

COMP 4958: Lab 3

1. Use `mix` to create a project for `Mydb` servers that we saw from the previous lab. For this lab, the server is implemented using the `GenServer` behaviour & resides in a module named `Mydb.Server`. The client API should include the following:

```
Mydb.Server.start()  
Mydb.Server.store(pid, key, value)  
Mydb.Server.find(pid, key)  
Mydb.Server.match(pid, value)
```

Note that this server is not registered & hence some of the functions require a `pid` parameter. Make `store` a “cast” operation; `find` & `match` are “call” operations & they return the same values as in the previous lab.

2. Add a lookup server for `Mydb` servers. Name the module `Mydb.Lookup`. This should be a registered server implemented using the `GenServer` behaviour. Besides `start`, the main function in its client API is `get_pid(name)`. This function returns the PID of the `Mydb` server associated with the given name; if no server is associated with the name, `get_pid` starts a new `Mydb` server & associates its PID with the name. Note that a `Mydb` server does not have a name (i.e., it is not registered); it is the lookup server that associates it with a name.