grown disproportionally to the data being held.
- [ ] b. You have financial transactions requiring ACID properties.
- [ ] c. You are creating prototypes or fast applications.
- [ ] d. If consistency is mandatory and there will be no drastic changes in terms of the data volume.
- [ ] e. You have local data transactions which do not have to be very durable.

Question 33

Not yet answered

Marked out of 1.00

Flag question

What compaction strategy should a Cassandra instance deployed in a write-intensive environment use?

Select one:

- a. size tiered compaction
- b. data tiered compaction
- c. All the compaction strategies provide the same performance.
- d. leveled compaction

Question 34

Not yet answered

Marked out of 1.00

Flag question

Data replication in cassandra is done using which of the following techniques?

Select one:

- a. Cluster of replica sets with one master node.
- b. Cluster of Multi-master nodes.
- c. Cluster arranged as a ring of nodes.

Question 35

Not yet answered

Marked out of 1.00

Flag question

You are the architect for a social networking application that allows users to leave comments for other users. Recently, a spate of hacker attacks have disrupted the site, reducing revenue from site partners and advertising. Of the attack types listed next, which two can be addressed by ensuring that all special characters/word sequences are removed from all free text inputs on the web site?

Select one or more:

- Buffer overflow
- Cross-site scripting
- SQL injection
- Permission errors

Question 36

Not yet answered

Marked out of 1.00

Flag question

You have a new product that you're working on for a banking institution. As this service works intimately with the account interest processing components, it will be deployed in an isolated VPC as part of the customer's on-premise private cloud. Knowing only this, you indicate that the product will be packed in the following way: (Select the BEST option):

Select one:

- A docker container with the Java application and an init script that downloads dependencies from S3 and runs the service
- A set of VMWare templates for vSphere, along with deployment instructions
- A tarball/zip with a docker container, init script and a readme that includes a list of required pre-reqs
- An AWS CloudFormation script that orchestrates the entire deployment
- A Hyper-V VM image, readme, and list of required pre-reqs

Question 37

Not yet answered

Marked out of 1.00

Flag question

A microservice architecture is good for:

Select one or more:

- [ ] Unified releases - Easy to ship multiple components with shared dependencies
- [x] Technology diversity - using the right tools for the right job/service
- [x] Agility - Faster time from code change to release
- [x] Strong componentization - Well defined boundaries between teams
- [ ] Latency Performance - Calls to other components are as fast as possible

Question 38

Not yet answered

Marked out of 1.00

Flag question

Difference between cluster computing and cloud computing?

Select one:

- In cloud, computers work together but in cluster, computers work independently.
- In cloud, resources are treated independently but in cluster, the resources are treated as one system.
- In cloud, resources are virtualized but in cluster, resources are running physically on a computer system.
- In cloud, resources are not as reliable as in cluster because cluster has redundant nodes for high availability.

Question 39

Not yet answered

Marked out of 1.00

Flag question

Which of the following is true for MVC architecture?

Select one:

- View should contain the logic related to user Interface and client side validations, controller should contain the logic required to return right view and all the business logic should be contained in the Model
- View should contain the logic related to user Interface, controller should contain the flow control and business logic of the application while model should contain database access logic
- View should contain the logic related to user Interface, controller should contain the logic required to return right view and all the application business logic, validation logic, and database access logic should be contained in the Model
- View should contain the logic related to user Interface and client side validations, controller should contain the logic required to return right view and all the application business logic, validation logic, and database access logic should be contained in the Model

Question 40

Not yet answered

Marked out of 1.00

Flag question

You recently defined a new data system that stores a small computation done for every file in a repository. The actual computation is miniscule, with a complexity O(log(n)) where n is the size of the file in lines of code. One of the requirements you listed in your specification was for the computation for an entire repository of 10,000 files, each file being less than 5,000 lines should be computed and saved in your database in less than 5 minutes. The dev team has come back saying that these performance requirements are unrealistic and that even the database insertions into the relational database is taking longer than the 5 minutes specified. Knowing that 10,000 inserts into a properly scaled RDS (Ex: AWS Aurora on an 8XL machine) should take nowhere near 5minutes, you start to question the developer's implementation.
What would be your first question/concern that you would want details on from your developer?

Select one:

- How is traffic routed from the application to the RDS?
- What is the DB schema you are using for this data type you're inserting?
- Are you inserting each item individually, or batching the insert request?
- What ORM are you using in your java implementation?
- Are you using a UTF8 encoding, or a UTF16 encoding for strings?

Question 41

Not yet answered

Marked out of 1.00

Flag question

What of the following considered characteristics of a truly scalable application?

Select one or more:

- [x] A scalable service is capable of handling heterogeneity
- [x] Increasing resources results in a proportional increase in performance
- [ ] Can be used by several users
- [x] A scalable service should become more cost effective when it grows
- [ ] A scalable service can be consumed by several clients.

Question 42

Not yet answered

Marked out of 1.00

Flag question

You're working on a new business critical service that for a set of customer repositories, as part of a CI/CD process, evaluates every check-in against 3 quality checks before ultimately deciding if the check-in is GOOD or BAD. Each of these quality checks have already been implemented as a webapp/service. Each time a new check-in is built by the CI/CD system, your component orchestrates the quality analysis; this is done by notifying the analysis sub-systems of any new check-in, and waits for them to respond with their individual evaluation. As this is a business critical app, you want to add some monitoring to the production deployment, along with alarms when certain thresholds are met. You have come up with several indicators you can monitor and have had your dev team put estimates for each one. Considering in this release you have one week (5 days) of dev-time allocated for monitoring, which monitoring indicators do you select to implement?

Select one or more:

- [ ] (.5d) Infrastructure indicators: CPU/Memory/Disk space
- [ ] (1d) Time from when your service is notified of a new check-in and each sub-service is notified
- [ ] (1d) Time from when a sub-service replies with its evaluation and the local service's DB/Data structure is updated
- [ ] (1d) Check-in evaluations requested per hour
- [ ] (1d) Indicators for each subservice: Time to evaluate, time out occurrences, pass/fail rates
- [ ] (1d) Total evaluation time from check-in notification through final recommendation
- [ ] (1d) The % of new metric: "Complete/Incomplete evaluations", which is the number of evaluations that successfully completed vs evaluations that had one or more sub-service evaluations fail
- [ ] (1d) The pass/fail/error evaluation fail rate for each individual repository, to determine if any individual repo is having systemic issues
- [ ] (.5d) The Queries Per Second (QPS) rate for the overall service

Question 43

Not yet answered

Marked out of 1.00

Flag question

For which of the following situations would a stack be recommended?

Select one:

- Handling requests from multiple clients
- Keeping a collection sorted after insertions/deletions
- Handling multiple undo operations ✓
- Efficiently computing the sum of all the elements from a collection

Question 44

Not yet answered

Marked out of 1.00

Flag question

What of the following is an example of a hash collision?

Select one:

- a. Two different hash functions produce the same address for a given key: h1( key ) = h2( key )
- b. A hash function produces the same address for two different keys: h( key1 ) = h( key2 ) where key1 =\= key2 ✓
- c. Two different hash functions produce the same address for two different keys: h1( key1 ) = h2( key2 ) where key1 =\= key2
- d. A hash function produces the same address for two different keys with different lengths: h( key1 ) = h( key2 ) where length(key1) =\= length (key2)
- e. A hash function produces the same address for two keys of the same length: h( key1 ) = h( key2 ) where length(key1) = length(key2).

Question 45

Not yet answered

Marked out of 1.00

Flag question

Continuous Integration is a process, not a set of tools, that requires great amount of discipline from software development team members. The goal of Continuous Integration (CI) is to make sure that software is operational and working all the time.

Select one:

- True ✓
- False

**Question 46**

Not yet answered

Marked out of 1.00

Flag question

Some reasons to apply Continuous Integration:

Select one or more:

- a. Allow defects to be found early
- b. Allow time to market to be reduce, because the software is tested all the time
- c. Software performance and security are improved, because can be checked very often using special CI environments
- d. To notify developers, stakeholders and end-users about build success or failure

**Question 47**

Not yet answered

Marked out of 1.00

Flag question

In IAM, to which of the following can you assign a security policy?

Select one or more:

- a. User
- b. Group
- c. Role
- d. None of the above

**Question 48**

Not yet answered

Marked out of 1.00

Flag question

A new employee has just started working at your company. It is your job to give them administrator access to your AWS console. You have given them a user name, access key ID, secret access key, and you have generated their password. They are now able to log in to your AWS console, but they are not able to interact with any AWS services. What should you do next?

Select one:

- a. Require multi-factor authentication for their user account.
- b. Ensure that they are logging in to your AWS console from your corporate network and not the normal internet.
- c. Tell them to log out and log back in again.
- d. Grant them administrator access by adding them to the administrator group

**Question 49**

Not yet answered

Marked out of 1.00

Flag question

What is the maximum size of an S3 object?

Select one:

- a. 5GB
- b. 50GB
- c. 500GB
- d. 5TB
- e. There is no limit

Question 50

Not yet answered

Marked out of 1.00

Flag question

About Docker container execution model:

a) Is multitask model, but you cannot run multiple threads in a single container

b) The "docker run" command is designed to run a single container

c) You can use a bash-script to start many processes

d) To execute many processes in a container, you can use a process supervision tools like "supervisor"

Select one or more:

- [ ] a, b, c & d are true
- [ ] b, c & d are true
- [ ] a & b are false
- [ ] a & c are false, b & d are true
- [ ] b, c & d are true, but c and d are not a good usually idea and you should run multiple containers

Question 51

Not yet answered

Marked out of 1.00

Flag question

It's possible to execute commands inside a running docker container without access the container's console?

Select one:

- a. No, there's no way to do that
- b. Yes, using the command: "docker run -it <command>"
- c. Yes, using the command: "docker exec <container_name> <command>"
- d. Yes, using the command: "docker attach <container_name> <command>"

Question 52

Not yet answered

Marked out of 1.00

Flag question

How to create a new local branch in git?

Select one:

- a. git new branchName
- b. git branch -local branchName
- c. git branch -n branchName
- d. git checkout -b branchName

Question 53

Not yet answered

Marked out of 1.00

Flag question

You have changes in your working directory that you are not ready to commit, and you need to temporarily switch to another branch. Which Git command could you use to store you changes (without committing them) and come back to them later.

Select one:

- a. git stash / git stash apply
- b. git cherry-pick
- c. git reset HEAD --hard
- d. There is no such command. You must manually save your changes somewhere on the filesystem.

Question 54

Not yet answered

Marked out of 1.00

Flag question

Which of the following are part of a commit in Git?

Select one or more:

- Reference to parent commits
- A copy of the central repository
- A hash that uniquely identifies the commit
- All of the above

Question 55

Not yet answered

Marked out of 1.00

Flag question

How do you merge changes from one branch to another?

Select one or more:

- a. git rebase <another branch>
- b. git merge <another branch>
- c. git pull <another branch>
- d. git apply <another branch>

Question 56

Not yet answered

Marked out of 1.00

Flag question

It's true about Jira:

Select one or more:

- [ ] Any type of JIRA issues can be moved across projects
- [ ] Links allows you to establish relationships/dependencies between issues
- [ ] JIRA UserVoice allows users vote for resolution of an issue favorably or unfavorably.
- [ ] To modify multiple issues, you can use "Bulk Change" option

Question 57

Not yet answered

Marked out of 1.00

Flag question

Which of the following Agile approach is based on Given-When-Then pattern to define Test cases in software development?

Select one:

- ( ) Test Driven Development
- ( ) Acceptance Test Driven Development
- ( ) Behavior Driven Development
- ( ) None of these

Question 58

Not yet answered

Marked out of 1.00

Flag question

Scrum teams usually have these types of backlogs:

Select one or more:

- [x] Release backlog
- [x] Project backlog
- [x] Team backlog
- [x] Sprint backlog

Question 59

Not yet answered

Marked out of 1.00

Flag question

The amount of time spent on an issue are represented by these colors:

Select one or more:

- [ ] Green for the amount of time originally estimated to resolve the issue
- [x] Orange for the amount of time left to resolve the issue
- [ ] Red for the amount of time already logged so far while resolving the issue
- [ ] Gray for the amount of time elapsed since the issue registration

Question 60

Not complete

Marked out of 19.00

Flag question

Bob is traveling via taxi and has an unlimited supply of banknotes of different denominations. Taxi rent will be in whole numbers and accepts only cash.

Bob need to calculate in how many different ways he can pay for the taxi using different denominations.

## Input Format:

The internal test cases read the following input from stdin and pass it to the function:

The first line contains the number of different denominations n Bob has.

The second line contains the value of each denomination separated by a space.

The third line contains the rent amount r which needs to be paid.

## Output Format:

Return a single integer representing the number of ways the rent can be paid or 0.

## Sample Input (0):

```
3
1 2 5
6
```

## Sample Output (0):

```
5
```

## Explanation (0):

First line in input shows 3 as number of denominations. And given banknotes of $1, $2, $5 in second line, Bob can pay to the taxi driver in following different ways

1 + 1 +1 + 1 + 1 +1 = 5 bank notes of $1
1 + 1 +1 + 1+ 2 = 4 banknotes of $ 1 and 1 banknote of $2
1 + 1 +2 + 2 = 2 banknotes of $1 and $2 each
2 + 2 +2 = 3 bank notes of $2
5 + 1 = 1 bank note of $1 and $5

That's why the program will output 5.

## Sample Input (1):

```
3
1 5 10
11
```

## Sample Output (1):

```
4
```

## Explanation (1):

First line 3 means Bob has 3 denominations as mentioned in the second line ie $1, $5, $10
Bob need to pay $11 rent as mentioned in line 3. Bob can pay to the taxi driver in the following ways.

11 banknotes of $1 each
6 banknotes of $1 and 1 banknote of $5
1 banknote of $1 and 2 banknotes of $5
1 banknote of $1 and 1 banknote of $10
That's why the program will output 4.

For example:

| Test | Input | Result |
|---|---|---|
| Example1 | 3<br>1 2 5<br>6 | 5 |

Answer: (penalty regime: 0 %)

```
import java.io.*;
import java.util.*;

public class CoinChange {

    /**
     * Complete the function below.
     * DONOT MODIFY anything outside this function!
     */
    static long numberOfWaysToPay(int[] denominations,int denominationCou
        return -1;
    }

    /**
     * DO NOT MODIFY THIS METHOD!
     */
    public static void main(String[] args) throws IOException {
        Scanner in = new Scanner(System.in);

        int denominationCount = 0;
        denominationCount = Integer.parseInt(in.nextLine().trim());
        int[] denominations = new int[denominationCount];
        String[] bankNotes =  in.nextLine().split(" ");
        int element;
        for (int i = 0; i < denominationCount; i++) {
            denominations[i] = Integer.parseInt(bankNotes[i]);
        }
        int rent = in.nextInt();
        long result = numberOfWaysToPay(denominations,denominationCount,

        System.out.println(result);

    }
}
```