Case0 (setup) : Start database workers

```
Compiling 1 file (.ex)
warning: variable "e" is unused (if the variable is not meant to be used, prefix it with an underscore)
  lib/todo/auth.ex:34: Todo.Auth.login_username_check/2

Interactive Elixir (1.10.3) - press Ctrl+C to exit (type h() ENTER for help)
iex(1)> Todo.System.start_link
Starting database worker 1
Starting database worker 2
Starting database worker 3
Starting to-do cache
{:ok, #PID<0.151.0>}
```

Case 2: Start cache server -> exit option ->failed

```
iex(2)> Todo.Cache.server_process("bill")
Starting to-do server for auth_server...
Are you going to login, no for sign up[y/n/exit]:exit
Authentification Failed, Please try again.
:failed
```

Case 3 Start cache server -> login -> check user exist(false) -> failed

```
iex(3)> Todo.Cache.server_process("bill")
Are you going to login, no for sign up[y/n/exit]:y
user not exist! please try again
Authentification Failed, Please try again.
:failed
```

Case 4: Start cache server -> login -> check user exist(true) -> enter password -> check password(true) ->
success

```
iex(2)> Todo.Cache.server_process("bill")
Starting to-do server for auth_server...
Are you going to login, no for sign up[y/n/exit]:y
user check result: exit
user login_loop page:
username: bill
password[enter password]: 123456
login success, welcom back :)
Starting to-do server for bill...
#PID<0.148.0>
```

Case 5 Start cache server -> login -> check user exist(true) -> enter password -> check password(false) ->
enter password loop

```
iex(5)> Todo.Cache.server_process("bill")
Are you going to login, no for sign up[y/n/exit]:y
user check result: exit
user login_loop page:
username: bill
password[enter password]: 1234
confirm password doesn't match, please try again
user login_loop page:
username: bill
password[enter password]: 1234
confirm password doesn't match, please try again
user login_loop page:
username: bill
password[enter password]:
```

Case 6 Start cache server -> sign up -> check user exit(true) -> create password -> enter confirm password -> goto Case 4 (success)

```
iex(4)> Todo.Cache.server_process("bill")
Are you going to login, no for sign up[y/n/exit]:n
user register_loop page:
username: bill
new password[enter password]: 123456
confirm password[enter password]: 123456
register success, redirecting to login page...
user check result: exit
user login_loop page:
username: bill
password[enter password]: 123456
login success, welcom back :)
Starting to-do server for bill...
#PID<0.165.0>
```

Case 7 Start cache server -> sign up -> check user exit(false) -> failed

```
iex(3)> Todo.Cache.server_process("bill")
Are you going to login, no for sign up[y/n/exit]:n
Error: the user name 'bill' has already been taken by others, please exit and change another username
Authentification Failed, Please try again.
:failed
```

Case 8 Start cache server -> sign up -> check user exit(true) -> create password -> enter confirm password -> not match -> enter password loop

```
iex(4)> Todo.Cache.server_process("Tom")
Are you going to login, no for sign up[y/n/exit]:n
user register_loop page:
username: Tom
new password[enter password]: 123456
confirm password[enter password]: 123
confirm password doesn't match, please try again
user register_loop page:
username: Tom
new password[enter password]: 123456
confirm password[enter password]: 123
confirm password doesn't match, please try again
user register_loop page:
username: Tom
new password[enter password]: []
```