Mutation testing - LoginController

Testing framework: Mocha@10.8.2
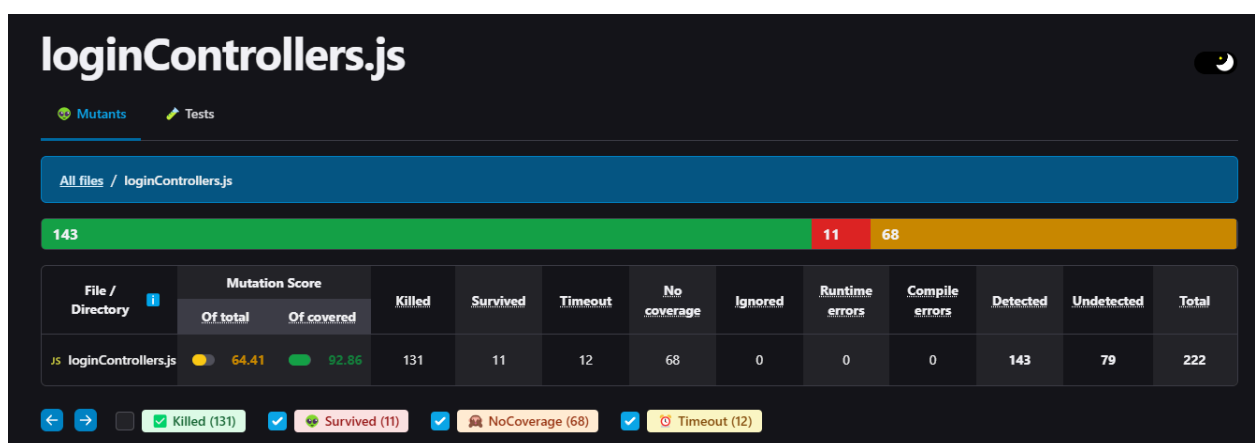**Assertion library used**: Chai@4.3.4
Other: Sinon@19.0.2

Scope of testing: The loginController contains various asynchronous functions handling user login, signup, password reset, OTP verification, and session management processes. Following are the functions under test:
- createLoginData
- checkLoginCredential
- postNewPassword
- postForgotPassword
- Logout
- postPassword
- getUserDetails

Below is the result obtained by running the test file on the mutated code:

```
-------------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
                   | % Mutation score  |           |           |           |           |           |           |
File               | total  | covered  | # killed  | # timeout | # survived| # no cov  | # errors  |
-------------------|--------|----------|-----------|-----------|-----------|-----------|-----------|
All files          | 64.41  |   92.86  |    131    |     12    |     11    |     68    |      0    |
 loginControllers.js| 64.41 |   92.86  |    131    |     12    |     11    |     68    |      0    |
-------------------|--------|----------|-----------|-----------|-----------|-----------|-----------|
03:12:08 (24068) INFO HtmlReporter Your report can be found at: file:///D:/Mutation/G1 Pet Adoption Syst
```


File / Directory	Mutation Score		Killed	Survived	Timeout	No coverage	Ignored	Runtime errors	Compile errors	Detected	Undetected	Total
	Of total	Of covered										
JS loginControllers.js	64.41	92.86	131	11	12	68	0	0	0	143	79	222

Killed (131)   Survived (11)   NoCoverage (68)   Timeout (12)

Empty query sent

```
14  -          const existingUser = await loginschema.findOne({ email: req.body.email }); ●
    +          const existingUser = await loginschema.findOne({});
```

😷 ObjectLiteral Survived (14:56) 🔼 More

☂ Covered by 3 tests (yet still survived)

Changing the condition to false:

```
58  -          if (isPasswordMatch) { ●
    +          if (false) {
```

😷 ConditionalExpression Survived (58:13) 🔼 More

☂ Covered by 1 test (yet still survived)

Changing the conditions

```
86  -          if(!email || !OTP) { ●
    +          if(!email && !OTP) {
```

😷 LogicalOperator Survived (86:12) 🔼 More

☂ Covered by 7 tests (yet still survived)

Changing the conditions

```
95  -              if(expireAt < Date.now()) { ●
    +              if(expireAt <= Date.now()) {
```

😷 EqualityOperator Survived (95:20) 🔼 More

☂ Covered by 4 tests (yet still survived)

Changing the condition value to true

```
136 -          if(!user) { ●
    +          if(true) {
```

😷 ConditionalExpression Survived (136:12) 🔼 More

☂ Covered by 1 test (yet still survived)

Passing empty object

```
96  -              await OTPverification.deleteMany({email:email}); ●
    +              await OTPverification.deleteMany({});
```

😷 ObjectLiteral Survived (96:54) 🔼 More

☂ Covered by 1 test (yet still survived)

Link to files:

loginController.js

loginControllerTest.js