**Core**

Professional Skills

Java Interview Question Bank

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# Java Interview Question Bank

## Technical

* What do you know about collection framework?
* What do you know about Threading?
* What are soft, weak and phantom references and explain the difference.
* Given the scenario below what is the most effective solution?
  + In a movie rental store, a client walks to a till and asks for a movie, the till staff will then ask a non till staff worker to find the movie.
  + The till staff will keep giving out the task so long as there are non till staff free, if there are none the till staff should wait until there are.

Hint: The Solution to this was being able to identify that it is a producer - consumer problem and to provide a producer - consumer solution.

* What is the difference between list and set?
* The remaining questions were code snippets asking for the output. Best solution to give is
  + Does it work? (mostly no)
  + What is the output?
  + Why does it not work?
  + What is a solution?
  + What would have been the output if it did work?
* What are exceptions and how do you handle them?
* Explain what polymorphism is.
* What is extreme programming?
* Explain what inheritance is.
* What is regression testing?
* What is automation testing and what are the advantages of it?
* Explain the differences between functional and non-functional testing.
* What is quality assurance?
* What is the importance of testing?
* Explain what SOLID is.
* Name different types of testing.
* What is SCRUM?
* Which design patterns do you know?
* What tools do you know for automated testing?
* Explain what a test case is.
* Discussion about abstract vs. Interfaces.
* Write a piece of code to implement your own TreeSet structure.
* What are the advantages of Agile, testing and testing development?
* Talk about Maven
* Given a piece of Java code, explain and improve it.
* Give a few examples of HTML tags.
* How do you divide a page in HTML?
* What is JSP & Servlet?
* How can you read XML files?
* What project did you do with Java and JDBC?
* Describe how to use Ibatis in Java? How to implement Ibatis?
* How to draw a class diagram?
* Name and explain the access modifiers.
* REST vs. SOAP and XML.
* How do hashcode and equals work in the background?
* When are objects set to immutable?
* TDD exercise (practical and paired with interviewer)
* Which is the bigger priority: Meeting deadlines, code quality or customer satisfaction?
* What is a thread?
* What issues are there in using threading?
* Discuss the use of Agile and SCRUM methods.
* A high level explanation of OOP.
* What is unit testing?
* How would you use IoC in JUnit test?
* Asked about threading, collections, serialization and inheritance.
* Explain OOP in programming.
* What is deadlock?
* Explain 4 pillars of OOP?
* Why Spring framework?
* What classes can be used to read XML and HTML files?
* Write a linear algorithm.
* Write some Java code that does bubble search.
* Write a code to implement your own LinkedList structure.
* Tell me about your java projects and give a bit of technical information on how it operates.
* How did you store the information
* What if it was a threaded program what would you change?
* Would you use synchronization?
* What is the different  types of collections and what are the differences between them?
* How does a hashmap work?
* Explain hashcode and equals.
* Explain the comparator and comparable interfaces.
* What design patterns do you know?
* Explain the singleton pattern and show how it works.
* Explain the factory pattern and show how it works.
* How did you test your java programmes?
* What do you know about Agile Development?
* What do you know about Scrum?
* What do you know about Test Driven Development?
* What is Hibernate? Have you used it?
* What is Spring? Have you used it?
* Differences between ArrayList and LinkedList
* Advantages of LinkedList over ArrayList
* Explain the modules in the MVC pattern
* Given 9 statements and 6 design patterns, match them (e.g. abstract factory, command, facade etc)
* Identify differences in statement and a prepared statement.
* Identify problems in a piece of code with mixed access and non access modifiers.
* What is transient?
* Explain the difference between synchronized block and synchronized method.
* If you created 2 instances of the same class can 2 threads access a synchronized method at the same time?
* When you have try and catch and you have 3 catch statements does it matter what order they are in?
* Give me 3 exceptions and order them.
* What methods does an object inherit from the Object class?
* Can you communicate using UML?
* What is the difference between composition and inheritance?
* What is Encapsulation?

## Interviews with financial clients

When interviewing for a role with a financial client the following preparation could prove to be invaluable:

* Have a look at the Investment Banking definitions and information for help or have a look on these websites:  investopedia.com, wikipedia.com, fsa.gov.uk
* Look at the financial sites- <http://www.lsespreads.com/financial_markets>  ,Bloomberg and Reuters. Familiarise yourself with the latest news in finance. Investment Bankers would be checking this on a daily basis.
* What is the difference between an Investment Bank and a Retail Bank?
* What is a derivative?
* How would you use a derivative?
* What is the difference between a share and a bond?
* What is a credit default swop?
* What do you know about investment banking?
* What is a credit derivative?
* What do you know about FX?
* Why do you want to work for a bank?
* Why do you want to work in finance?
* What is equity?
* Describe the FTSE 100.
* What is a stock?
* What is a bond?
* What is the difference between equity and bonds?
* What is an IPO?