

# Graql Cheatsheet ^ 1.3

---

This cheatsheet is a quick reference guide for those already familiar with Graql. For further information and additional documentation, please see the Graql section on our developer portal at [dev.grakn.ai/docs](https://dev.grakn.ai/docs).

## Variables

Variables start with \$ followed by alphanumeric characters.

## Match clause

A match query will search the graph for any subgraphs that match the given pattern.

**match { pattern; }+ [modifiers]**

```
match $x isa person; get;
```

```
# Match several patterns together
match $x isa person, has firstname "John"; get;
```

## Modifiers

```
# Get particular variables from the query
match $x isa person, has firstname $f, has surname $s;
get $f, $s;
```

```
# Skip some results & limit the number returned
match $x isa person, has identifier $id;
limit 10; offset 5; get;
```

```
# Order by variable [ asc | desc ]
match $x isa person, has surname $n;
order by $n desc; get;
```

## Get Query

An `get` query will return the answers that satisfies the match patterns.

**Match { pattern }+ get;**

```
match $x isa person, has name "James Cameron";
get $x;
```

## Insert Query

An insert query will insert the specified variable patterns into the graph.

**[ match { pattern }+ ] insert { pattern }+**

```
insert has identifier "Titus Groan" isa person;
```

If a match query is provided, the query will insert the given variable patterns for every result of the match query.

```
match $p has identifier "Minnie Downs";
insert $p has middlename "Mathilda";
```

```
match $b has name "Tim Burton";
$m isa movie; (director: $b, $m);
match $d has name "Johnny Depp"; get;
```