



Oracle 技术嘉年华

Oracle Technology Carnival 2016

数据 · 平台 · 智能 – 新时代的技术前沿



Sharing-JDBC

当当开源分库分表中间层

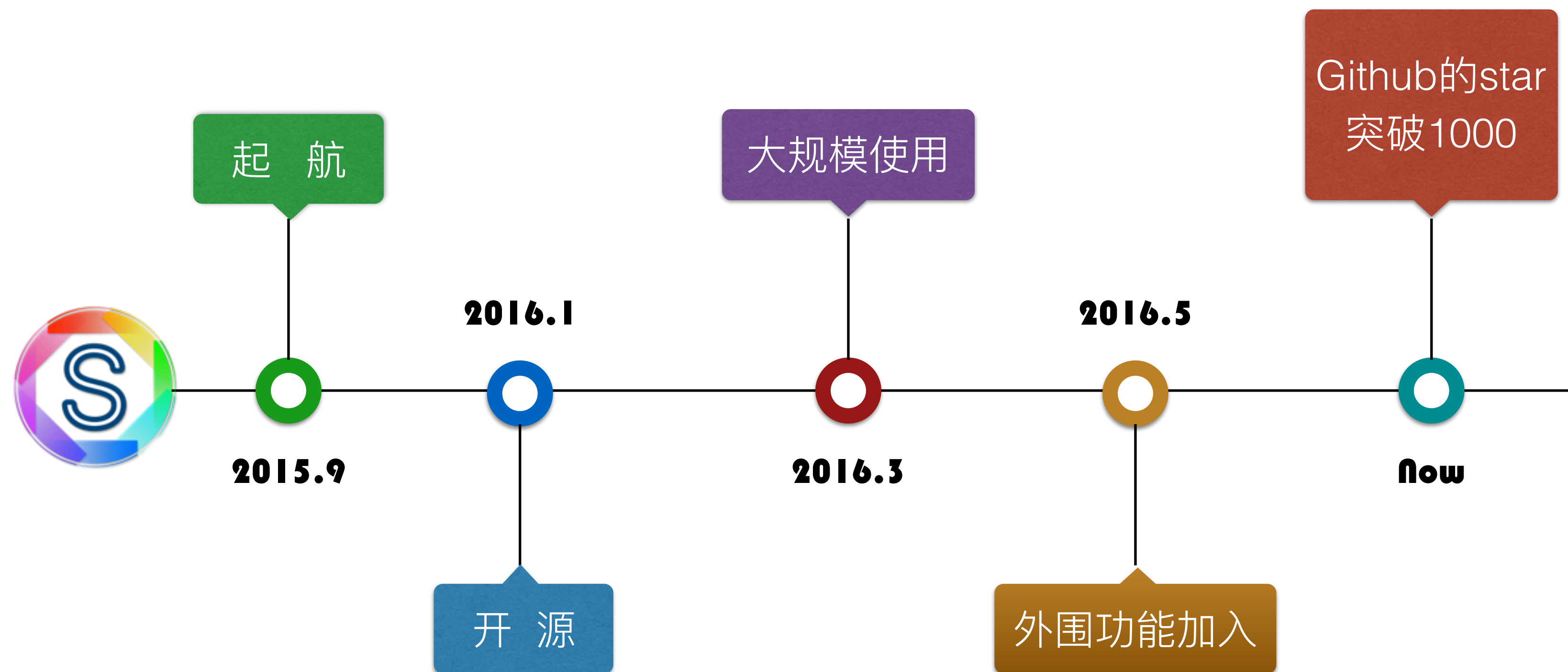


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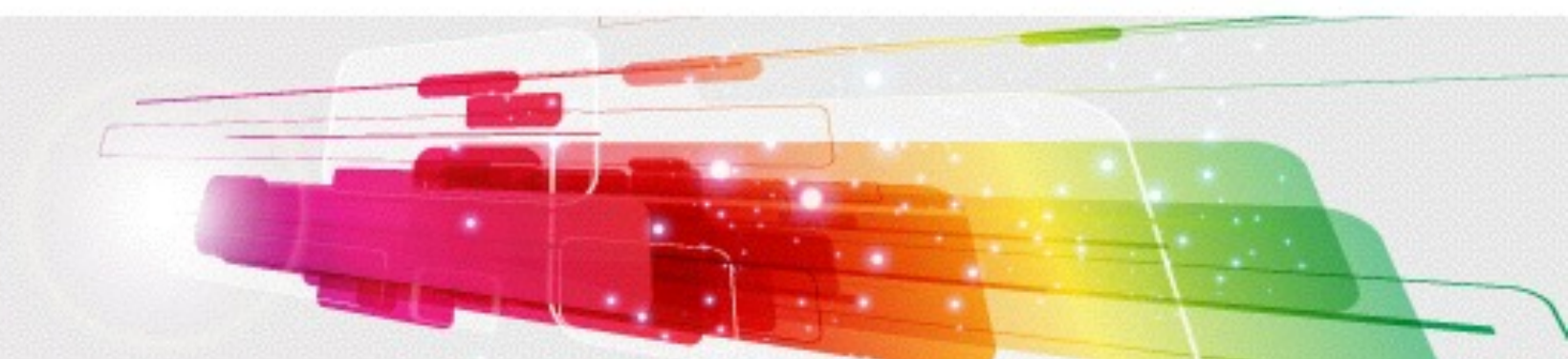




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Sharding- JDBC 是什么?



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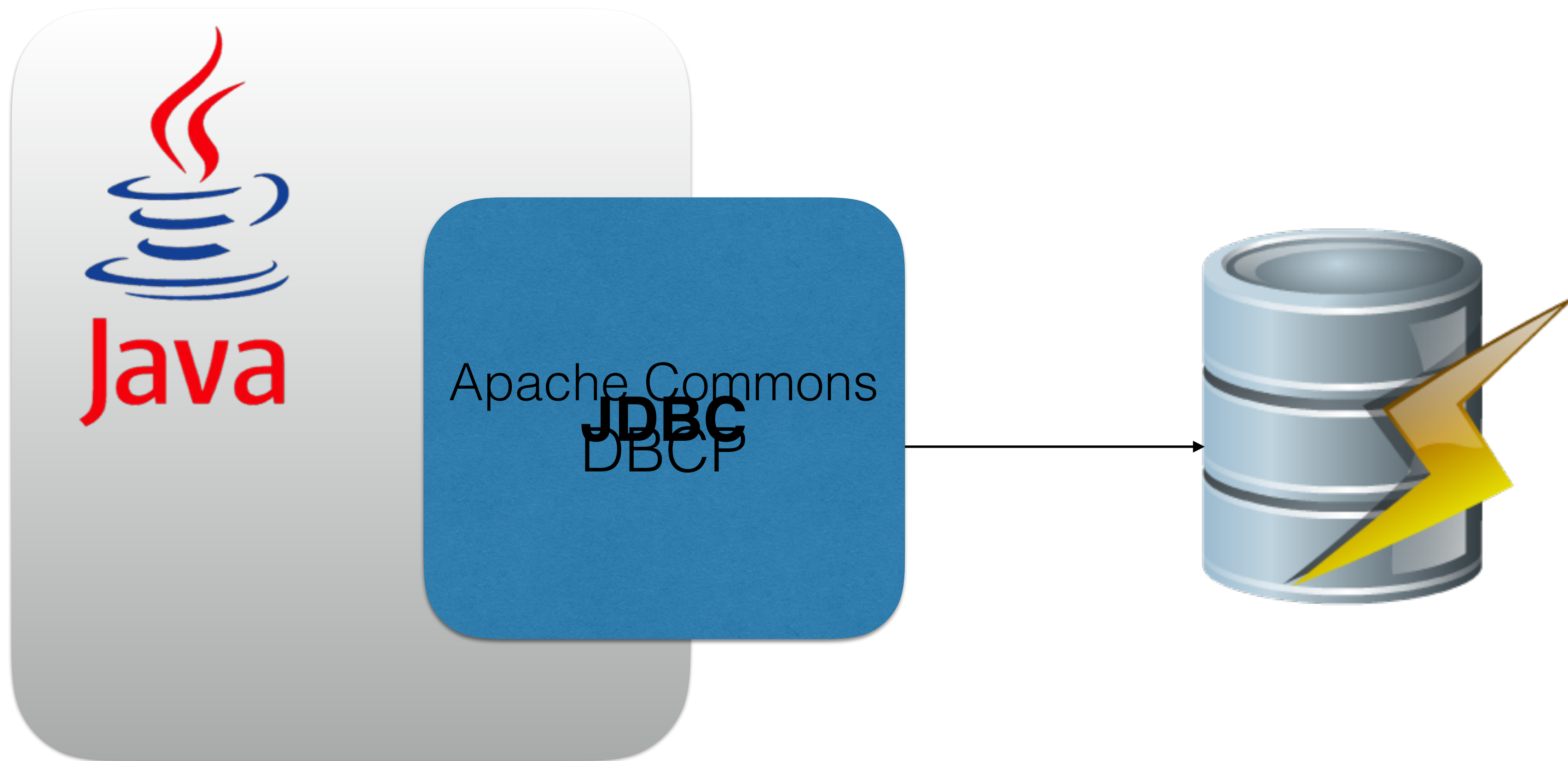


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JDBC

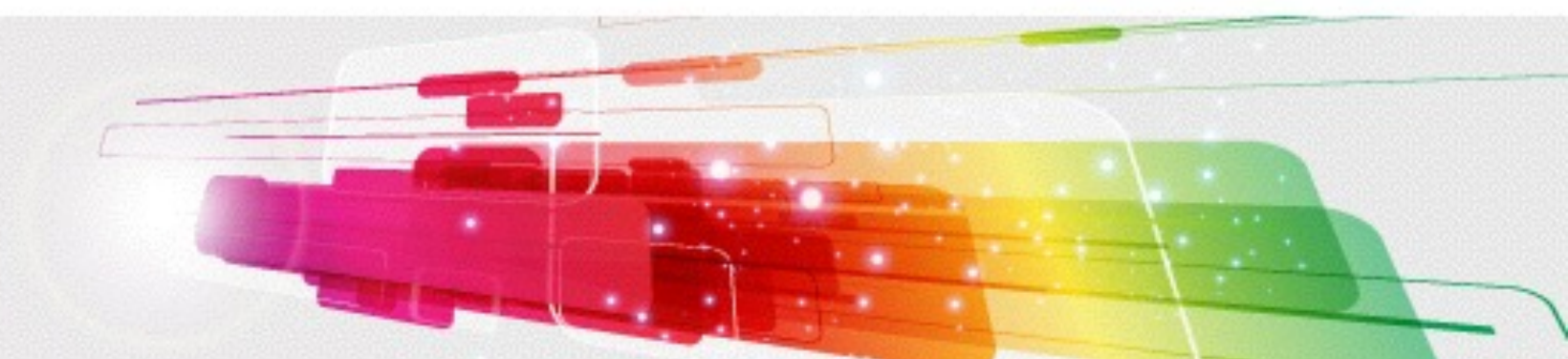


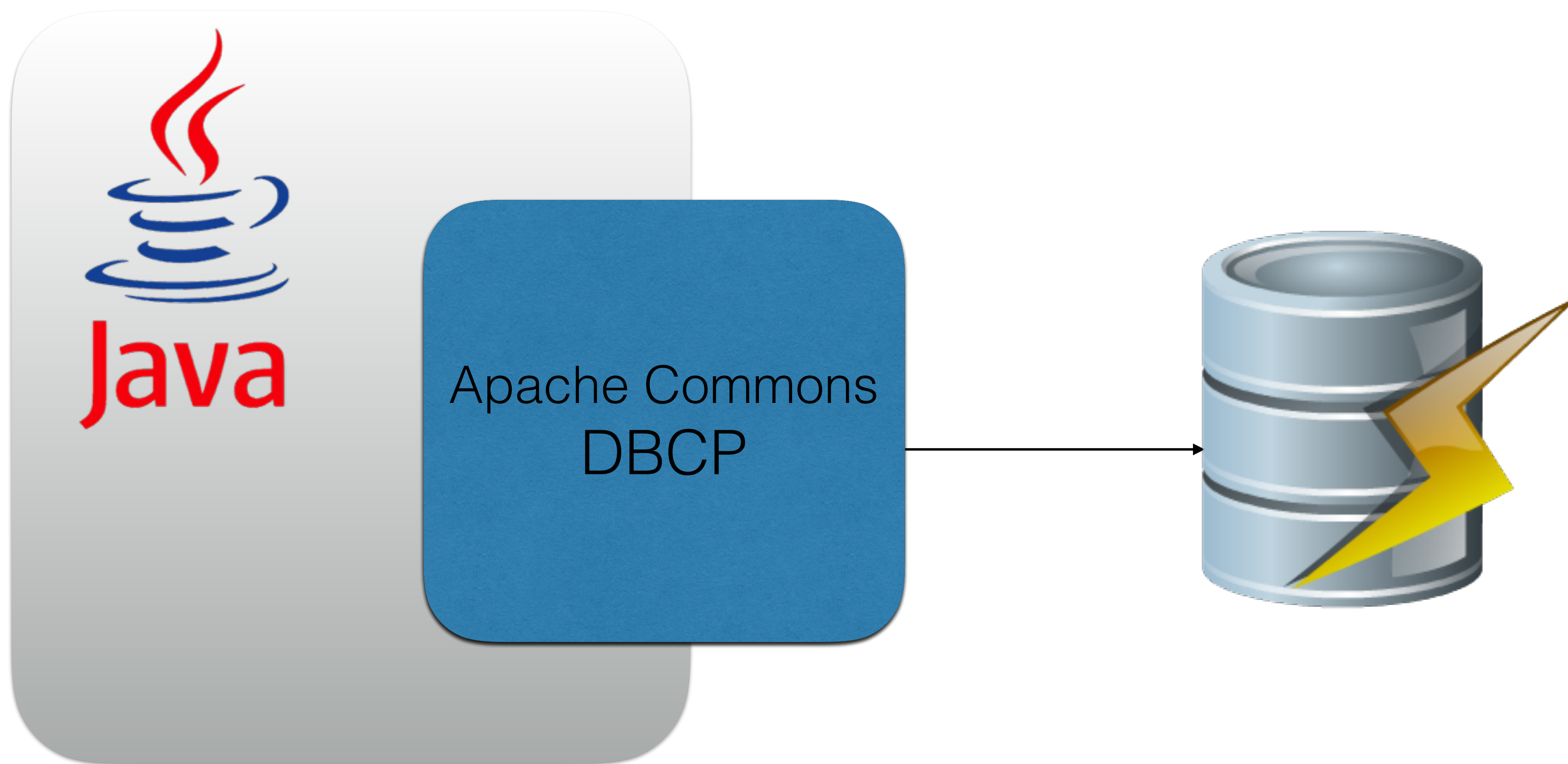


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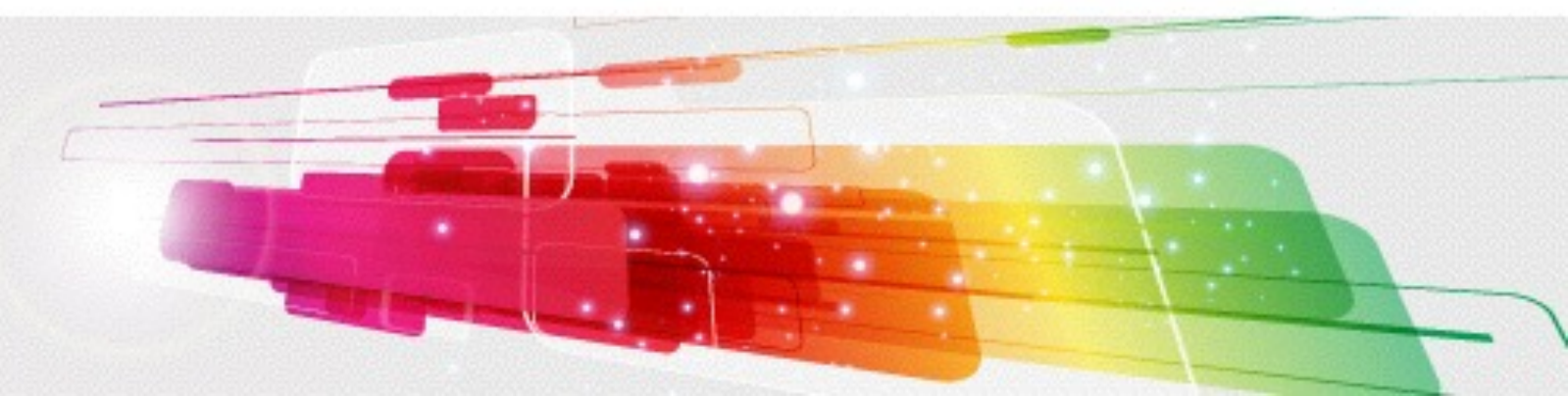


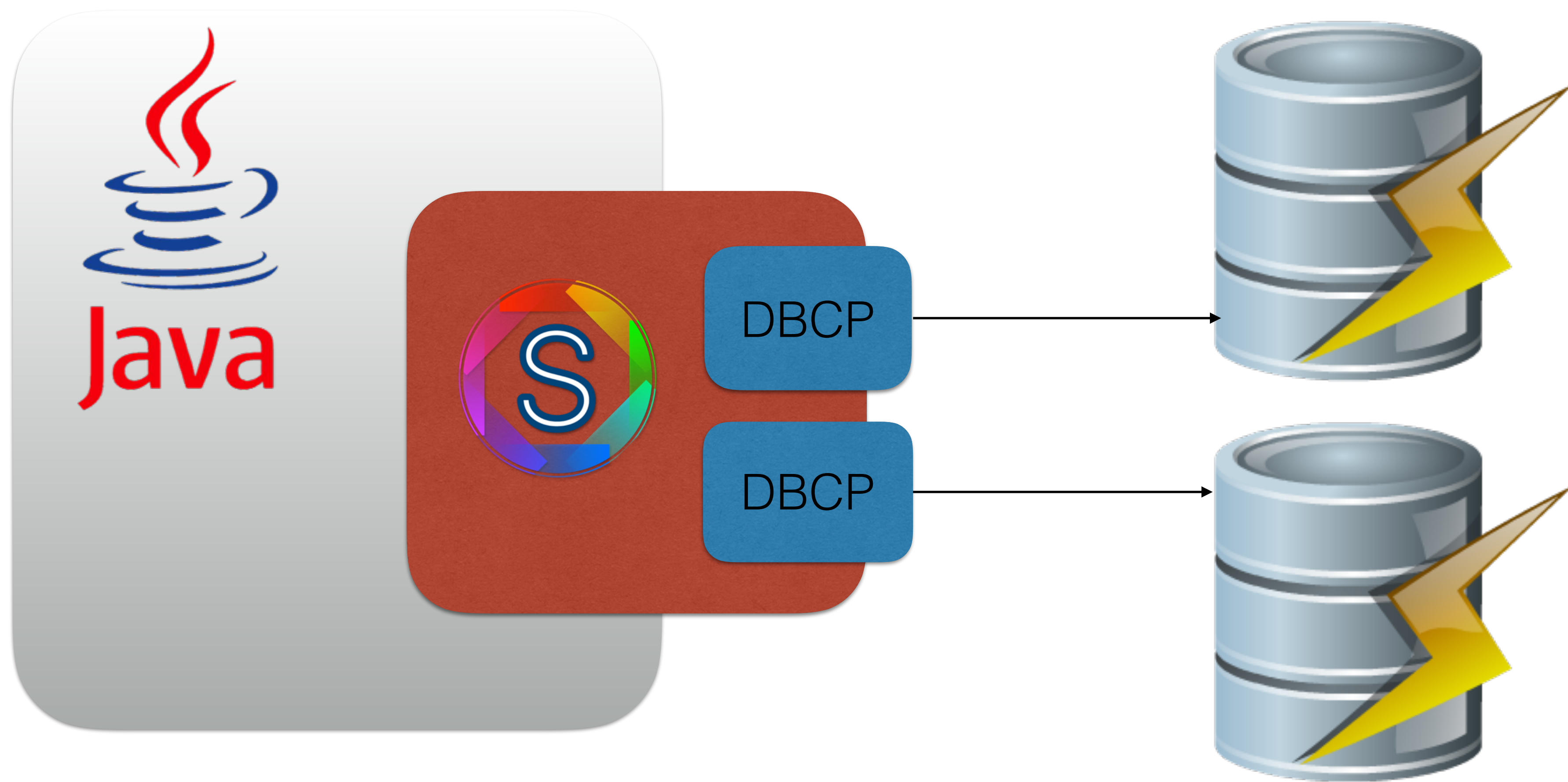


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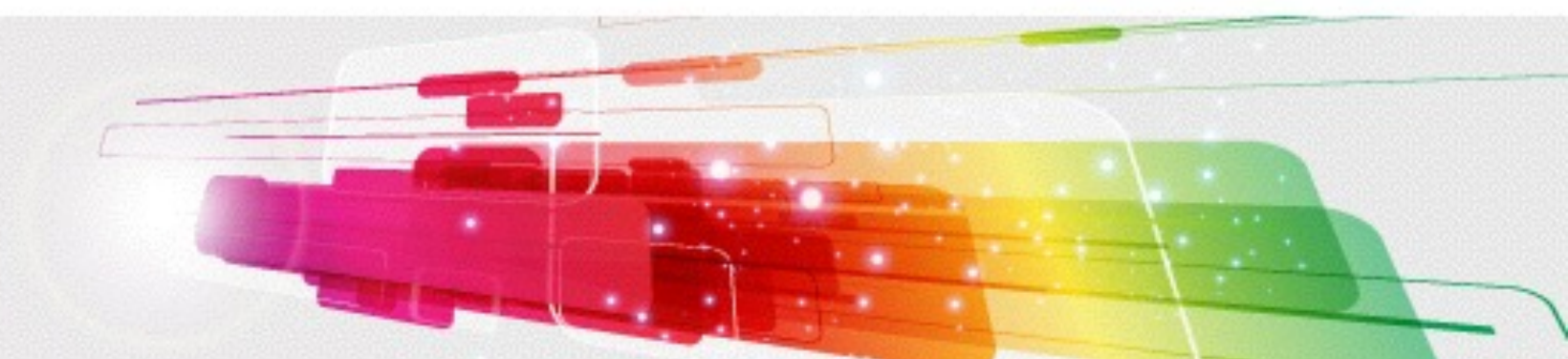




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分库分表功能的数据库连接中间层



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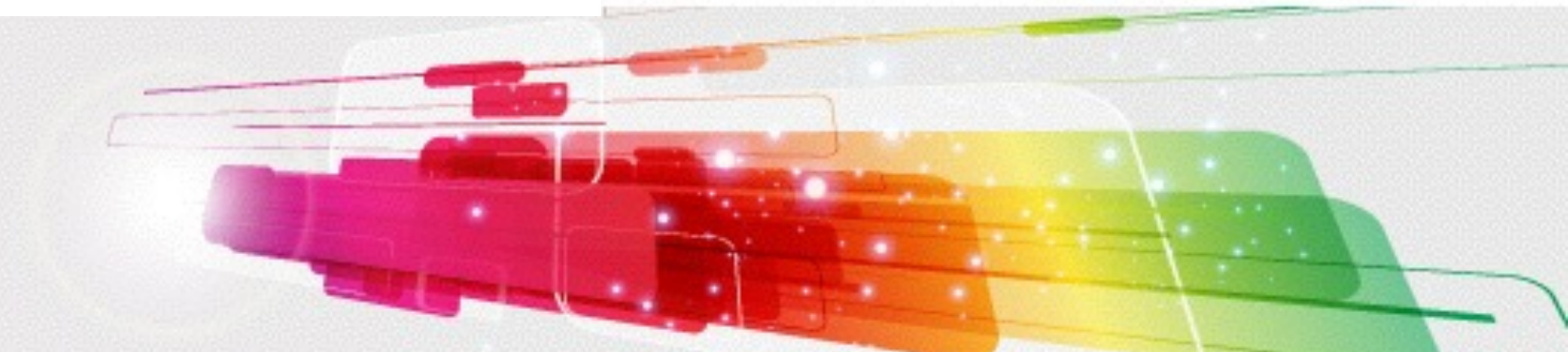
	TDDL	MyCat	
开源	否	是	是
测试覆盖	无	低	高
是否需要运维?	需要	需要	无需

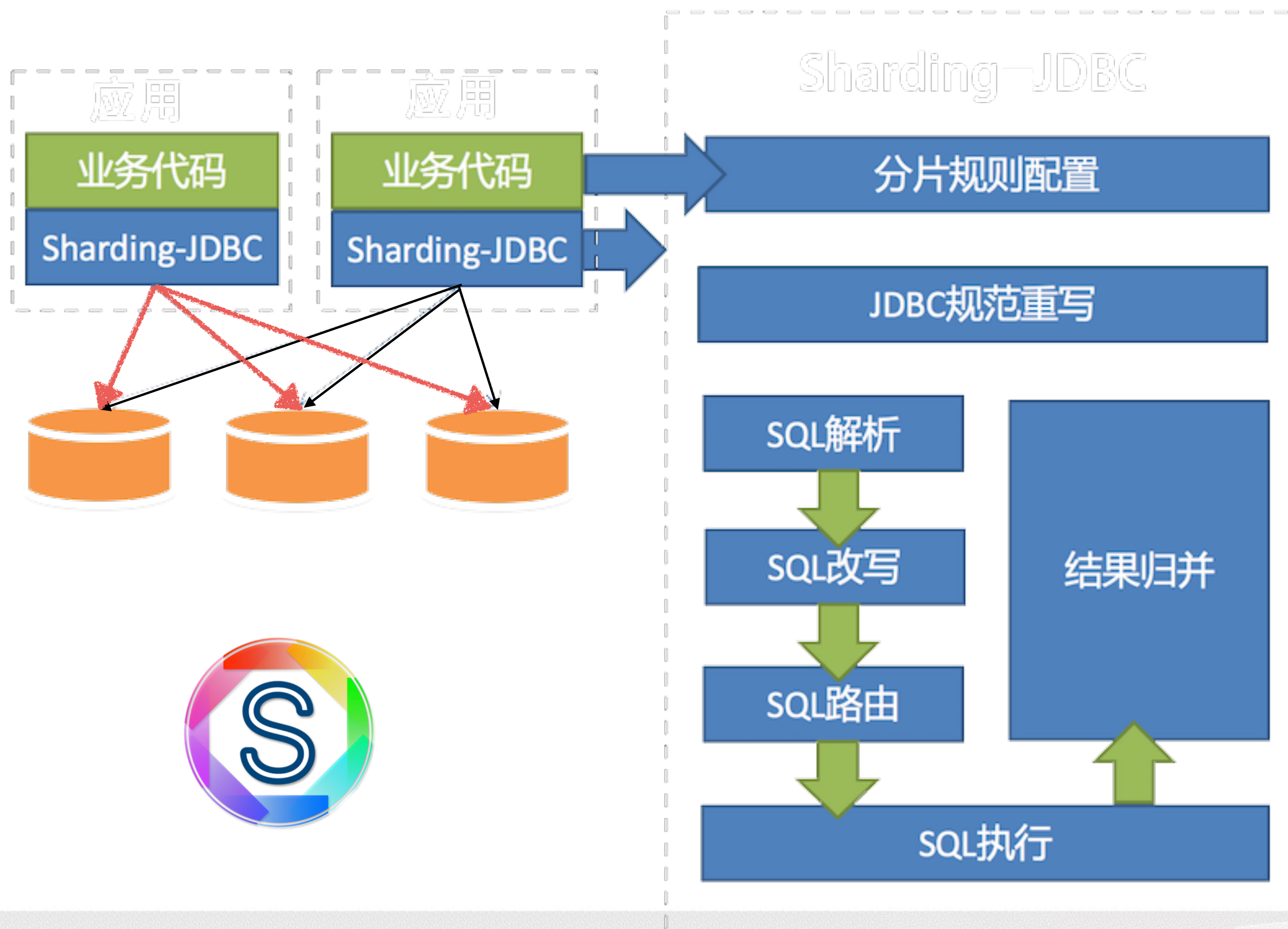


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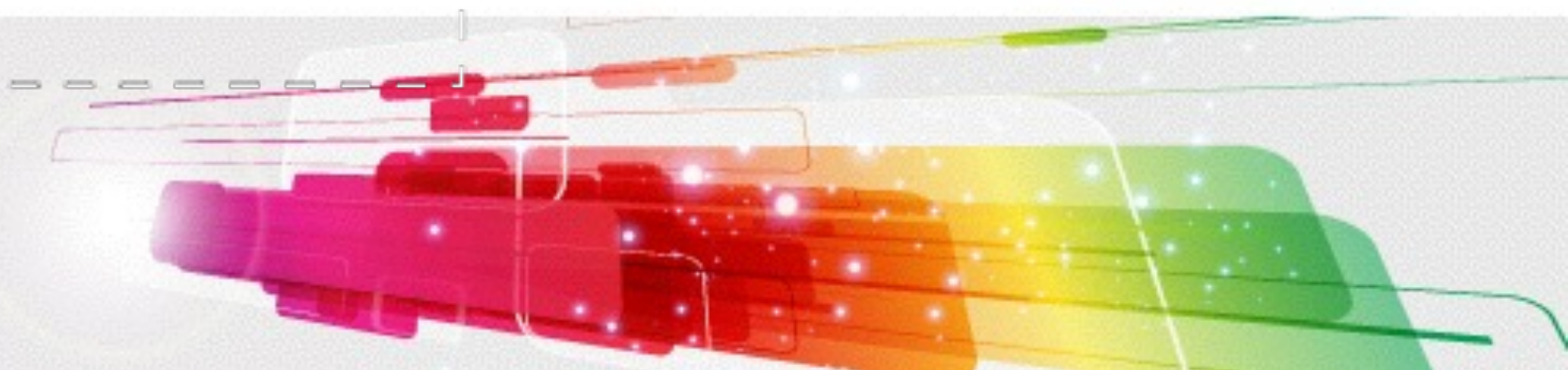




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```
SELECT
```

```
    a.id
```

```
    a.name
```

```
FROM    order a
```

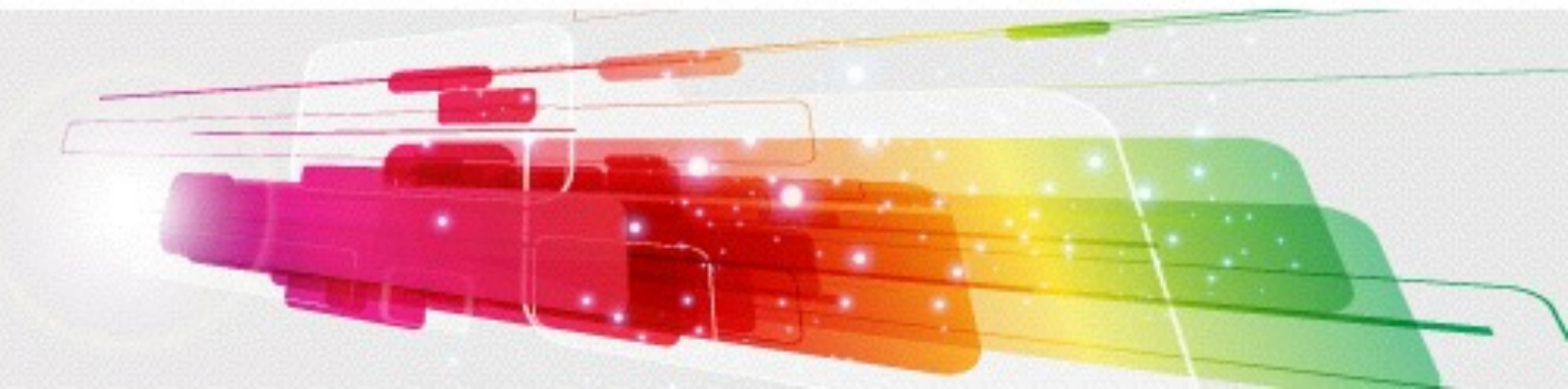
```
WHERE    a.id = 1
```

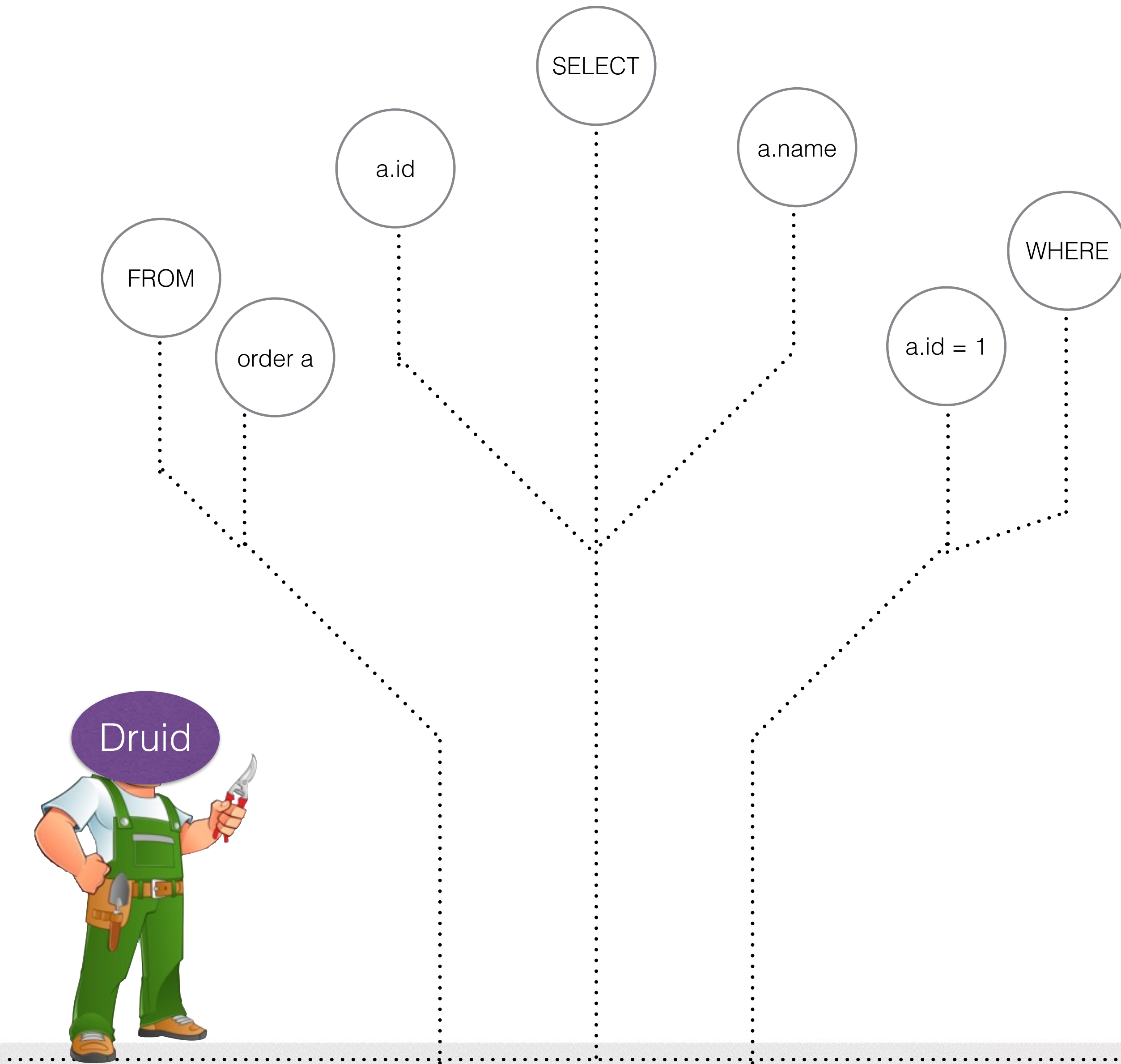


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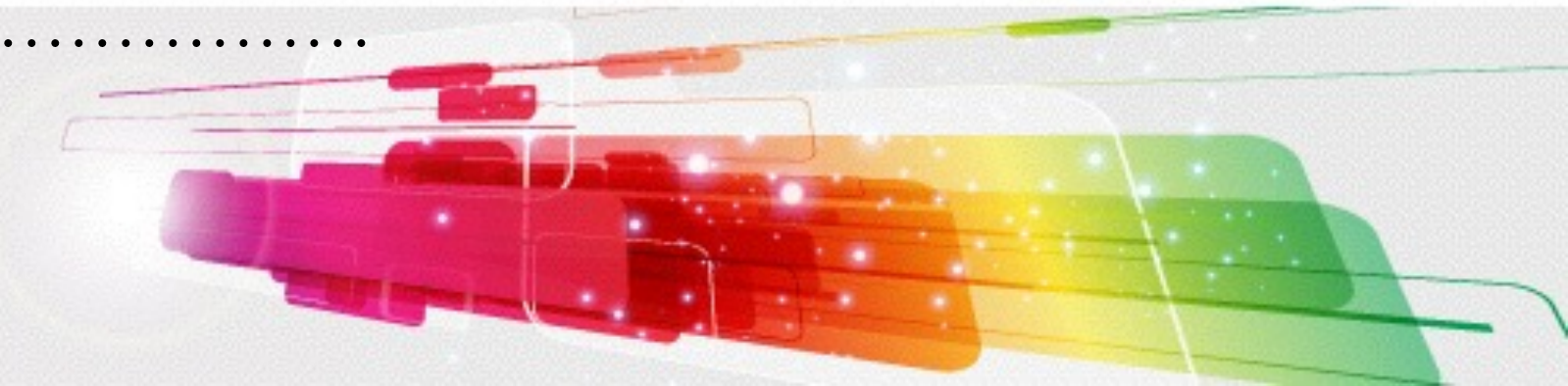


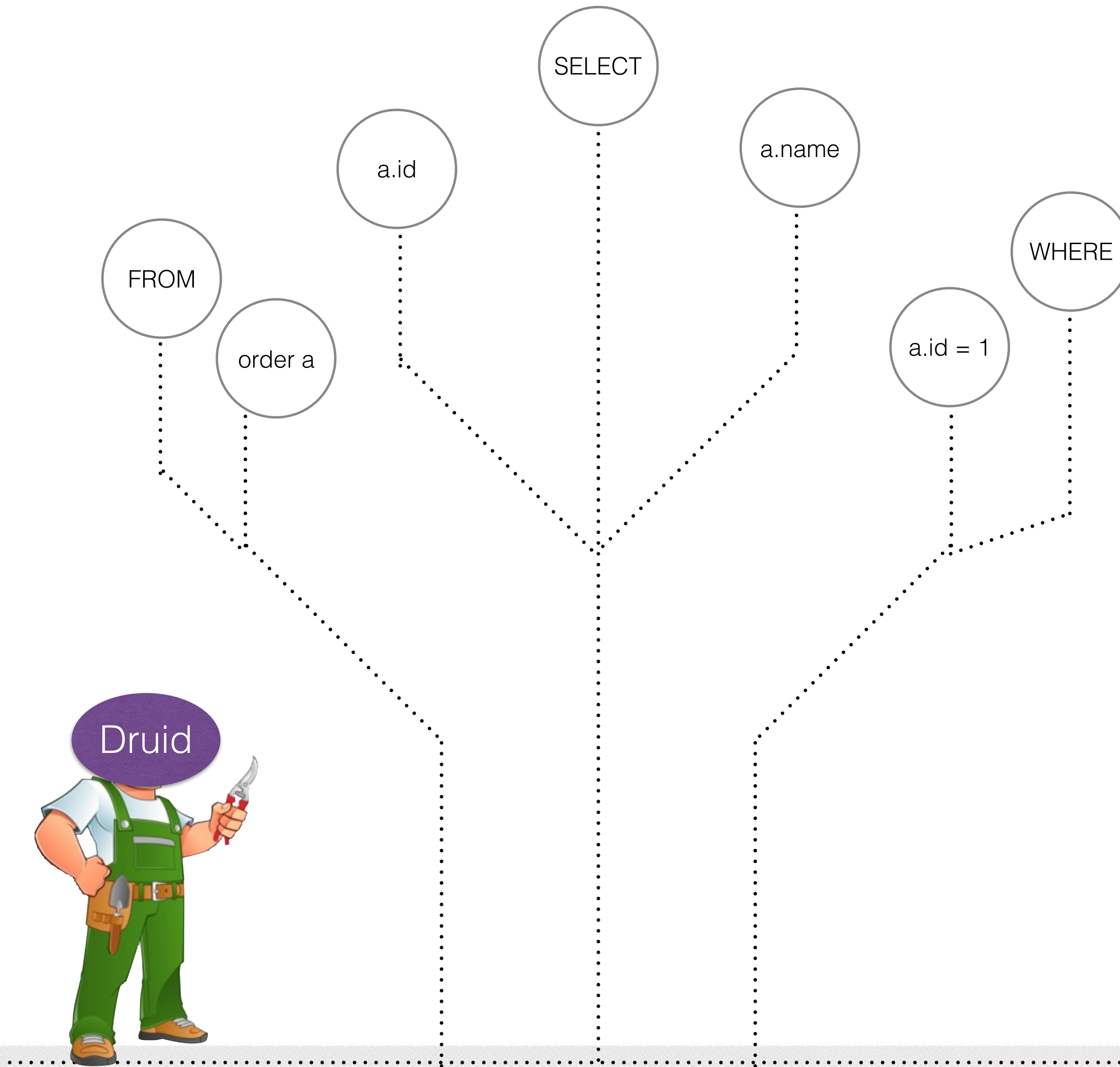


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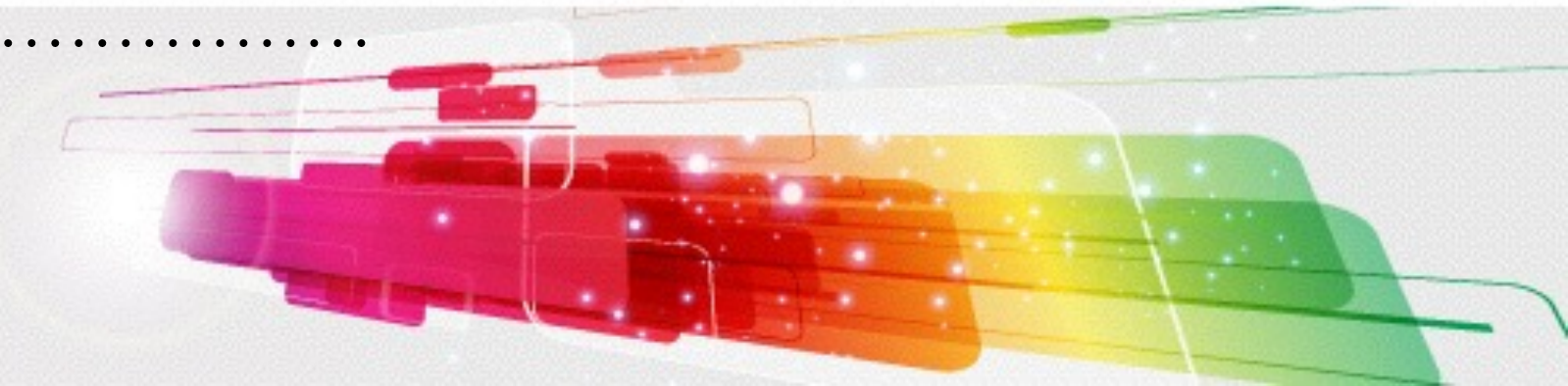




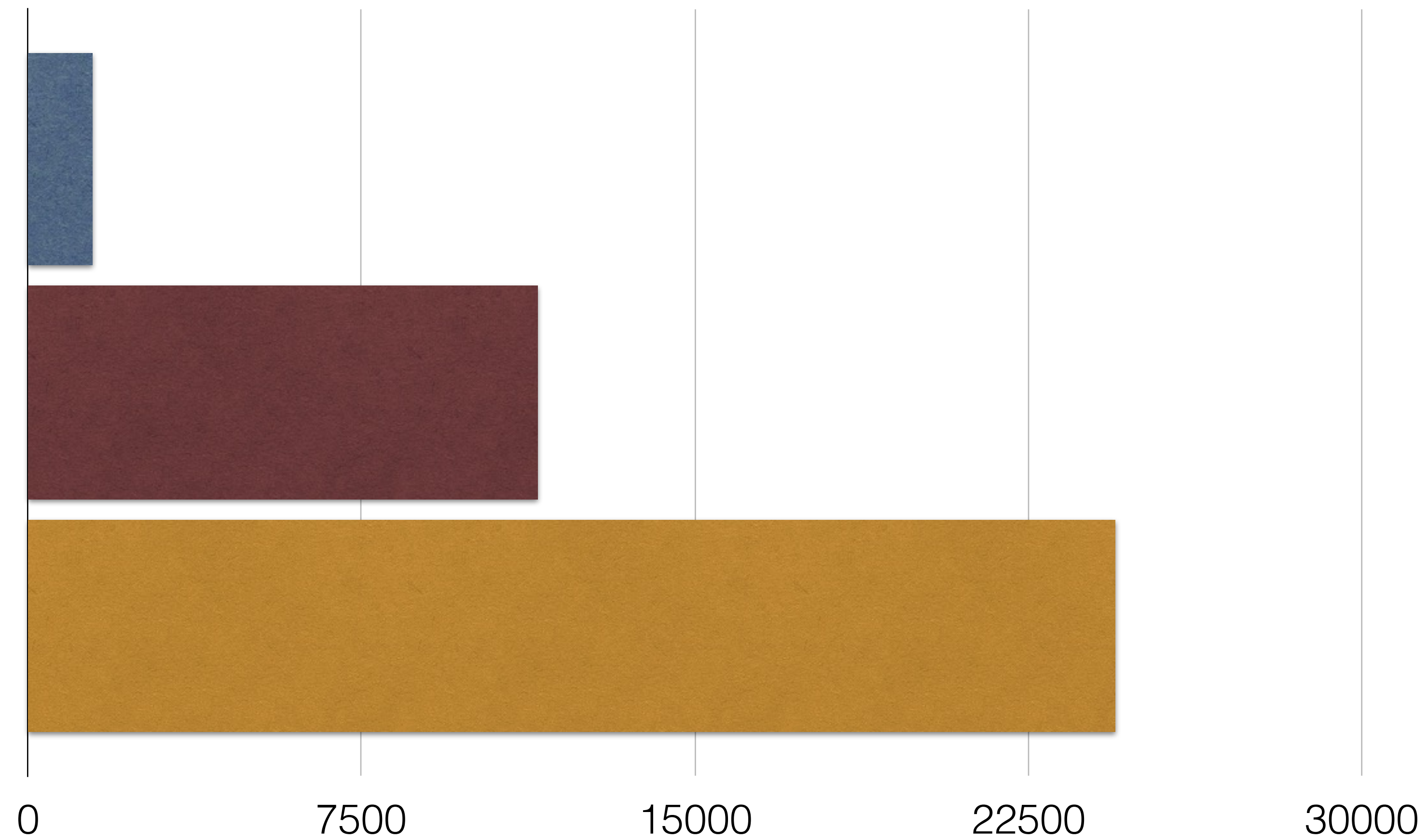
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百万次简单SQL解析时间



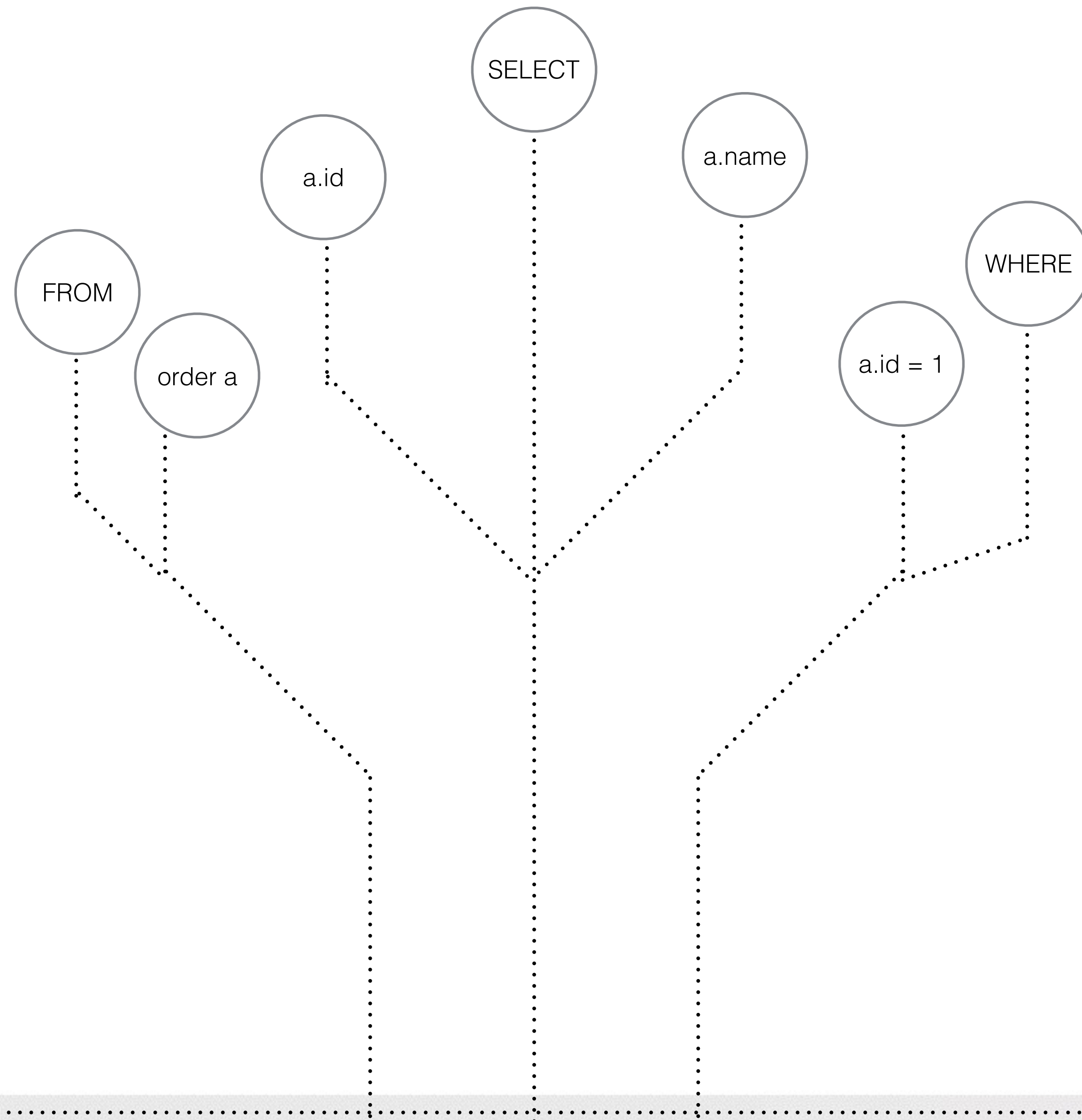
■ Druid ■ JSQLParser ■ Foundation DB

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2016

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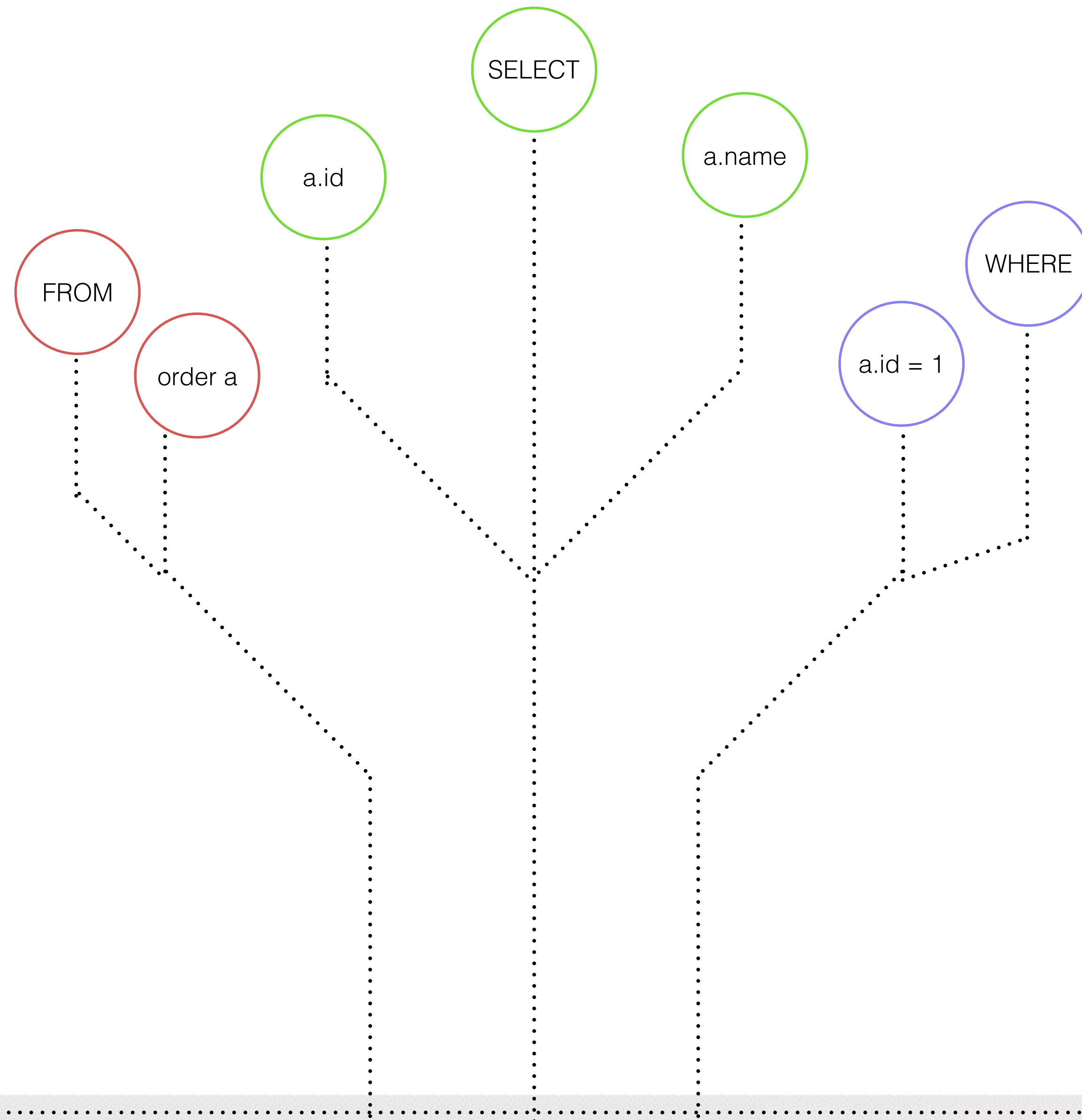


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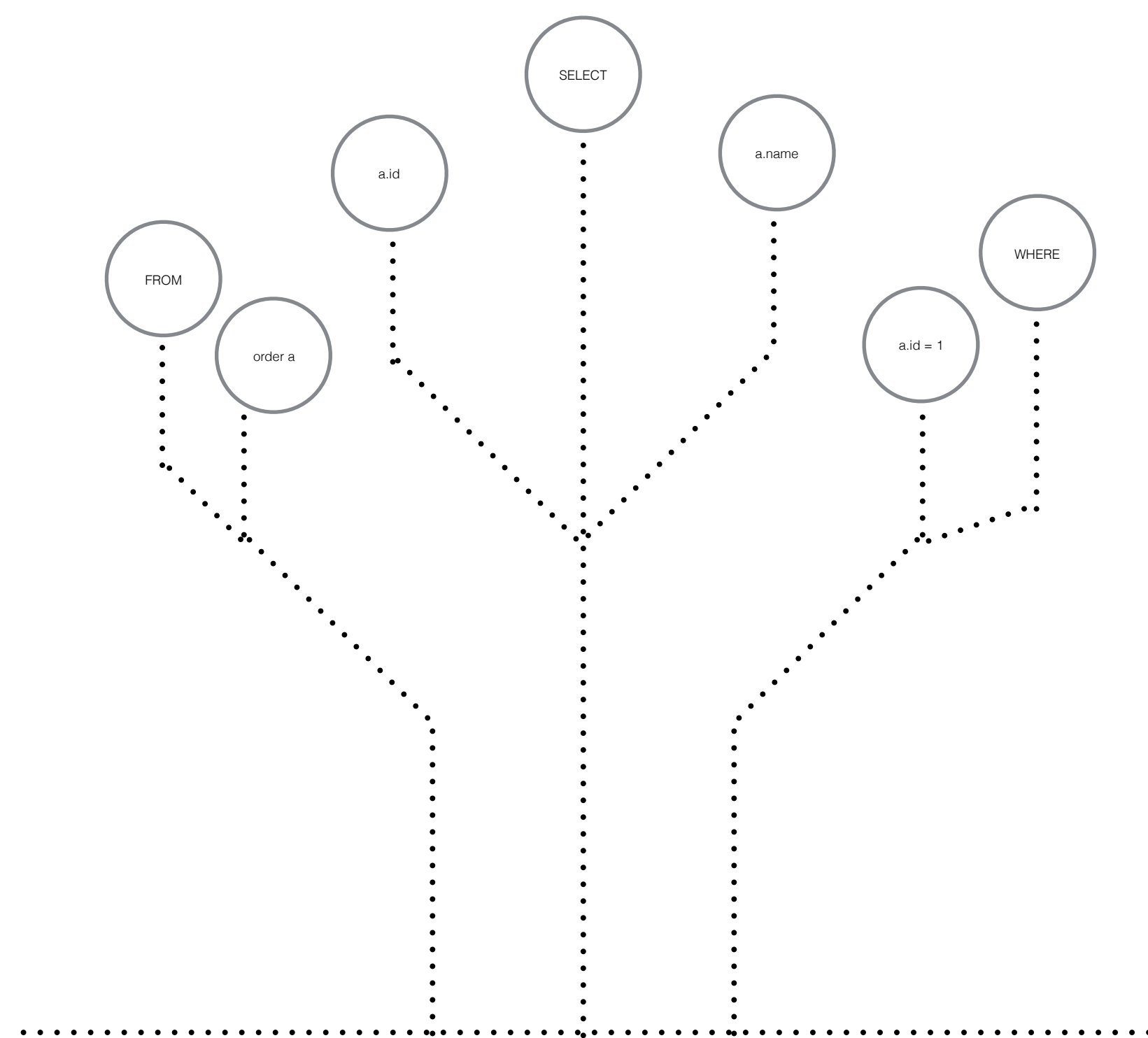


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ParseResult

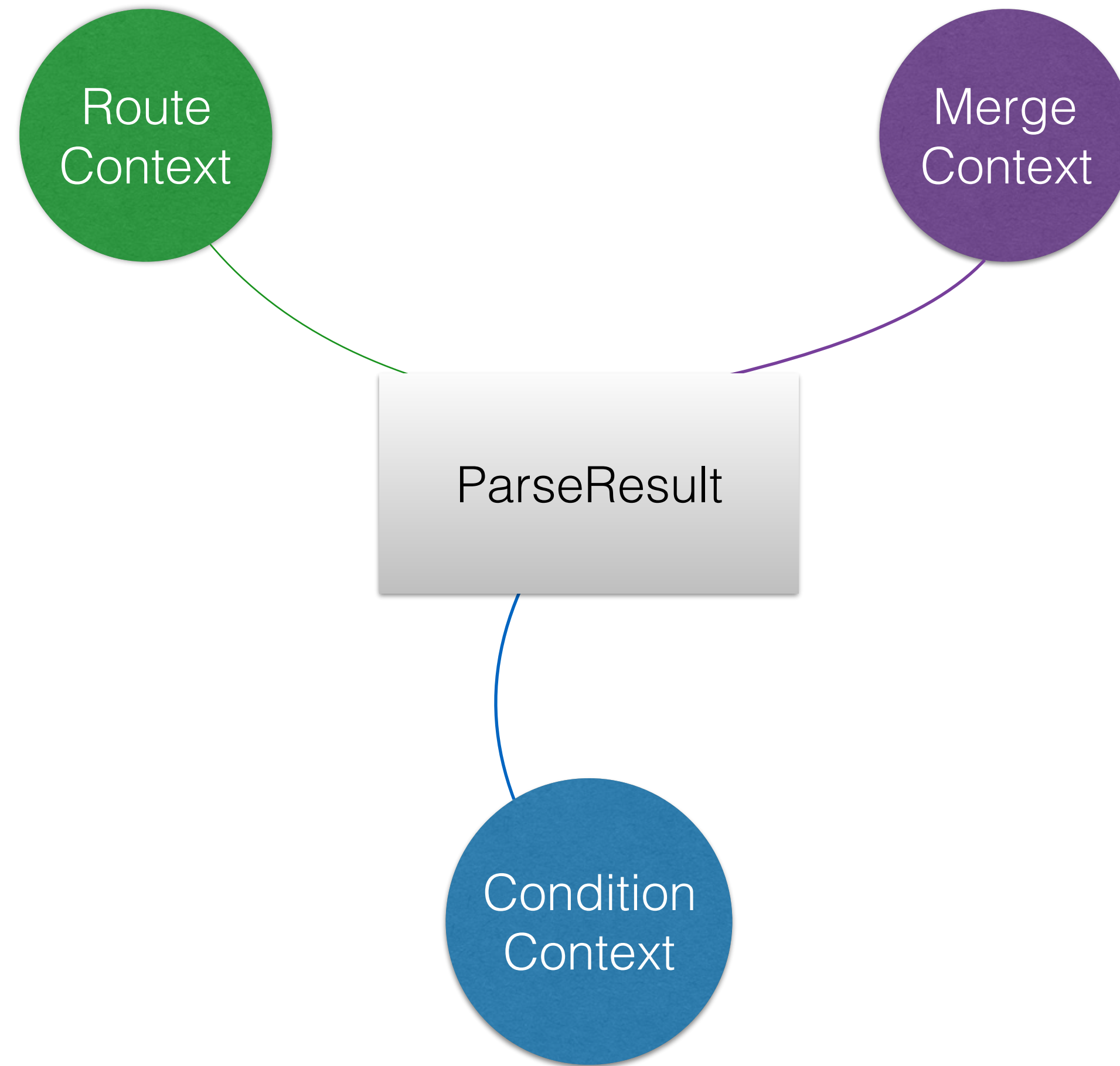


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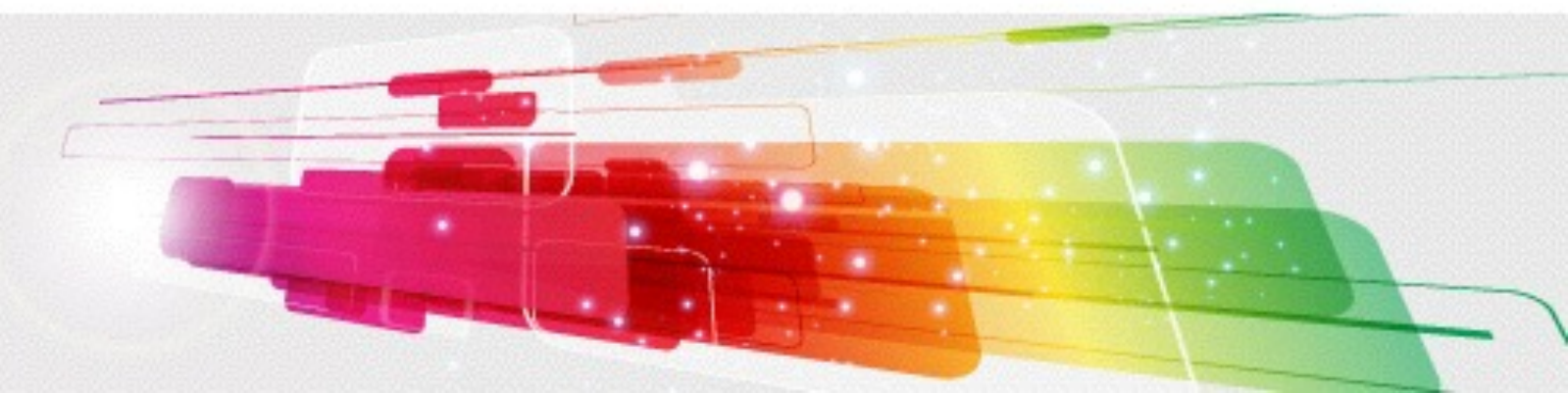




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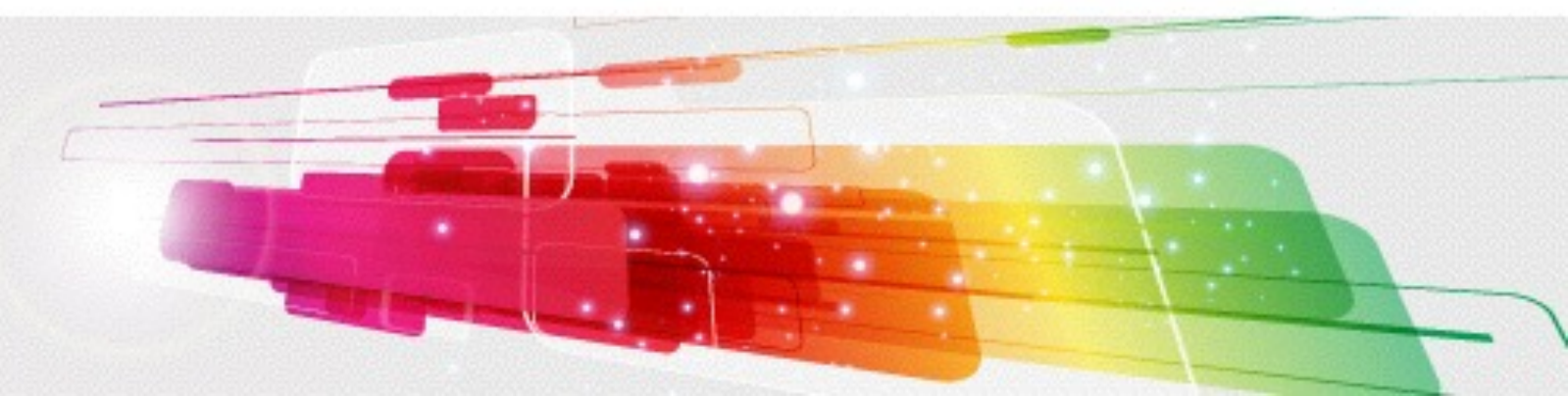




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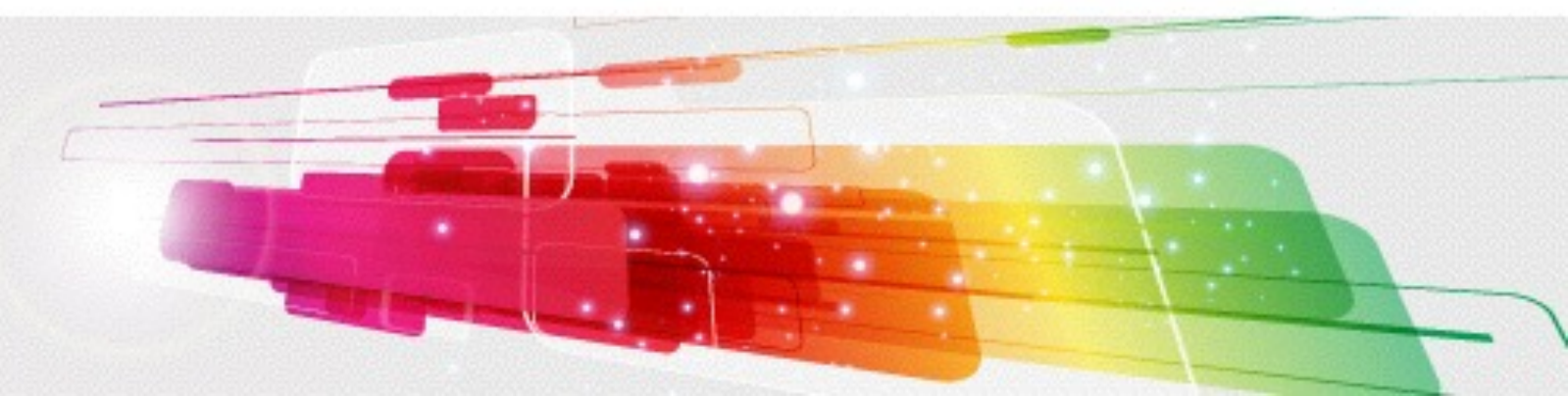


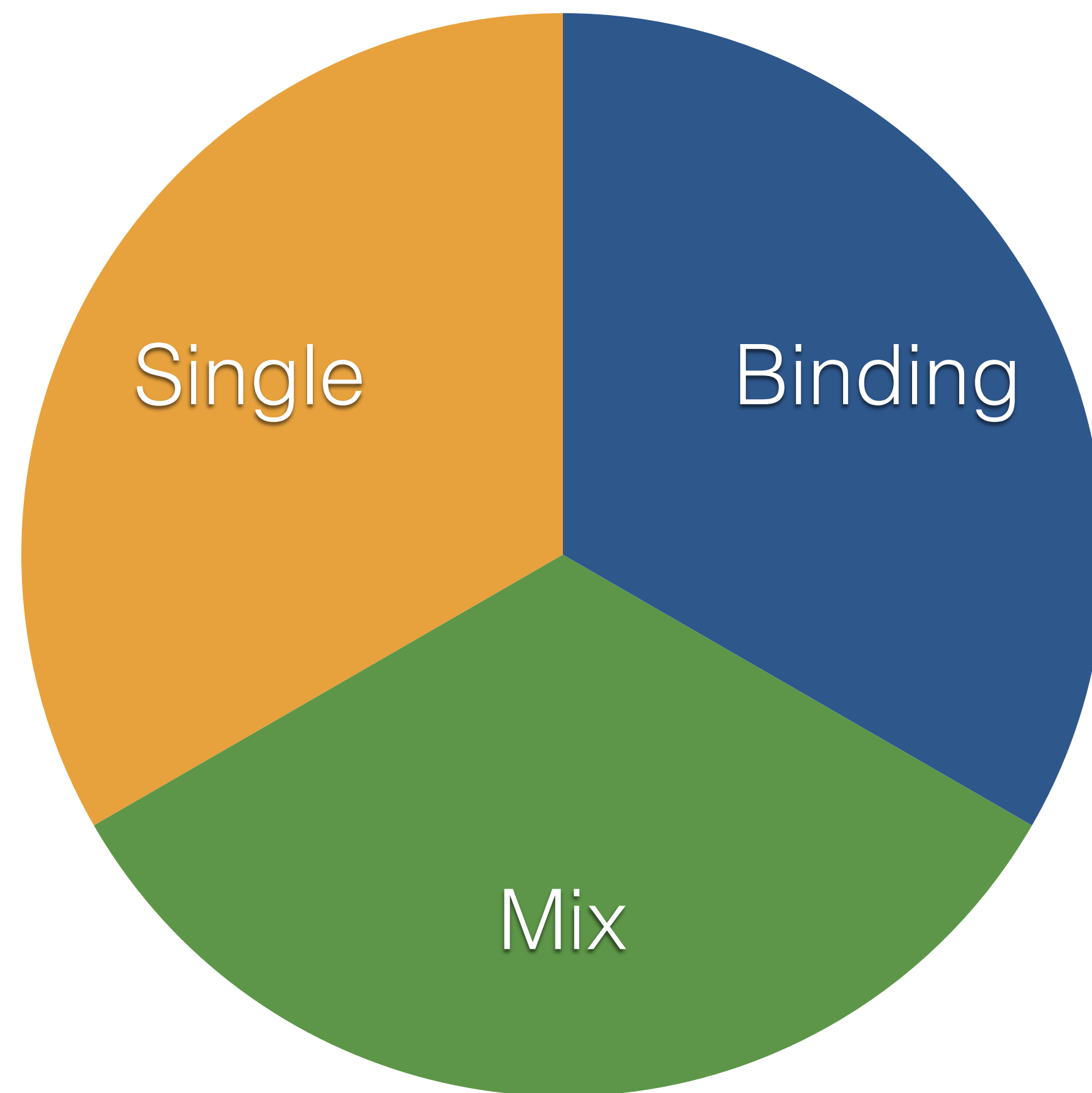


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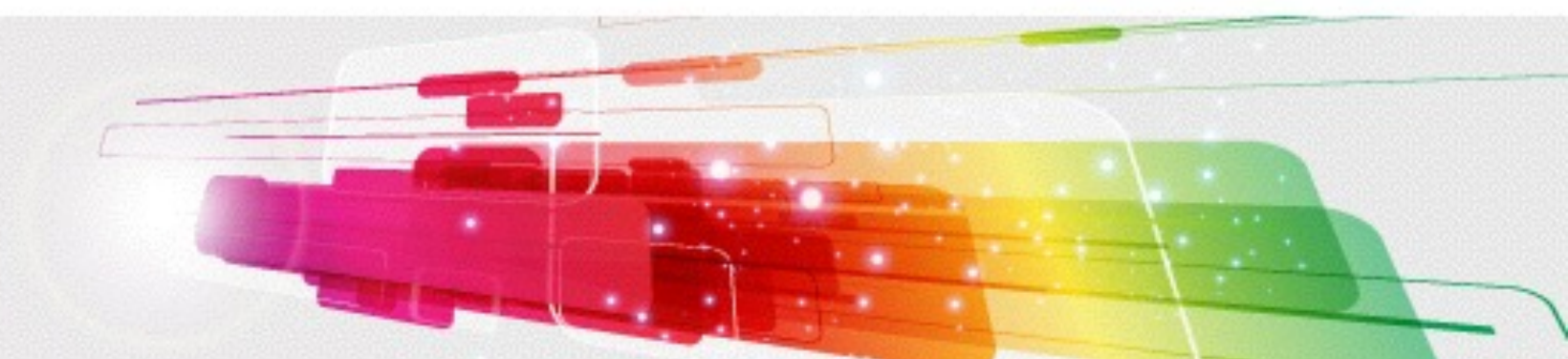




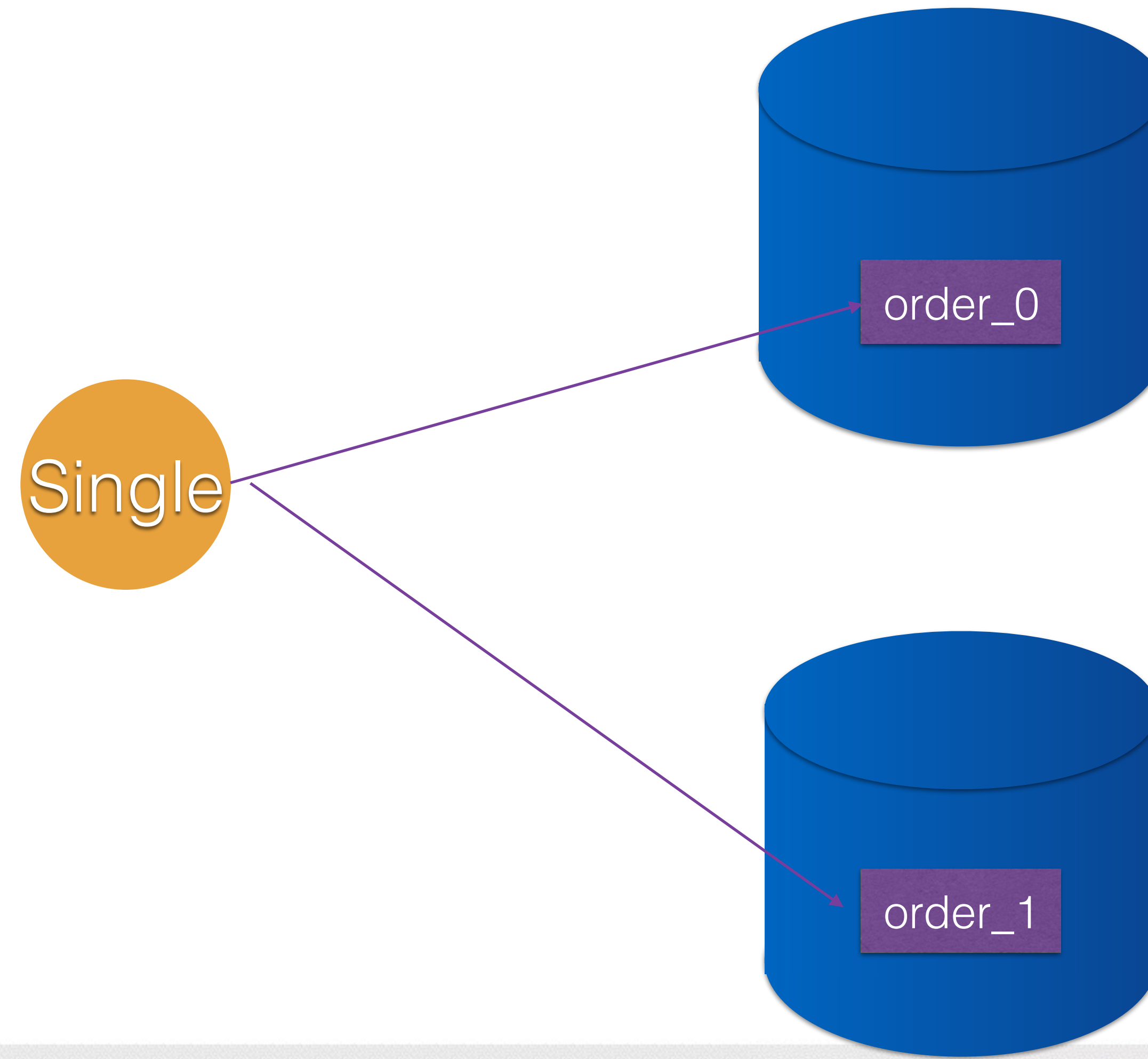
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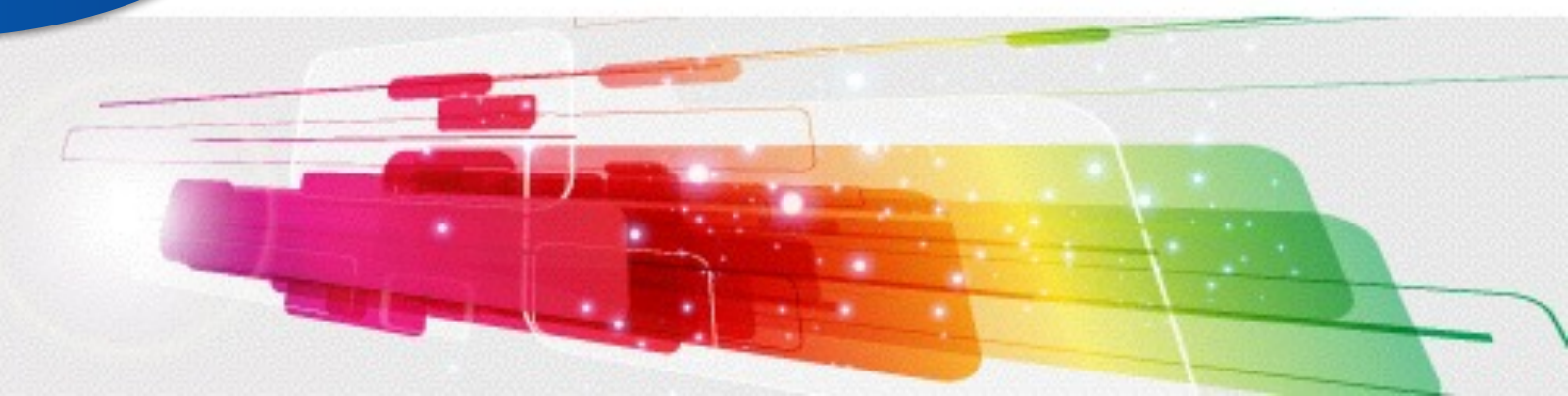
SELECT * FROM order



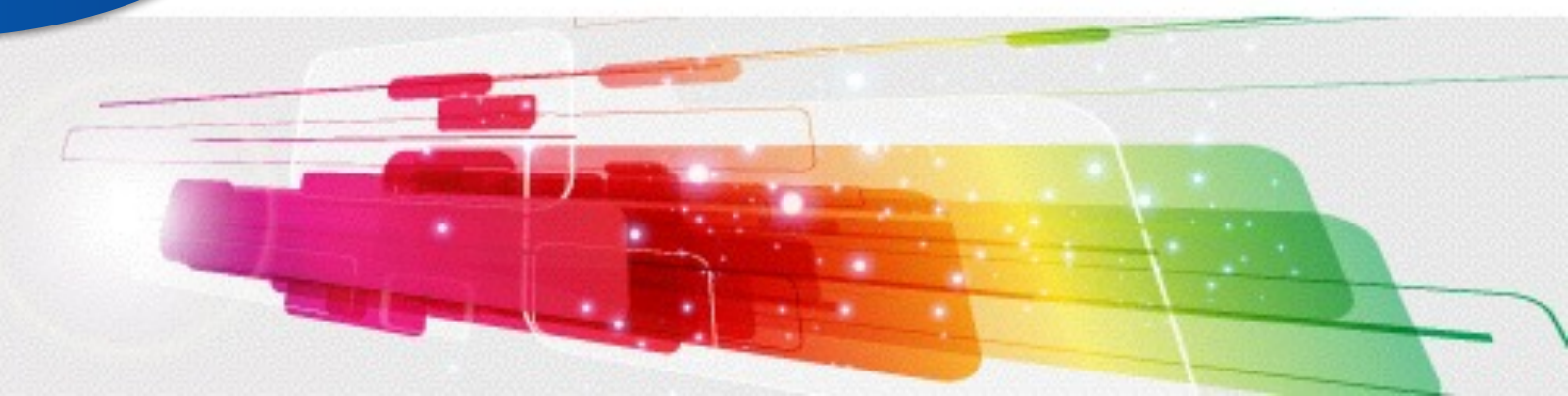
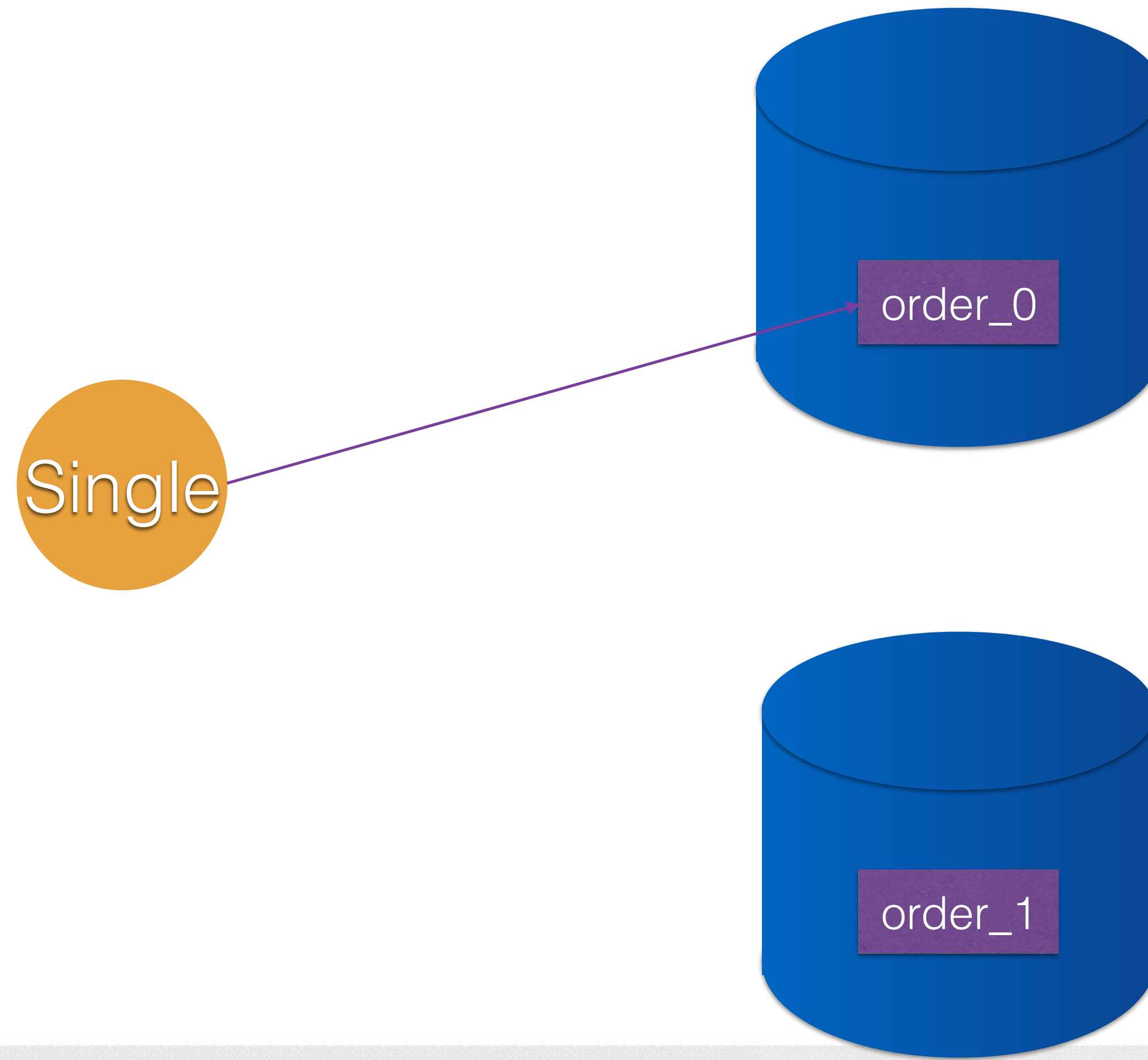
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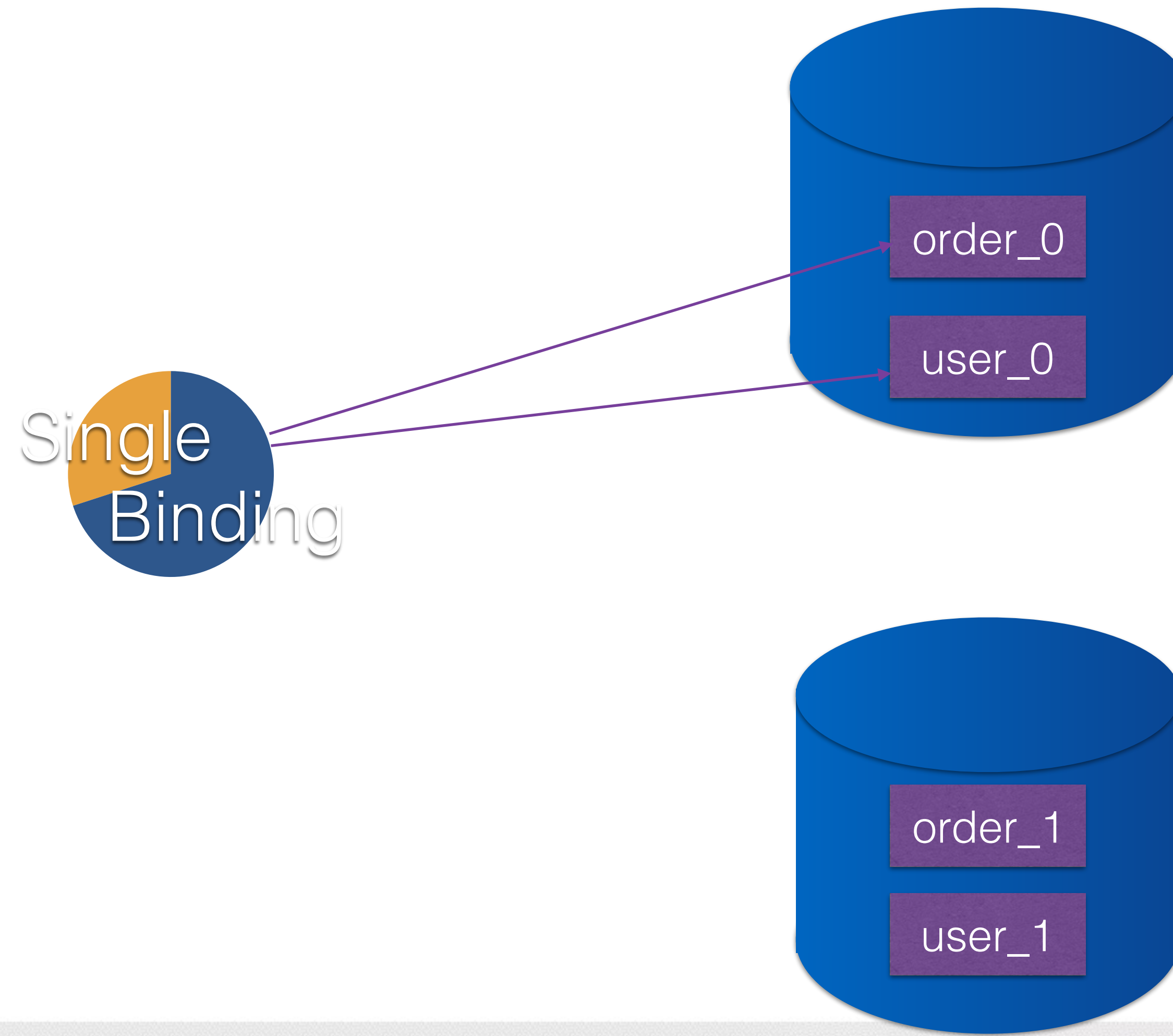
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SELECT * FROM order **WHERE order_id = 0**




```
SELECT * FROM order o join user u using user_id  
WHERE o.order_id = 0
```



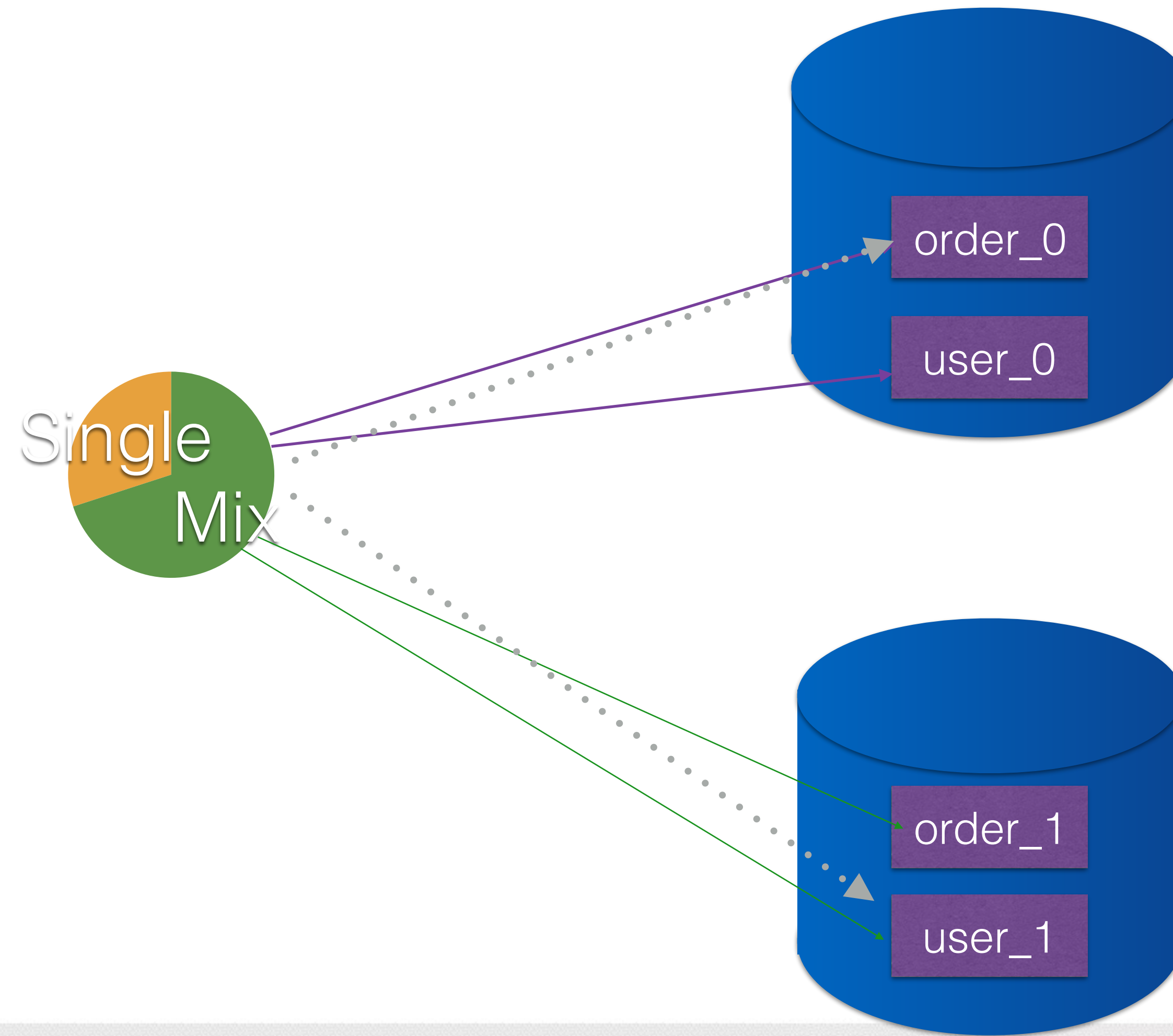
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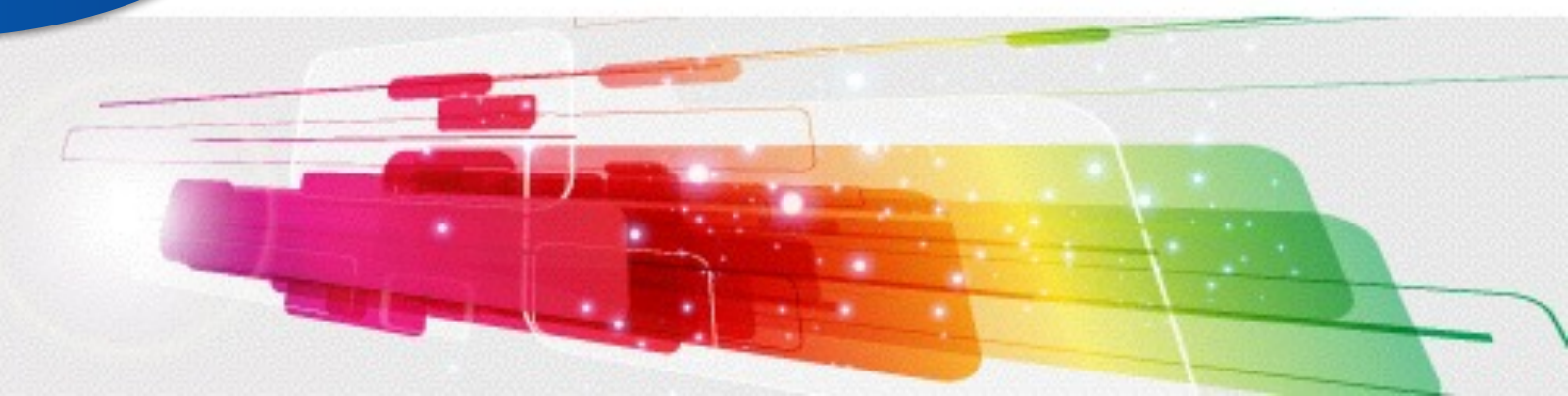

```
SELECT * FROM order o join user u using user_id  
WHERE o.order_id in (0,1) AND u.user_id in (0,1)
```



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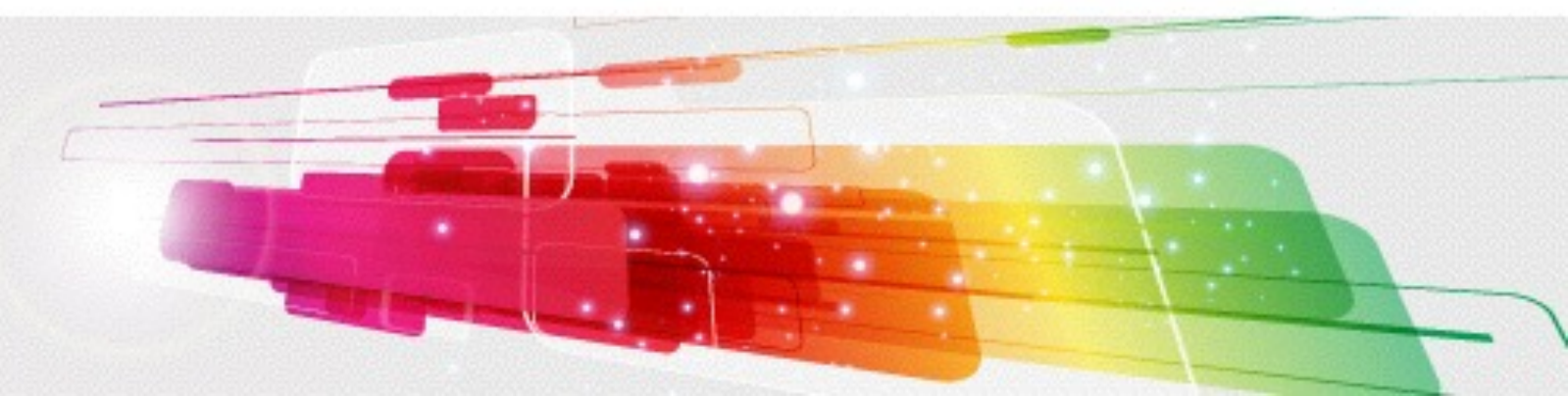


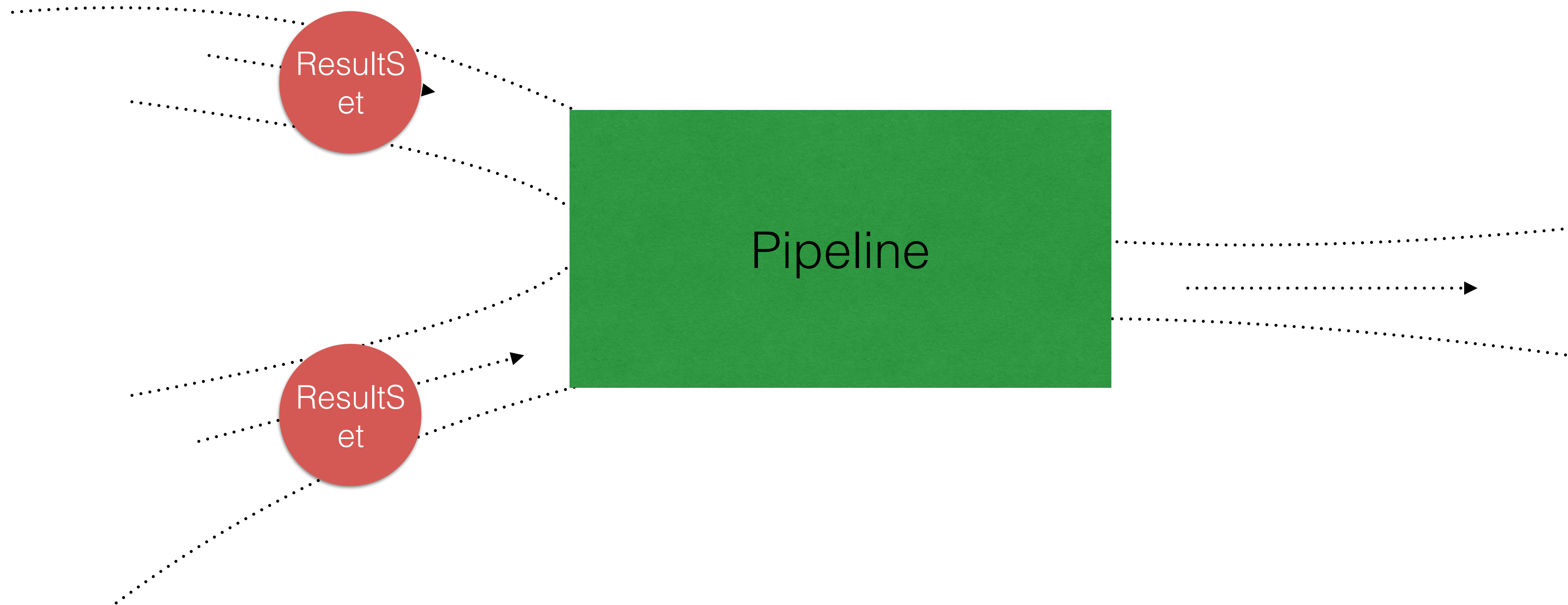


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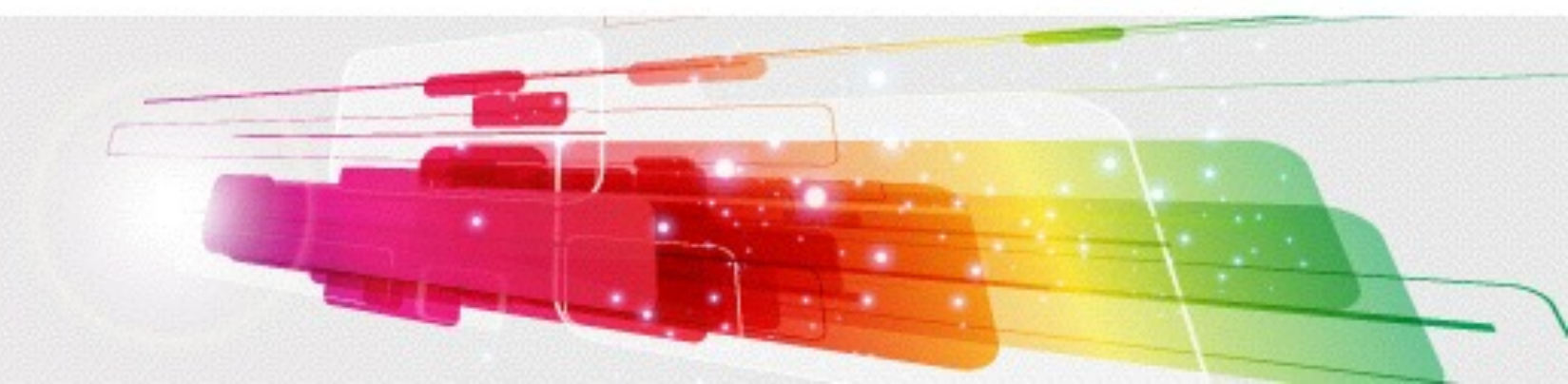


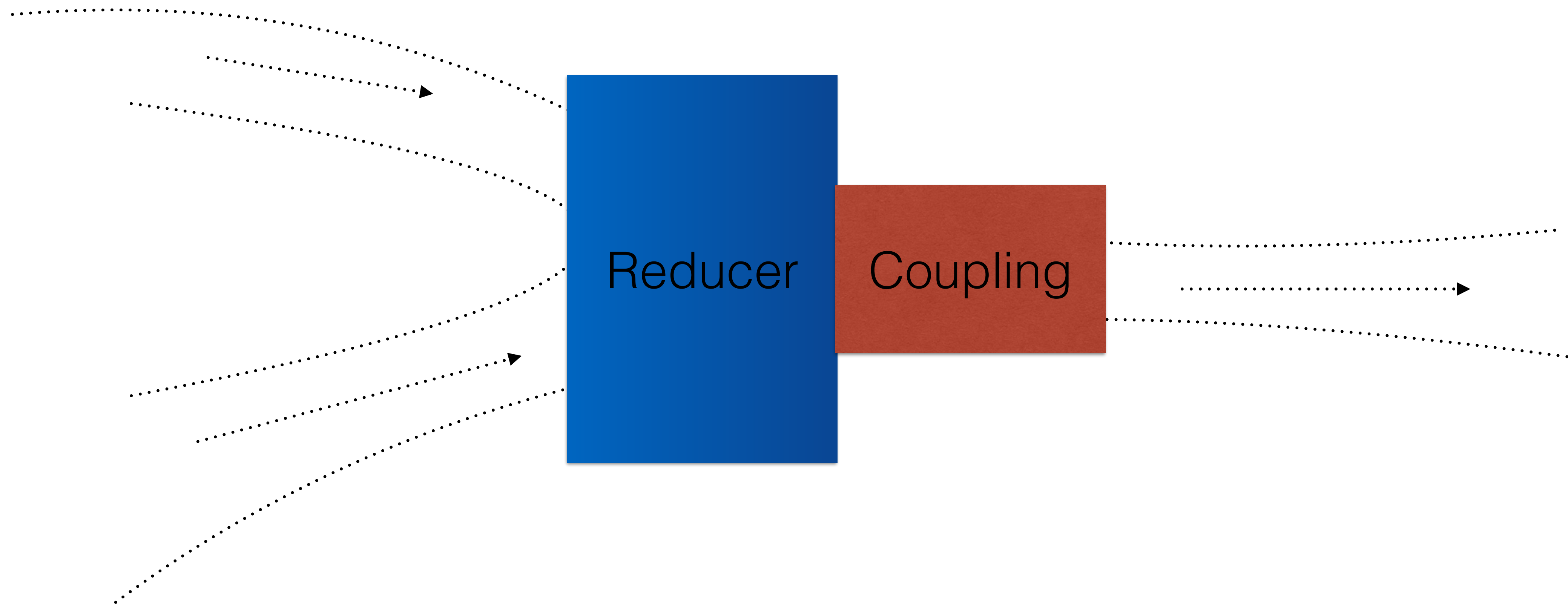


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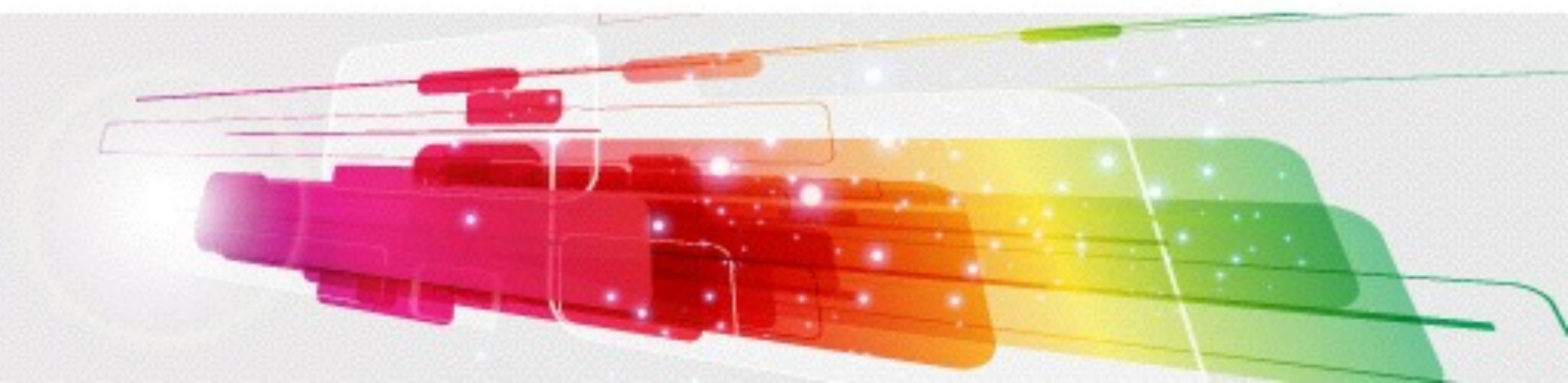




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Reducer

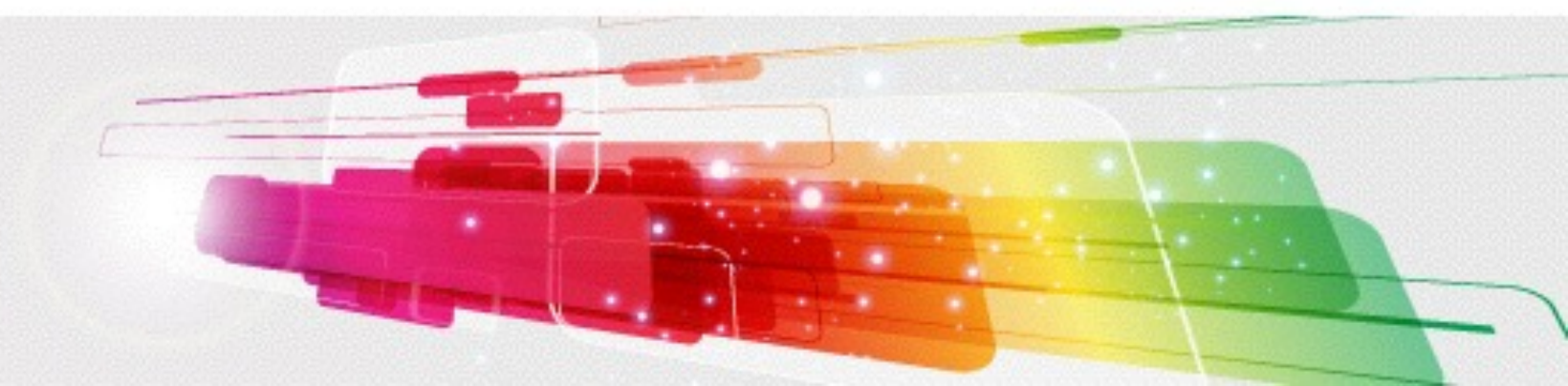
Coupling

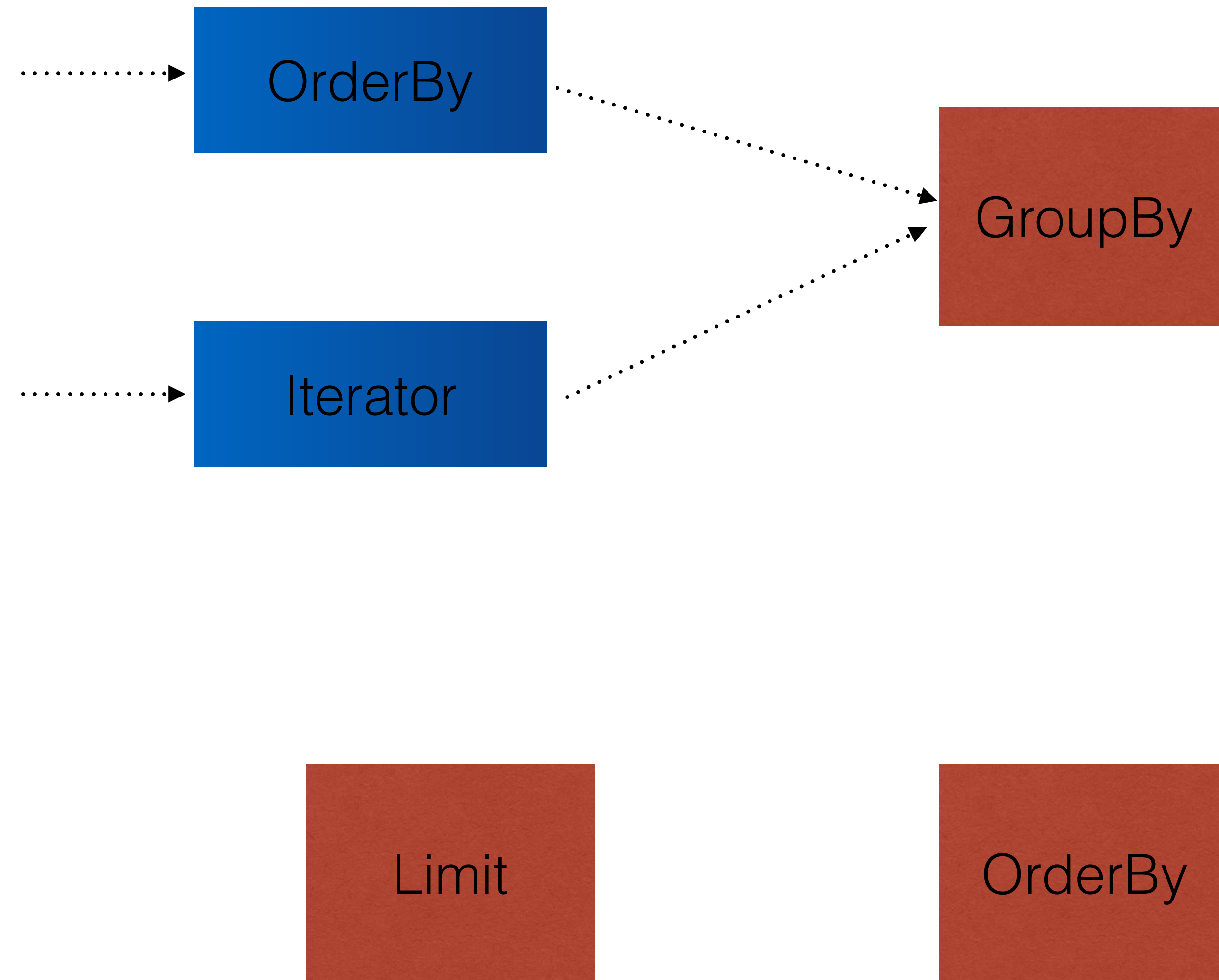


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```
SELECT price, order_date  
FROM order  
GROUP BY order_date  
ORDER BY price
```

OrderBy

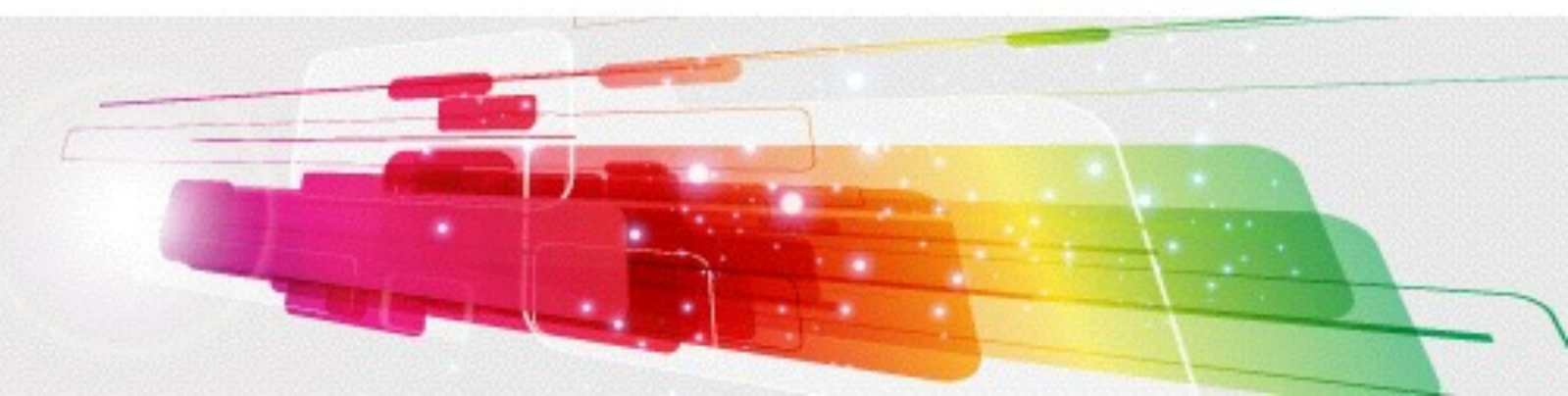
1. 存在GroupBy
2. 上游ResultSet没有按照Group Item排序

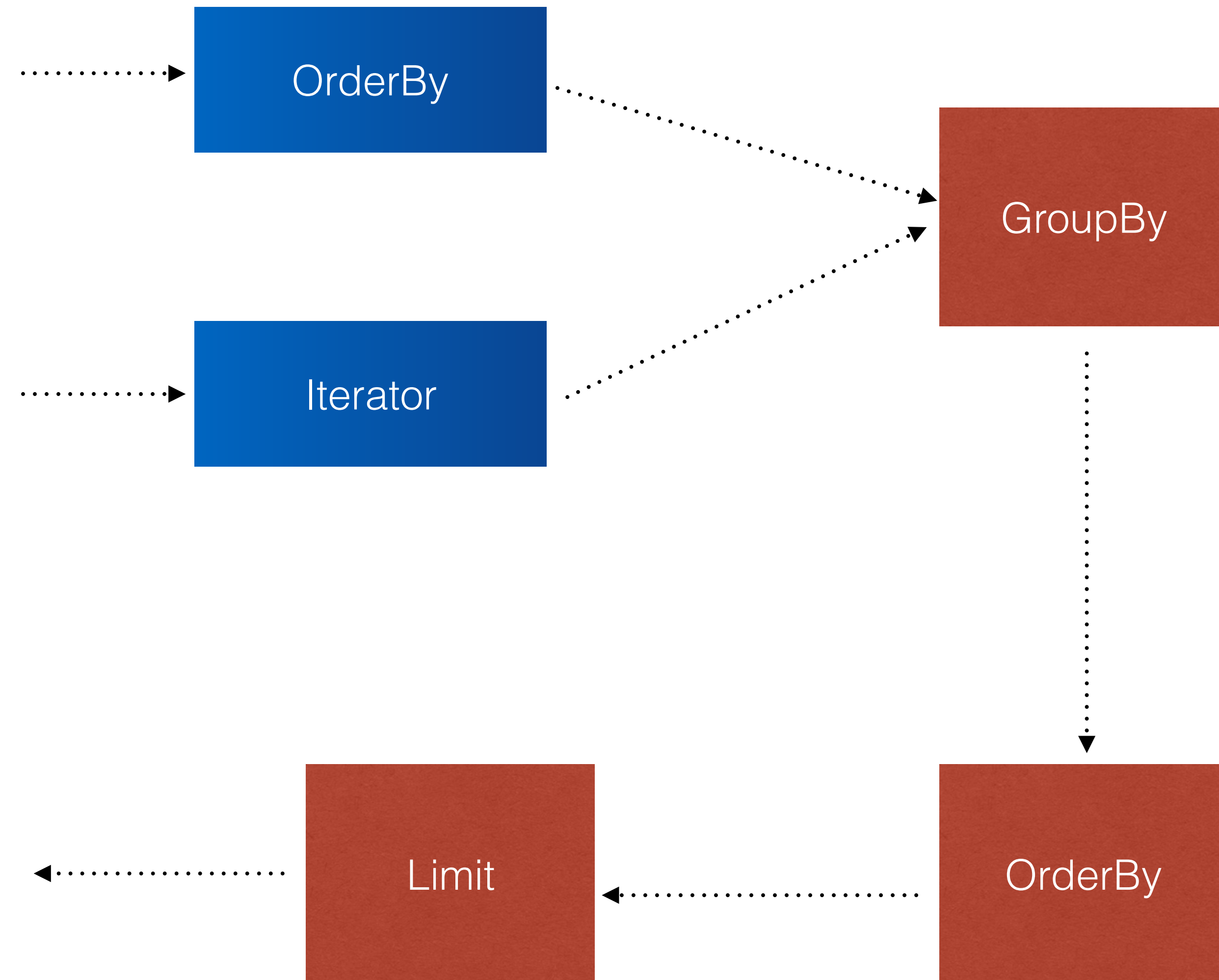


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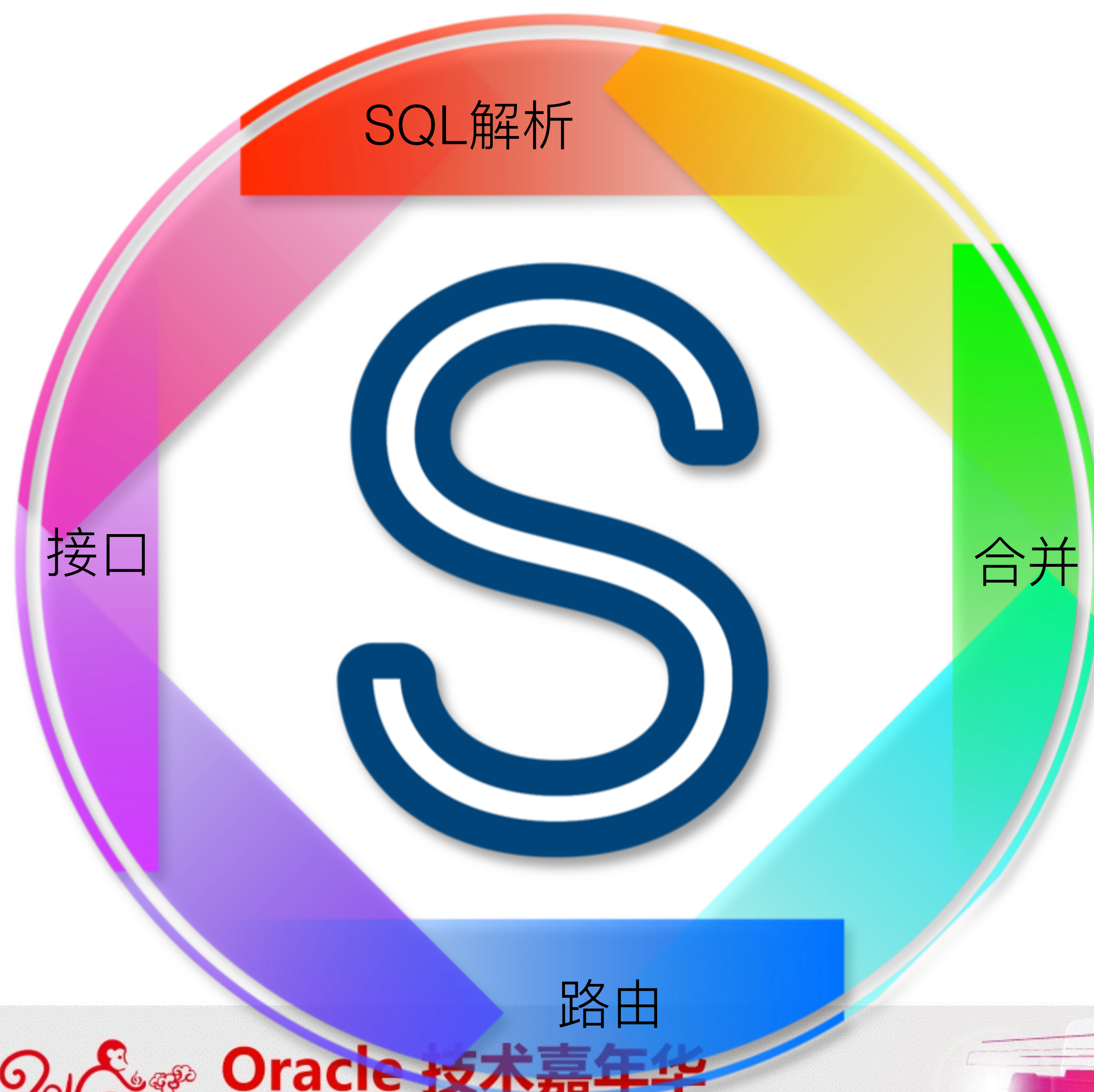


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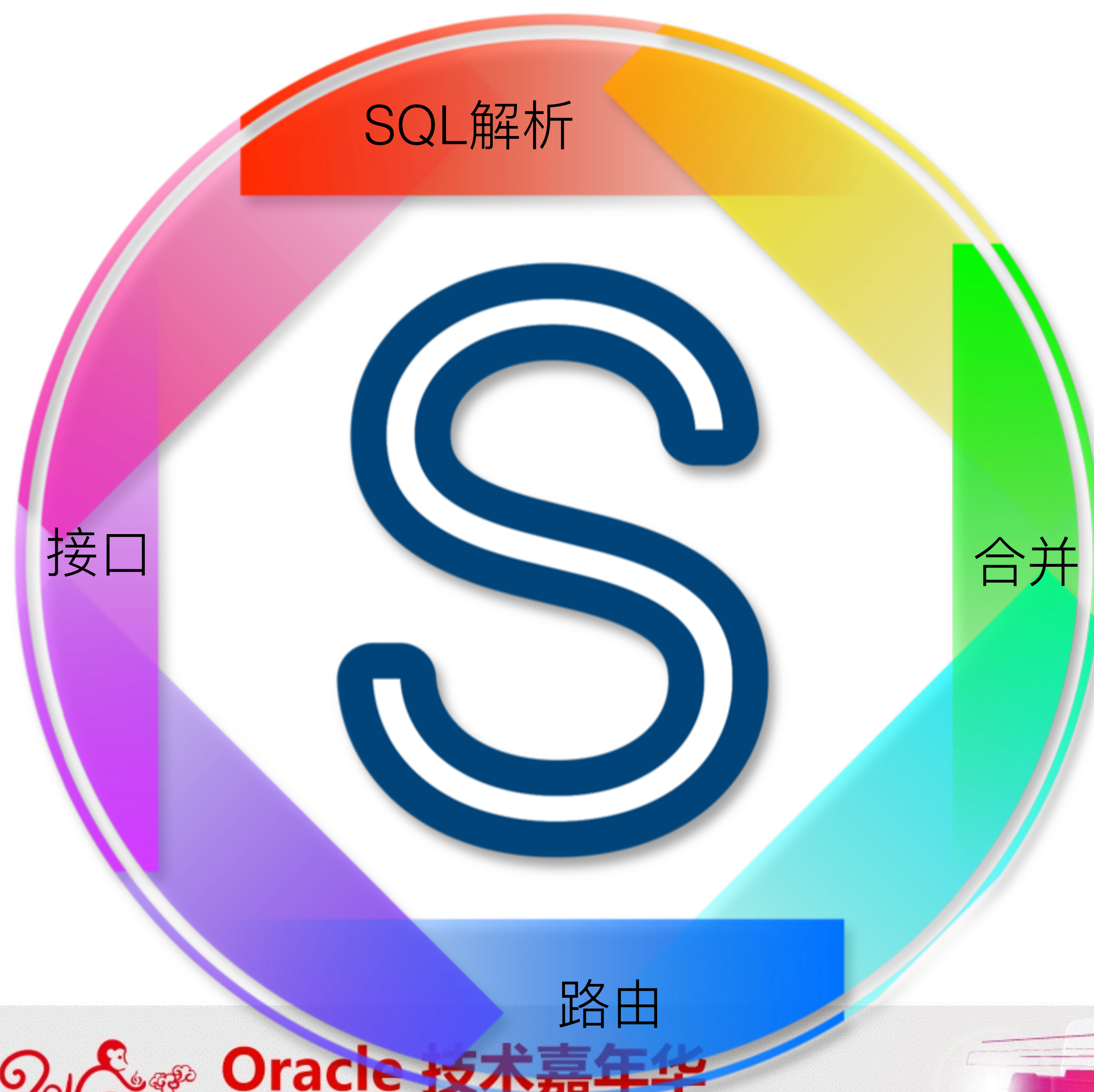


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Datasource

Connection

Statement

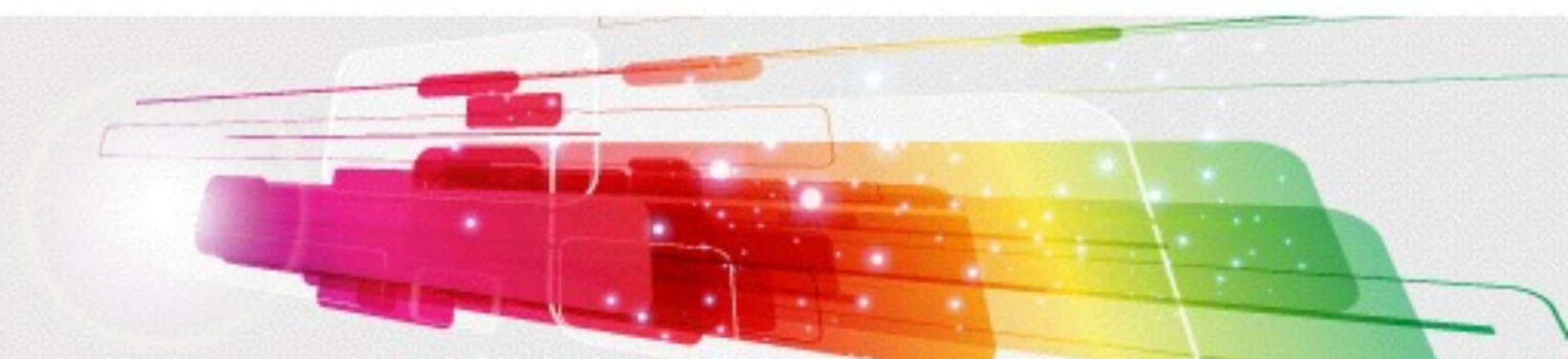
ResultSet

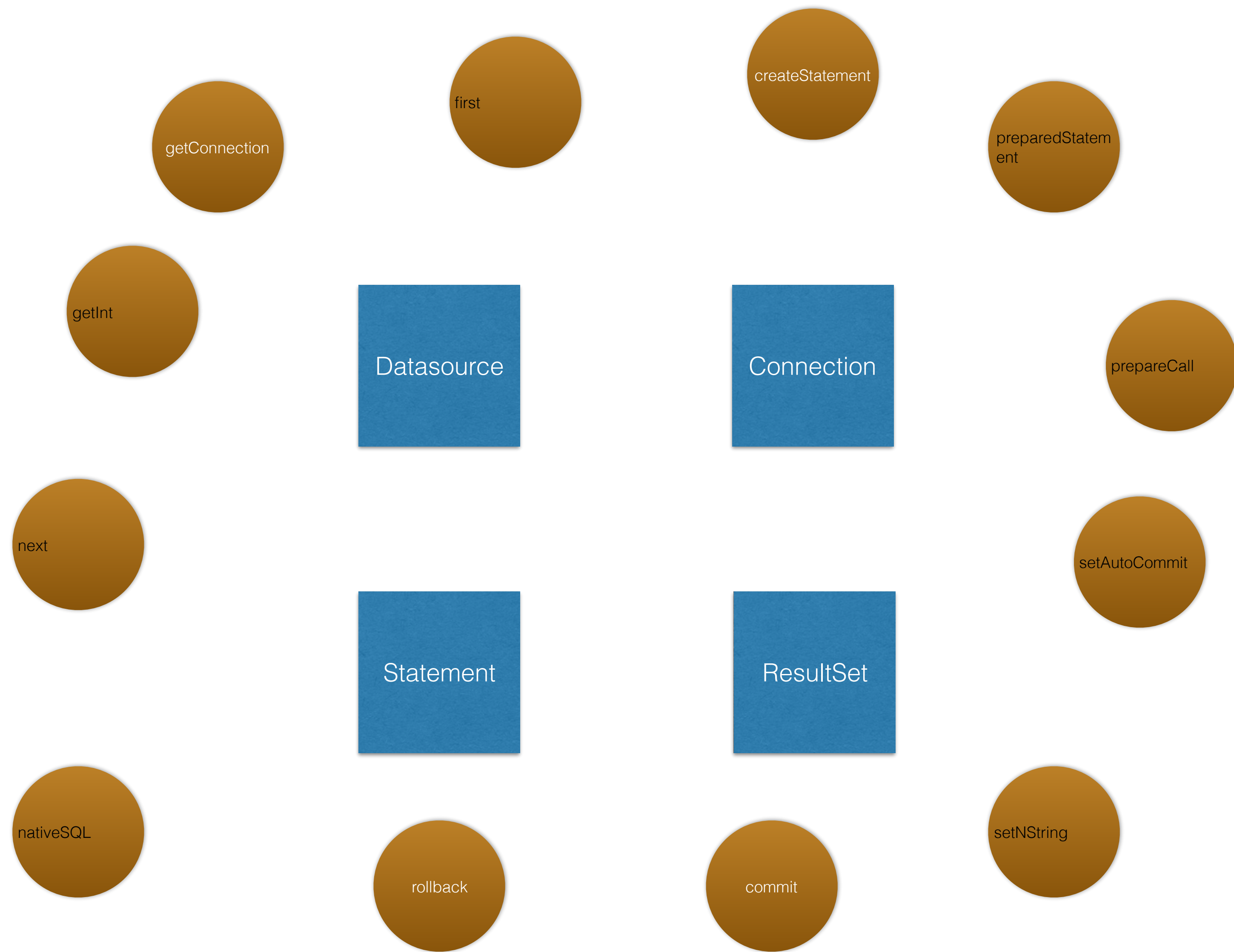


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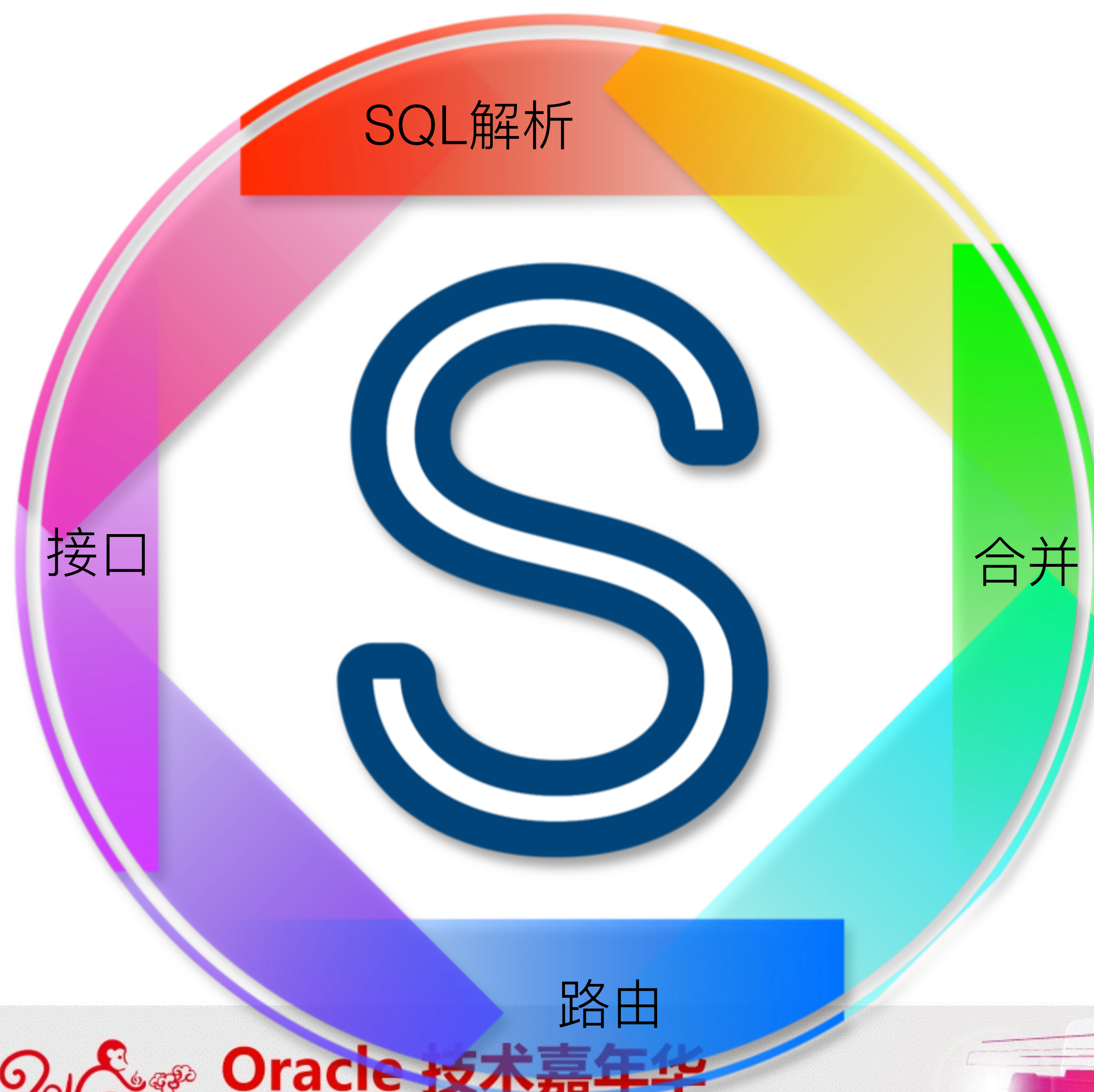


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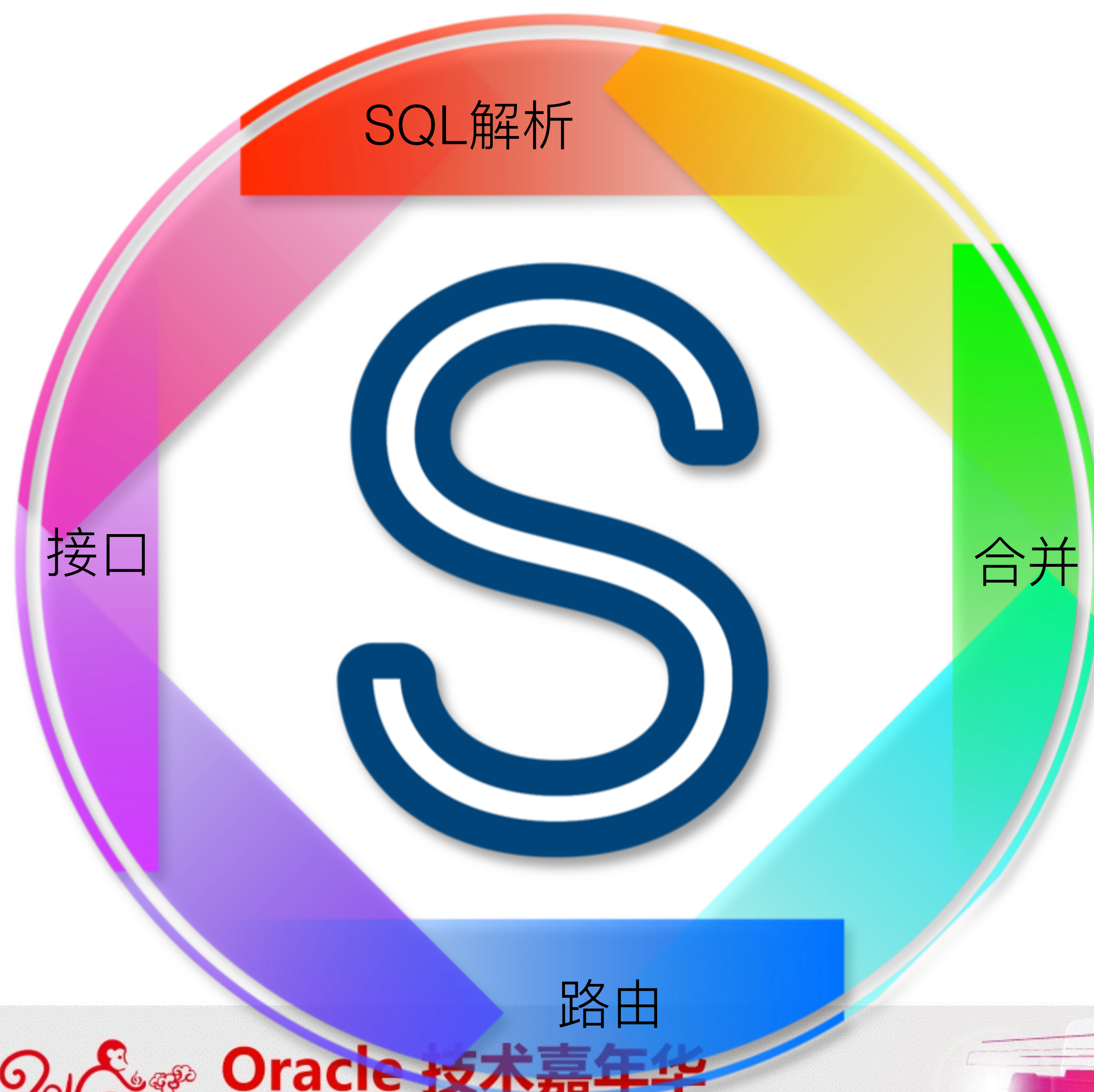


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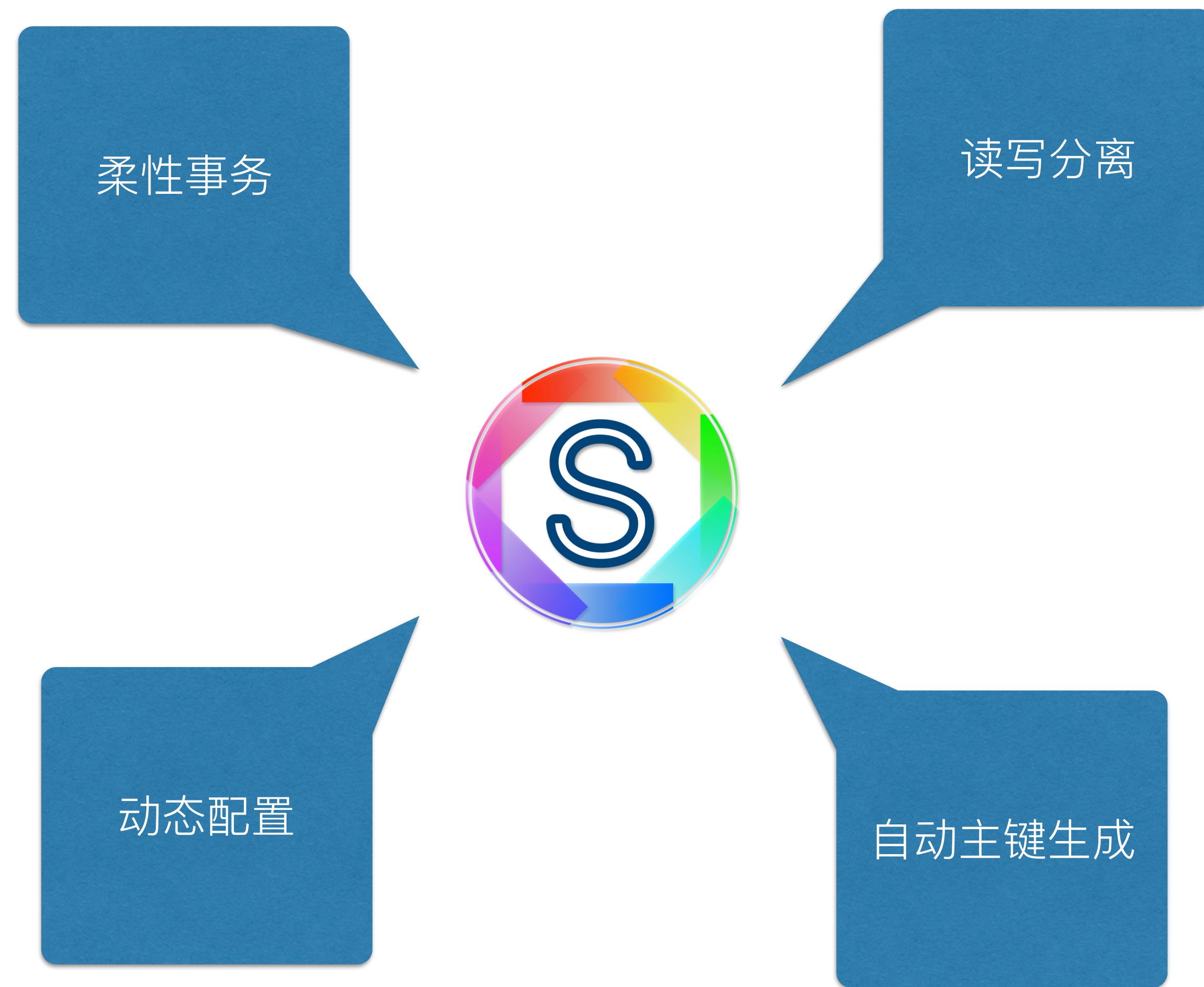


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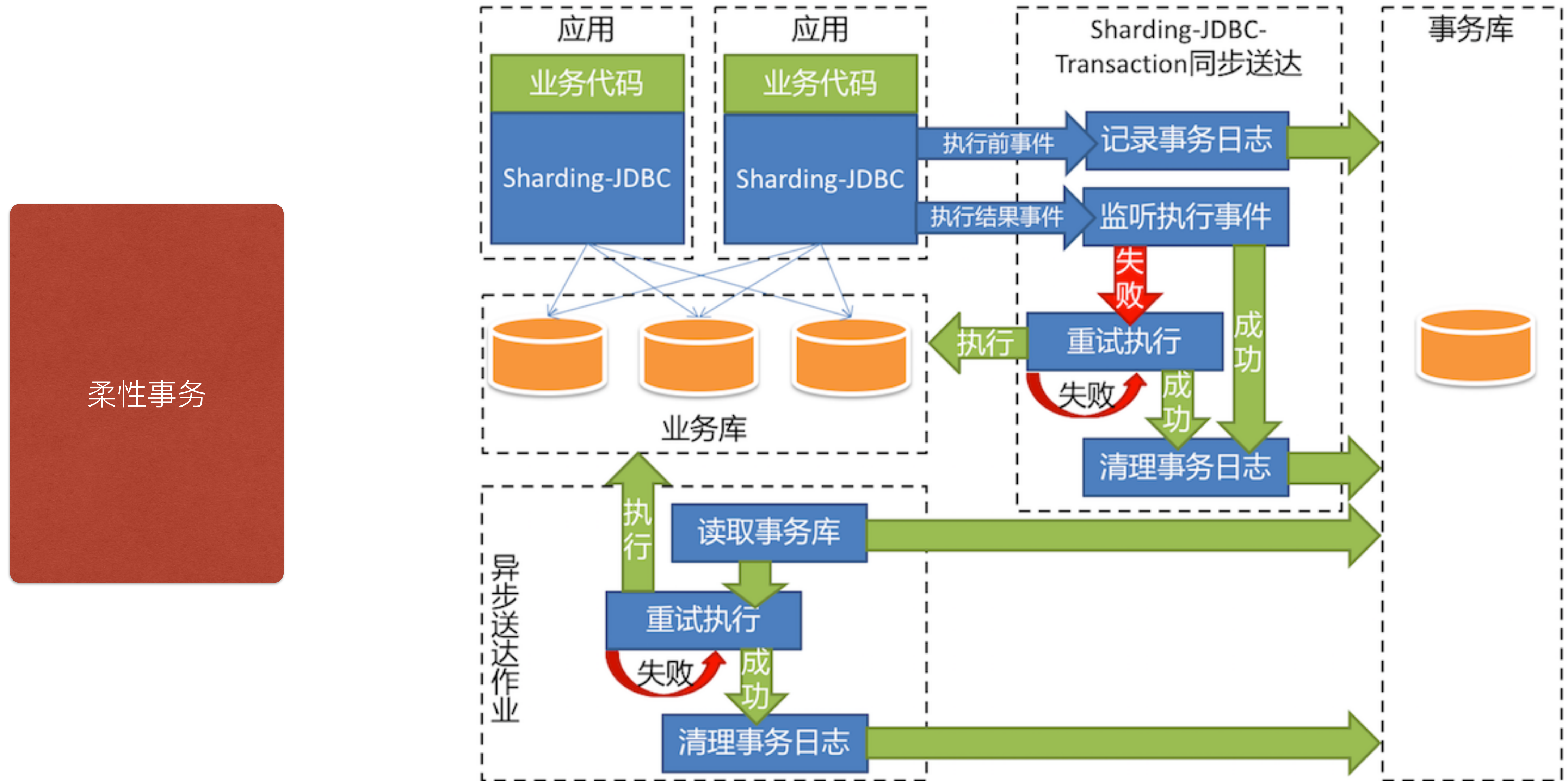
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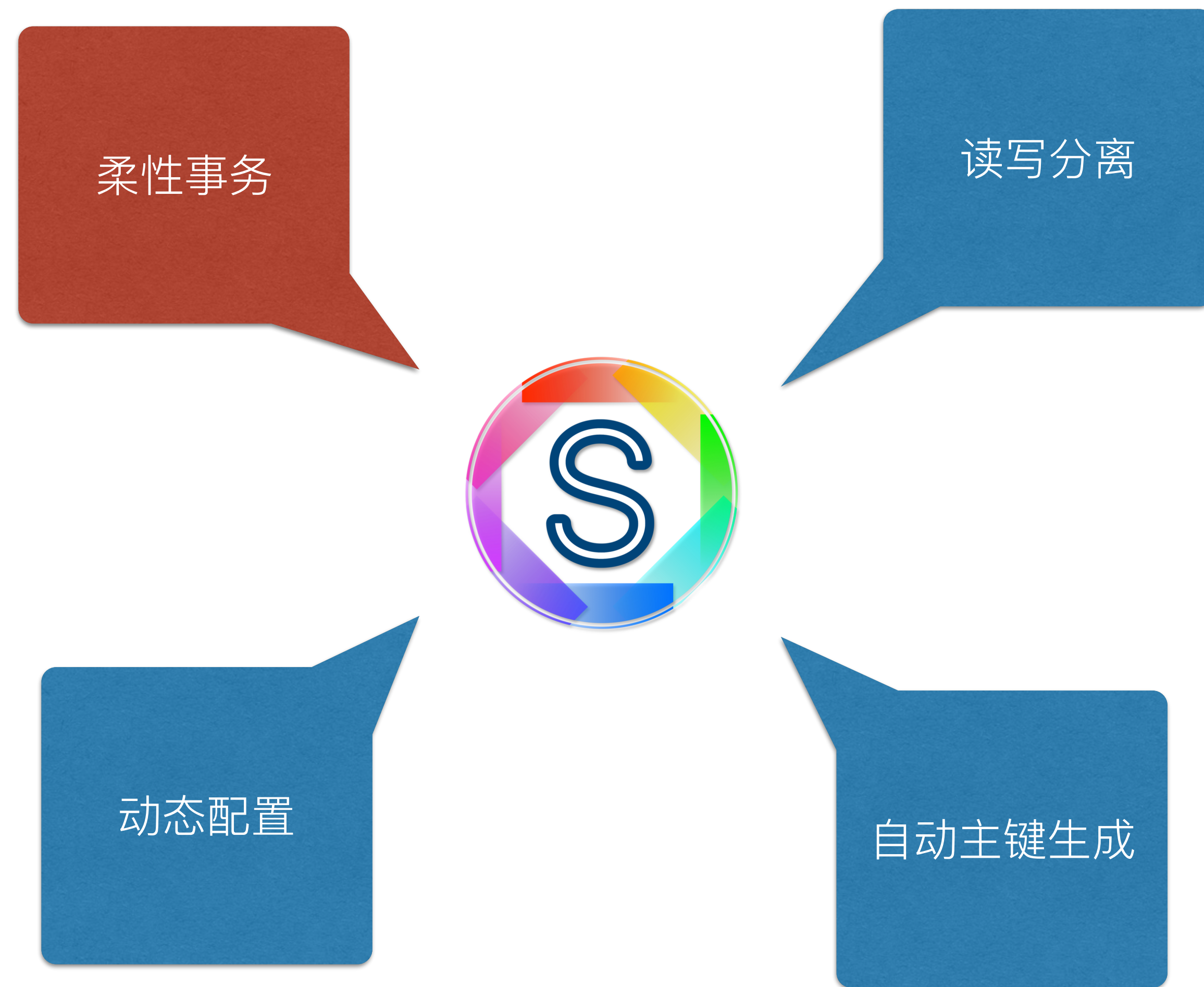


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柔性事务 – 最大努力送达型

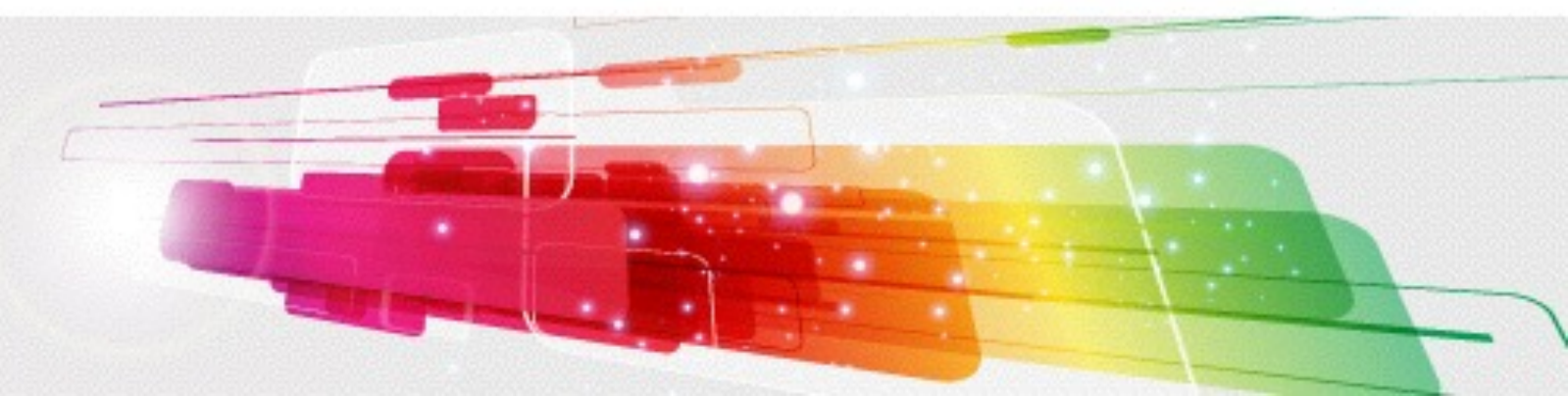


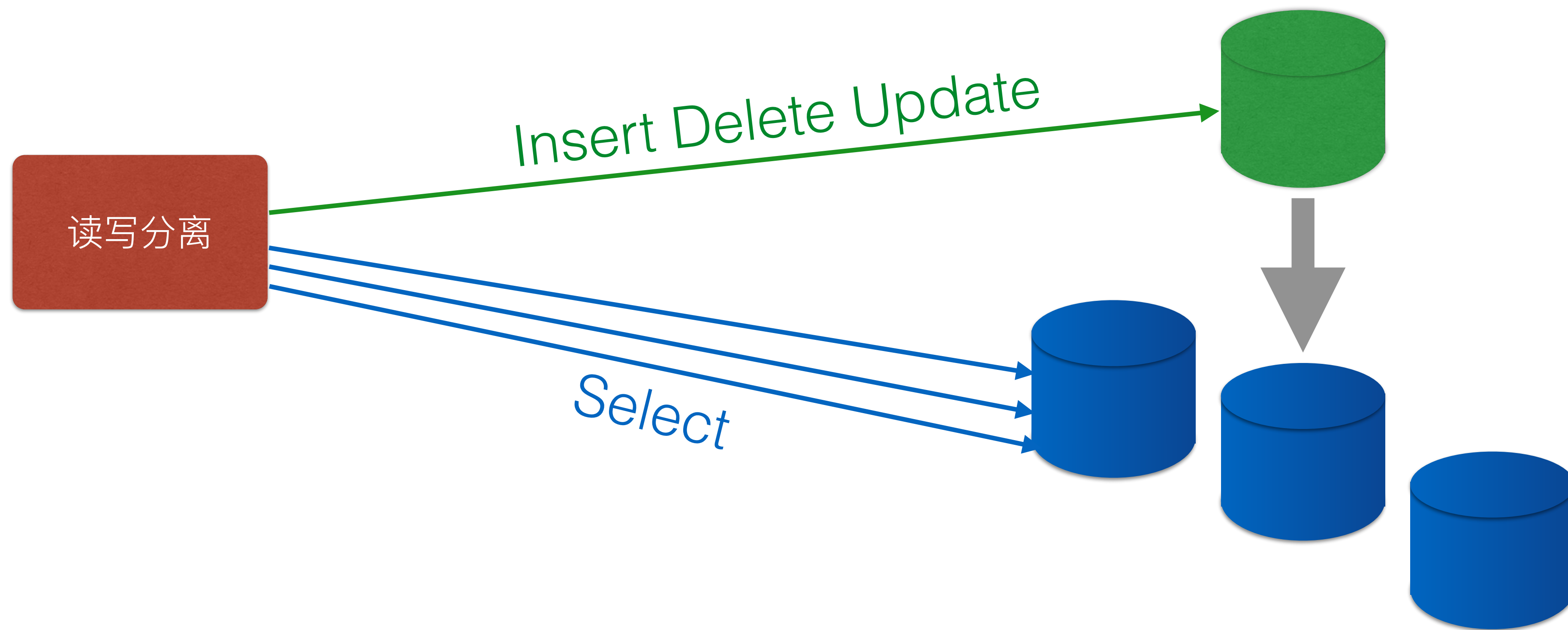


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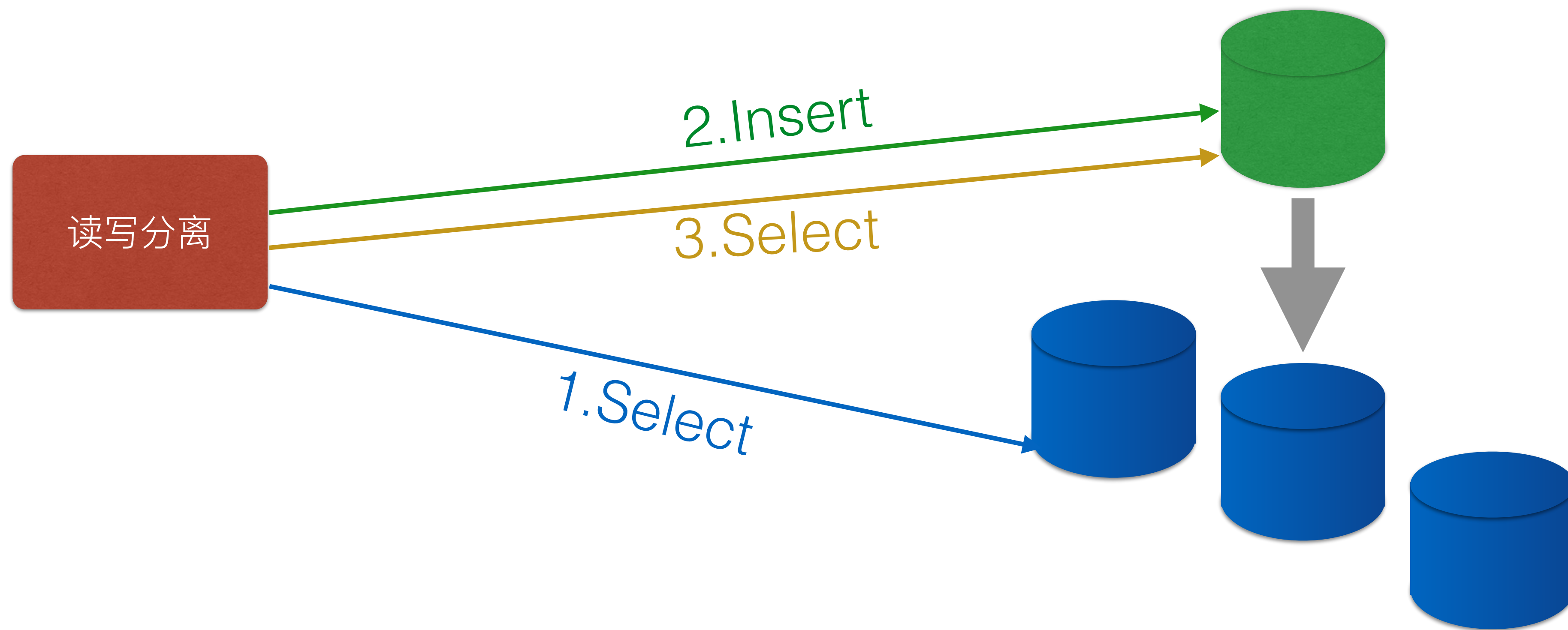


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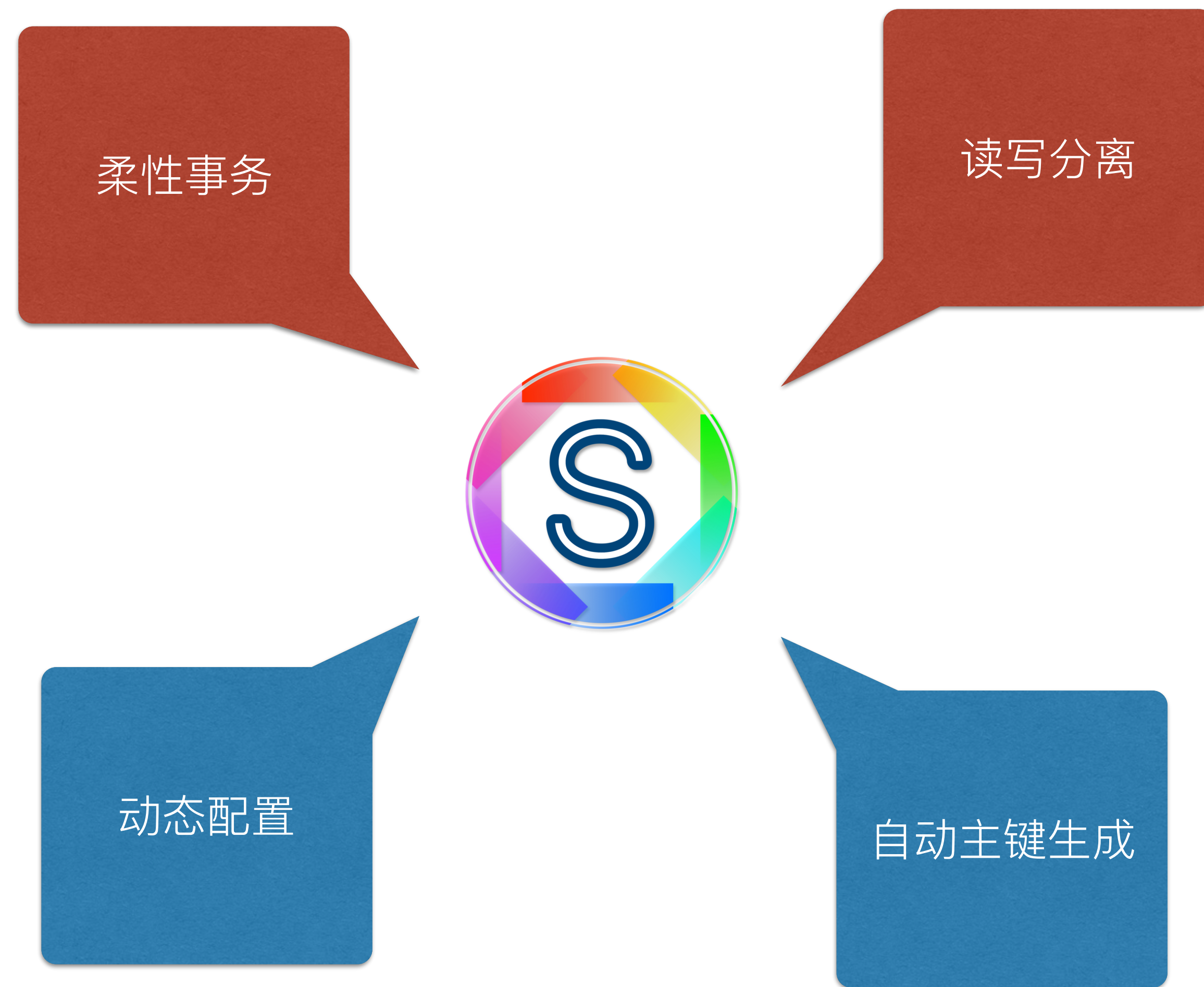


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动态配置

```
public String doEqualSharding(final Collection<String> tableNames, final ShardingValue<Integer> s
    for (String each : tableNames) {
        if (each.endsWith(shardingValue.getValue() % 2 + "")) {
            return each;
        }
        algorithmExpression: t_order_${order_id.longValue() % 2}
    }
    throw new IllegalArgumentException();
}
```

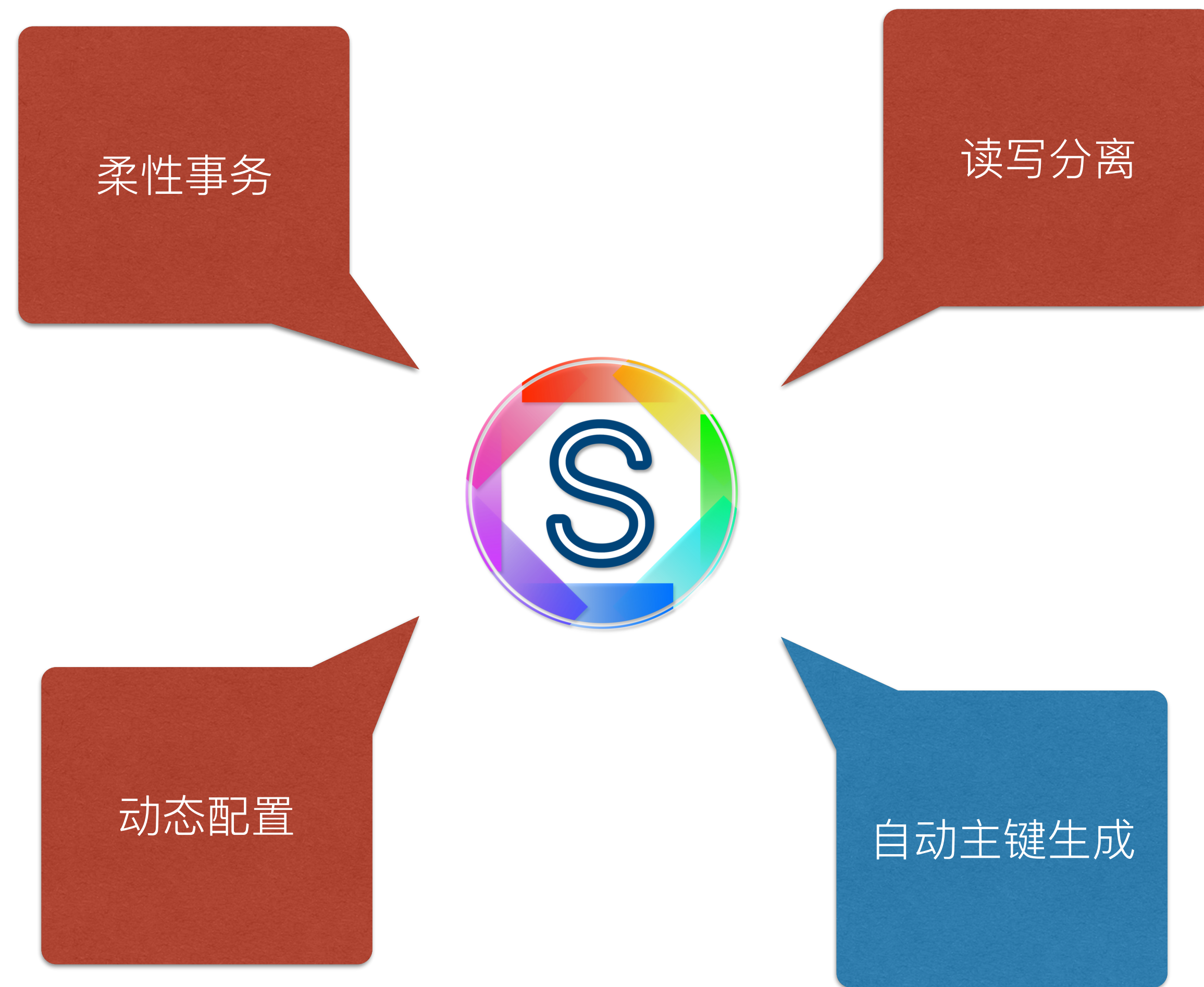


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自动主键生成

ORACLE®



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自动主键生成

LAST_INSERT_ID

IDENTITY



getGeneratedKeys



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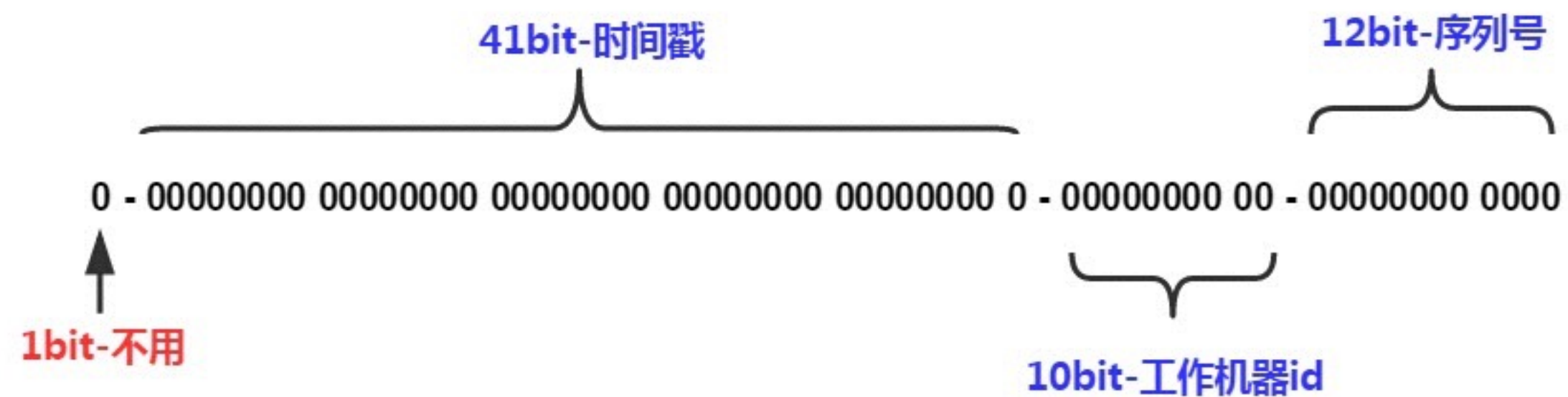


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UUID 56B 448b

snowflake-64bit



自动主键生成



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2016

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Q & A



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