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cursor.explain(verbosity)

Provides information on the query plan for the `db.collection.find()` method.

Sintaxis

```
db.collection.find().explain()
```

The `explain()` method has the following parameter:

Parameter	Type	Description
verbose	string	<p>Optional. Specifies the verbosity mode for the explain output. The mode affects the behavior of <code>explain()</code> and determines the amount of information to return. The possible modes are: "queryPlanner", "executionStats", and "allPlansExecution".</p> <p>Default mode is "queryPlanner".</p>

The `explain()` method returns a document with the query plan and, optionally, the execution statistics.

Verbosity Modes

The behavior of `cursor.explain()` and the amount of information returned depend on the verbosity mode.

queryPlanner Mode

By default, `cursor.explain()` runs in queryPlanner verbosity mode.

MongoDB runs the query optimizer to choose the winning plan for the operation under evaluation. `cursor.explain()` returns the queryPlanner information for the evaluated method.

executionStats Mode

MongoDB runs the query optimizer to choose the winning plan, executes the winning plan to completion, and returns statistics describing the execution of the winning plan.

`cursor.explain()` returns the queryPlanner and executionStats information for the evaluated method. However, executionStats does not provide query execution information for the rejected plans.

allPlansExecution Mode

MongoDB runs the query optimizer to choose the winning plan and executes the winning plan to completion. In "allPlansExecution" mode, MongoDB returns statistics describing the execution of the winning plan as well as statistics for the other candidate plans captured during plan selection.

`cursor.explain()` returns the queryPlanner and executionStats information for the evaluated method. The executionStats includes the completed query execution information for the winning plan.

If the query optimizer considered more than one plan, executionStats information also includes the partial execution information captured during the plan selection phase for both the winning and rejected candidate plans.

`db.collection.explain().find()`

`db.collection.explain().find()` is similar to `db.collection.find().explain()` with the following key differences:

- The `db.collection.explain().find()` construct allows for the additional chaining of query modifiers. For list of query modifiers, see `db.collection.explain().find().help()`.
- The `db.collection.explain().find()` returns a cursor, which requires a call to `.next()`, or its alias `.finish()`, to return the `explain()` results.

Output

`cursor.explain()` operations can return information regarding:

- `queryPlanner`, which details the plan selected by the query optimizer and lists the rejected plans;
<https://docs.mongodb.com/manual/reference/explain-results/#queryplanner>
- `executionStats`, which details the execution of the winning plan and the rejected plans; and
<https://docs.mongodb.com/manual/reference/explain-results/#executionstats>
- `serverInfo`, which provides information on the MongoDB instance.
<https://docs.mongodb.com/manual/reference/explain-results/#serverinfo>

The verbosity mode (i.e. `queryPlanner`, `executionStats`, `allPlansExecution`) determines whether the results include `executionStats` and whether `executionStats` includes data captured during plan selection.