

COMP 4958: Lab 4

In this lab, you are asked to implement a dynamic supervisor for creating OTP servers based on the `Mydb` module (suitably modified). For this exercise, each `Mydb` worker (under the dynamic supervisor) does not need to retain its state after a crash. Recall that the dynamic supervisor is itself under the supervision of the application supervisor & that the dynamic supervisor is responsible for the `Mydb` workers it starts. Note also that the application supervisor needs to start the process registry as well.

The dynamic supervisor needs to provide functions to start & stop a `Mydb` worker:

```
start_db(dbname :: string) :: {:ok, pid}
stop_db(dbname :: string) :: :ok
```

Each `Mydb` worker provides the following functions:

```
store(dbname, key, value) => :ok
find(dbname, key) => {:ok, value} | {:error, :not_found}.
match(dbname, value) => [key1, ..., keyN].
```

Name your project `mydb`. The code for the dynamic supervisor should be in a module named `Mydb.WorkerSupervisor` & the code for a `Mydb` worker should be in a module named `Mydb.Worker`.

Provide a file of iex commands to start the dynamic supervisor & several `Mydb` workers. Also provide tests for these workers.