

Architecture	DevOps	Dev	Coding				
<p>The diagram illustrates a multi-tier architecture. At the top, the Client layer includes 'web', 'app', and 'wechat' components. Below this is the Server layer, featuring a 'CDN' and a 'WebServer'. The Service layer consists of 'WebService', 'APIService', and 'QueueService'. The bottom layer is the Data layer, containing 'DB (MySQL)', 'Cache (Redis)', and 'Msg Queue'. Vertical bars on the right side of each layer are labeled 'Client', 'Server', 'Service', and 'Data' respectively.</p>	<ul style="list-style-type: none"> <li>- Jenkins, SaltStack, Sonar, Maven, Git</li> <li>- Linux/Ubuntu, Nginx/conf, Tomcat</li> <li>- Aliyun, AWS: LBS, auto-scaling, RDS, CloudWatch, cli</li> <li>- Security: SSL, https, csrf, OAuth</li> <li>- Distributed: register, monitor, dubbo, ZooKeeper, Eureka, Thrift, Hessian, Broker</li> <li>- Docker Swarm, Kubernetes(k8s), etcd</li> <li>- Microservice, ServerLess, ServerMesh</li> <li>- MySQL5.3/5.7: InnoDB, MyISAM, commit, insert/update</li> <li>- Index: unique, primary, fulltext, clustered</li> <li>- Redis3.8/4.0: info, saveof, masterauth, slave-read-only, cluster, sentinel, sharding <ul style="list-style-type: none"> <li>- LazyFree: huge key, unlink, flushdb async, flushall async</li> <li>- lua: non-deterministic command, date</li> <li>- memory: stats, doctor, perge, malloc_stats, usage &lt;key&gt;</li> <li>- hot keys</li> </ul> </li> <li>- NoSQL: MongoDB</li> <li>- MQ: RabbitMQ, kafka, RocketMQ, MetaQ</li> <li>- Search Engine: Lucene, ElasticSearch, Solr</li> <li>- Log: ELK</li> <li>- Data: Hadoop, Spark</li> <li>- Hands on: hackerrank.com, coderpad.io</li> <li>- Story telling, Executable <ul style="list-style-type: none"> <li>- Crazy 8 sections: <table border="1"> <tr> <td></td><td></td><td></td><td></td></tr> </table> </li> </ul> </li> </ul>					<ul style="list-style-type: none"> <li>- IDE: Sublime, IDEA, PyCharm, VS Code, Wechat Dev Tool</li> <li>- Wechat mini program</li> <li>- Ant Design Pro, React, VUE, Angular</li> <li>- Django/Python</li> <li>- Spring Boot/Cloud/Java, application.yml</li> <li>- NodeJS</li> <li>- Bean scope: prototype, singleton, lazy-init</li> <li>- 2-way data-binding</li> <li>- API: SOA, restful, RPCI</li> <li>- http: TCP, UDP, netty, io, nio, aio <ul style="list-style-type: none"> <li>- syn+ack 3-handshakes</li> <li>- sliding window, cache</li> </ul> </li> <li>- MyBatis: 2-level cache, Hibernate, Struts</li> <li>- Consistent Hashing</li> <li>- Concurrent HashMap, TreeMap, Queue</li> <li>- Encode: MD5, SHA, DES, RSA, Base64 <ul style="list-style-type: none"> <li>- Java: DES, DES3, AES</li> </ul> </li> <li>- Redis: master-slave <ul style="list-style-type: none"> <li>- Single thread: be used as lock</li> <li>- string(get/set, 512MB), int</li> <li>- hash(hmset/hget, 2<sup>32</sup>-1, 4G)</li> <li>- list(lpush/lrange, 2<sup>32</sup>-1, 4G)</li> <li>- set(sadd/smembers)</li> <li>- sorted set(zset, zddd/zrangebyscore)</li> <li>- pub/sub</li> </ul> </li> <li>- Scrum: agile</li> <li>- Jira, Trello, TeamBition, LeanGoo</li> </ul>	<ul style="list-style-type: none"> <li>- Readable</li> <li>- Testable</li> <li>- Unit-testing: junit4, mockito2</li> <li>- log4j</li> <li>- Multi thread communication: <ul style="list-style-type: none"> <li>- wait/notify, producer/consumer</li> </ul> </li> <li>- Lock: synchronized, ReentrantLock, semaphore</li> <li>- Singleton, volatile, ThreadLocal</li> <li>- double, long: 2 slot for variables</li> <li>- MySQL: <ul style="list-style-type: none"> <li>- tiny text: 2<sup>8</sup>-1, 255B</li> <li>- text: 2<sup>16</sup>-1, 64KB</li> <li>- medium text: 2<sup>24</sup>-1, 16MB</li> <li>- long text: 2<sup>32</sup>-1, 4GB</li> </ul> </li> <li>- Data: <ul style="list-style-type: none"> <li>- xml: SAX, DOM, JDOM, DOM4J</li> <li>- json: fastjson</li> <li>- csv, yaml</li> </ul> </li> <li>- Code review, SQL, explain x, show x</li> <li>- DP, AOP</li> <li>- Regex: (2{([0-4]{0-9}) (5{0-5})}) ([0-1]?[0-9]?[0-9])</li> <li>- Ranking algorithm: stability, quick, bubble</li> <li>- JVM memory: heap, deep/shallow copy</li> <li>- GC: Young Generation(Eden, Survivor1/2), Tenured/Old Generation, Permanent Area, finalize(), stop-and-copy, GC Roots</li> <li>- Java8: lambda, stream, functional program</li> <li>- Python: __init__.py, __all__ = ["m1"]</li> </ul>