

## QUERYING

TASK: write a query to find all the RAs under 40 years old. Hint: use `$lt` for less than.

```
db.hwuPeople.find({role: "ra", age: {$lt: 40}})
```

TASK: Sort the entire list of people by age; use ascending order.

```
db.hwuPeople.find().sort({age: 1})
```

## INSERTING, UPDATING & REMOVING

TASK: add yourself, specifying your `_id` manually. HINT: treat `"_id"` as just another name/value pair.

```
db.hwuPeople.insert({_id: "somethingUnique", first_name: "joe", last_name: "blogs", age: 21, role: "msc", id: "jb33"})
```

TASK: update your information to provide your email address and your title (e.g., mr, ms etc.).

```
db.hwuPeople.update({_id: "somethingUnique"}, {$set: {email: "jb33@hw.ac.uk", title: "mr"}})
```

TASK: Write an upsert query to properly insert Andy Proudlove into the database.

There are many possibilities, but something like this works:

```
db.hwuPeople.update({first_name: "andy", last_name: "proudlove"}, {first_name: "andy", last_name: "proudlove", role: "ra", age: 47}, {upsert: true})
```

TASK: Use the *remove* command to delete Joe Bloggs from the database.

```
db.hwuPeople.remove({id: "jb33"})
```

## FINAL EXERCISE

Create a new collection (called "exercise") that includes the following information:

```
db.exercise.insert({_id: "ab1", name: "albert burger", role: "supervisor"})
```

```
db.exercise.insert({_id: "ag1", name: "alasdair grey", role: "supervisor"})
```

```
db.exercise.insert({_id: "iw1", name: "iain wiles", role: "phd", supervisor: ["ag1"]})
```

```
db.exercise.insert({_id: "ss1", name: "steve smith", role: "phd", supervisor: ["ag1", "ab1"]})
```

```
db.exercise.insert({_id: "hg1", name: "hugh dollar", role: "phd", supervisor: ["ab1"]})
```

Now construct an optimized query to list all of Dr Grey's students.

```
db.exercise.ensureIndex({supervisor: 1})
```

```
db.exercise.find({supervisor: "ag1"})
```

Write a second query to find all the students with 2 supervisors.

HINT: use the condition *\$size: 2*.

```
db.exercise.find({supervisor : {$size : 2}})
```