```
Catalog.java文件：                          public Db getDb(String dbName) {
Db db = getDb(dbName);                          return dbCache_.get().get(dbName.toLowerCase());
                                            }

if (!catalog_.containsTable(tableName.getDb(), tableName.getTbl())) {
    throw new ImpalaRuntimeException("Table does not exist");
}
                                                                        Db.java文件：
                        return (db == null) ? false : db.containsTable(tableName);    public boolean containsTable(String tableName) {
                                                                            return tableCache_.contains(tableName.toLowerCase());
                                                                        }

Db db = catalog_.getDb(tableName.getDb());

for循环每个pglocation，执行create index语句
for (String pg_addr : pg_node_list) {
    conn.createStatement().execute(create_index);
}

在catalog元数据库中持久化
MetastoreTools mtoTools = catalog_.getMetastoreTools();          MetastoreTools.java文件：createIndex函数的实现：
if (!mtoTools.createIndex(params.getIndex(), tableName, "btree", fields)) {    mtbl = getMTable(pm, currentTransaction, tablename.getDb(), tablename.getTbl());
    return false;// fail to persist the new table                MIndex mIndex = new MIndex(indexName, mtbl, type, indexField);
}                                                               pm.makePersistent(mIndex);

                                                                fe/generated-sources/gen-java/com/cloudera/impala/thrift/TDatabase.java
                                                                函数addToIndexcache
更新db cache的indexcache内容                                      if (this.indexcache == null) {
Index idx = new Index(params.getIndex(), tableName.getTbl(), "btree", fields);        this.indexcache = new ArrayList<TIndex>();
db.thriftDb_.addToIndexcache(idx.toThrift());                    }
                                                                this.indexcache.add(elem);

    ⚠️ db.setCatalogVersion(catalog_.incrementAndGetCatalogVersion());
       更新版本会使be端调用updateCatalogCache
设置返回response.result.的catalogObject以及version
```

case CREATE_INDEX:
    createIndex(ddlRequest.getCreate_index_params(), response)

index CatalogOpExecutor.java
       函数：execDdlRequest

```
Db db = catalog_.getDb(dbName);

                                            Db.java文件：containsIndex函数
                                            if (thriftDb_.getIndexcacheSize() == 0)
if (!db.containsIndex(idxName)) {                return false;
    throw new ImpalaRuntimeException("Index does not exist");    for (TIndex tindex : thriftDb_.getIndexcache()) {
}                                               indexList.add(tindex.getName());
                                            }
                                            return indexList.contains(indexName);

for循环每个pglocation，执行drop index语句
for (String pg_addr : pg_node_list) {
    conn.createStatement().execute(drop_index);
}

在catalog元数据库中删除持久化的index
MetastoreTools mtoTools = catalog_.getMetastoreTools();      MetastoreTools.java文件：dropIndex函数的实现：
if (!mtoTools.dropIndex(dbName, idxName)) {                  MIndex mindex = getMIndex(pm, currentTransaction, dbName, indexName);
    return false;// fail to persist the new table            pm.deletePersistent(mindex);
}

                                    for (int i=0;i<thriftDb_.getIndexcacheSize();i++) {
                                        if (thriftDb_.getIndexcache().get(i).name.equalsIgnoreCase(indexName)) {
更新db cache的indexcache内容                     thriftDb_.indexcache.remove(i);
db.removeIndex(idxName);                            break;
                                        }
                                    }

db.setCatalogVersion(catalog_.incrementAndGetCatalogVersion());
设置返回response.result.的catalogObject以及version
```

case DROP_INDEX:
    dropIndex(ddlRequest.getDrop_index_params(), response)