

Concept / Question	Comment	Resources			
How oauth works ?					
<p>Producer/Consumer Problem.</p> <p>The concept of Producer Consumer problem is used to some extent in implementing a message queue.</p> <p>In Python, we use Condition object which allows one or more threads to wait until notified by another thread. We use: Condition.acquire(); Condition.release() Condition.wait(); Condition.notify()</p>	<p>The problem describes two processes, the producer and the consumer, who share a common, fixed-size buffer used as a queue. The producer's job is to generate data, put it into the buffer, and start again. At the same time, the consumer is consuming the data (i.e., removing it from the buffer), one piece at a time. The problem is to make sure that the producer won't try to add data into the buffer if it's full and that the consumer won't try to remove data from an empty buffer.</p>	<p>https://www.wikiwand.com/en/Producer%E2%80%93consumer_problem</p> <p>http://agiliq.com/blog/2013/10/producer-consumer-problem-in-python/</p>			
What does thread join code mean ?	<p>When called on a child thread, 't', the code after t.join() will not execute until the child thread, 't' has completed the execution. This is a common pattern: Spawn child thread(s), and then wait for all of them to finish (by calling join) and then process the code of the main thread</p>	<p>https://stackoverflow.com/questions/15956231/what-does-this-thread-join-code-mean</p>			
<p>Least Recently Used - Discards the least recently used items first</p> <p>Most Recently Used</p> <p>Least Frequently Used</p>		<p>https://www.wikiwand.com/en/Cache_replacement_policies#/Least_Recently_Used</p>			
Master Slave setup	<p>A database is "slaved" to a "master" when it receives a stream of updates from the master in near real-time, functioning as a copy. The "slave" must simply apply the changes that the master validated and approved.</p> <p>Master writes binary logs regarding the replication events/changes; the slaves read this file and create a file locally on their machine. Simultaneously, another thread on slaves' machine reads the local file and apply the changes to slave db</p>	<p>https://www.quora.com/What-are-Master-and-Slave-databases-and-how-does-pairing-them-make-web-apps-faster</p> <p>https://dzone.com/articles/how-does-mysql-replication</p>			
<p>Advantages of Immutable objects</p> <p>Disadvantages on Immutable objects</p>	<p>Immutable objects are useful when objects are generally shared - not just with threading, but in single-threaded programs also where an object has many clients.</p> <p>The disadvantage is that we must create a new object to change its "value". If our class is representing something that "changes" frequently, we'll create a lot of objects, putting load on the garbage collector.</p>	<p>https://stackoverflow.com/questions/5652652/java-advantages-of-of-immutable-objects-in-examples</p>			
Use of Custom Exceptions		<p>https://stackoverflow.com/questions/22698584/when-should-we-create-our-own-java-exception-classes</p>			
Polymorphism	<p>'Polymorphism' means 'many forms'.</p> <p>We can treat a Snowboard as a Snowboard or as an Object.</p> <p>We define a common protocol for a set of classes related through inheritance. In other words, we establish a contract. eg. A contract may say that the function will take no arguments and will return a boolean</p>				
Function overloading	<p>Method overloading is nothing more than having two methods with the same name but different argument lists. Period. There's no polymorphism involved with overloaded methods!</p> <p>Overloading lets you make multiple versions of a method, with different argument lists, for convenience to the callers. For example, if you have a method that takes only an int, the calling code has to convert, say, a double into an int before calling your method. But if you overloaded the method with another version that takes a double, then you've made things easier for the caller.</p>				