Converge

SOFTWARE ENGINEERING(IT-314)

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Group - 23

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Mutation Testing

Backend:

- **Authentication (auth app):**

```
PS > $env:DJANGO_SETTINGS_MODULE = "mysite.settings"; $env:PYTHONPATH = (Get-Location).Path; & ".\venv\Scripts\python.exe" ".\venv\Scripts\mut.
py" --target api.auth.views --unit-test api.auth.tests --report-html report
ssword_server_error)
    - [# 142] ROR api.auth.views: [5.25414 s] killed by test_change_password_server_error (api.auth.tests.ChangePasswordViewTests.test_change_pa
ssword_server_error)
    - [# 143] ROR api.auth.views: [5.05705 s] killed by test_change_password_server_error (api.auth.tests.ChangePasswordViewTests.test_change_pa
ssword_server_error)
    - [# 144] ROR api.auth.views: [6.08834 s] killed by test_change_password_server_error (api.auth.tests.ChangePasswordViewTests.test_change_pa
ssword_server_error)
    - [# 145] ROR api.auth.views: [18.18475 s] killed by test_change_password_server_error (api.auth.tests.ChangePasswordViewTests.test_change_p
assword_server_error)
    - [# 146] ROR api.auth.views: [2.26777 s] killed by setUpClass (api.auth.tests.AuthAppSmokeTests)
    - [# 147] ROR api.auth.views: [3.29136 s] killed by setUpClass (api.auth.tests.AuthAppSmokeTests)
    - [# 148] ROR api.auth.views: [2.11526 s] killed by setUpClass (api.auth.tests.AuthAppSmokeTests)
    - [# 149] ROR api.auth.views: [2.15172 s] killed by setUpClass (api.auth.tests.AuthAppSmokeTests)
    - [# 150] ROR api.auth.views: [2.09998 s] killed by setUpClass (api.auth.tests.AuthAppSmokeTests)
    - [# 151] ROR api.auth.views: [2.10845 s] killed by setUpClass (api.auth.tests.AuthAppSmokeTests)
    - [# 152] ROR api.auth.views: [2.28275 s] killed by setUpClass (api.auth.tests.AuthAppSmokeTests)
    - [# 153] SIR api.auth.views: [0.00000 s] incompetent
    - [# 154] SIR api.auth.views: [0.00000 s] incompetent
    - [# 155] SIR api.auth.views: [0.00000 s] incompetent
[*] Mutation score [835.36586 s]: 100.0%
    - all: 155
    - killed: 119 (76.8%)
    - survived: 0 (0.0%)
    - incompetent: 36 (23.2%)
    - timeout: 0 (0.0%)
 PS >
```

- **Project Management (project app):**

```
mongoengine.connection.ConnectionFailure: You have not defined a default connection
    - [# 39] ROR api.projects.views: [3.84216 s] killed by test_accept_invitation_already_accepted (api.proj
ects.tests.AcceptInvitationTests.test_accept_invitation_already_accepted)
    - [# 40] SIR api.projects.views: [0.00000 s] incompetent
[*] Mutation score [188.16261 s]: 100.0%
    - all: 40
    - killed: 27 (67.5%)
    - survived: 0 (0.0%)
    - incompetent: 13 (32.5%)
    - timeout: 0 (0.0%)
(venv) PS C:\D drive\project\SE\Converge-report\converge\backend\remote-work>
```

- **Tasks (task app):**

```
  - [#  33] COI api.tasks.views: [57.14625 s] killed by api/tasks/test_tasks.py::test_list_success
  - [#  34] COI api.tasks.views: [55.67664 s] killed by api/tasks/test_tasks.py::test_list_success
  - [#  35] COI api.tasks.views: Exception ignored in: <generator object MutationOperator.visit at 0x000001CF48ED4240>
Traceback (most recent call last):
  File "D:\AnushkaData\DA life\Semester_5\Software_Engineering\Project\Testing\Converge\backend\remote-work\venv\Lib\si
te-packages\mutpy\controller.py", line 122, in mutate_module
    self.run_tests_with_mutant(total_duration, mutant_module, mutations, coverage_result)
RuntimeError: generator ignored GeneratorExit
[*] Mutation score [2195.94997 s]: 100.0%
   - all: 34
   - killed: 34 (100.0%)
   - survived: 0 (0.0%)
   - incompetent: 0 (0.0%)
   - timeout: 0 (0.0%)
Exception ignored in: <generator object MutationOperator.visit at 0x000001CF48ED6440>
RuntimeError: generator ignored GeneratorExit
   - [#   1] COD api.tasks.views:
P (venv) PS > |
```

● **File Sharing (file_sharing app)**

```
 PS > $env:DJANGO_SETTINGS_MODULE = "mysite.settings"; $env:PYTHONPATH = (Get-Location).Path; & "$PWD
 \venv\Scripts\python.exe" "$PWD\venv\Scripts\mut.py" --runner pytest --target api.file_sharing.views
  --unit-test api.file_sharing.tests --report-html "$PWD\report" --timeout-factor 6
gViewsTests::test_get_s3_client_default_region_fallback
   - [#  83] LCR api.file_sharing.views: [0.32592 s] survived
   - [#  84] ROR api.file_sharing.views: [0.27542 s] killed by api/file_sharing/tests.py::FileSharin
gViewsTests::test_aws_configuration_error_get_s3_client
   - [#  85] ROR api.file_sharing.views: [0.28469 s] killed by api/file_sharing/tests.py::FileSharin
gViewsTests::test_check_project_access_team_leader_true
   - [#  86] ROR api.file_sharing.views: [0.29678 s] killed by api/file_sharing/tests.py::FileSharin
gViewsTests::test_download_forbidden_no_access
   - [#  87] ROR api.file_sharing.views: [0.28295 s] killed by api/file_sharing/tests.py::FileSharin
gViewsTests::test_aws_configuration_error_get_s3_client
   - [#  88] ROR api.file_sharing.views: [0.32187 s] survived
   - [#  89] ROR api.file_sharing.views: [0.28032 s] killed by api/file_sharing/tests.py::FileSharin
gViewsTests::test_delete_aws_general_exception_still_deletes
[*] Mutation score [22.47171 s]: 82.4%
   - all: 89
   - killed: 42 (47.2%)
   - survived: 9 (10.1%)
   - incompetent: 38 (42.7%)
   - timeout: 0 (0.0%)
O PS >
```

- **Chat Feature (chat app):**

```
[22.31310 s] killed by test_create_group_success (Chat.test_views.CreateGroupTests.test_create_group_success
)
    - [#  67] ROR Chat.views: [0.74004 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  68] ROR Chat.views: [2.07816 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  69] ROR Chat.views: [2.07717 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  70] ROR Chat.views: [2.13414 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  71] ROR Chat.views: [2.08674 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  72] ROR Chat.views: [2.06791 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  73] ROR Chat.views: [2.26122 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  74] ROR Chat.views: [2.08860 s] killed by setUpClass (Chat.test_views.ChatListTests)
    - [#  75] SIR Chat.views: [0.00000 s] incompetent
[*] Mutation score [1090.08419 s]: 100.0%
    - all: 75
    - killed: 53 (70.7%)
    - survived: 0 (0.0%)
    - incompetent: 22 (29.3%)
    - timeout: 0 (0.0%)
(venv) PS C:\D drive\project\SE\Converge-report\converge\backend\remote-work>
```

Frontend:

```
Ran 1.00 tests per mutant on average.
```

File	% Mutation score total	covered	# killed	# timeout	# survived	# no cov	# errors
All files	42.61	42.61	323	0	435	0	0
components	100.00	100.00	5	0	0	0	0
Navbar.jsx	100.00	100.00	5	0	0	0	0
contexts	73.21	73.21	41	0	15	0	0
AuthContext.jsx	73.21	73.21	41	0	15	0	0
pages	40.68	40.68	253	0	369	0	0
Dashboard	40.68	40.68	253	0	369	0	0
CreateProject.jsx	33.59	33.59	133	0	263	0	0
Profile.jsx	73.79	73.79	76	0	27	0	0
Settings.jsx	35.77	35.77	44	0	79	0	0
services	32.00	32.00	24	0	51	0	0
api.js	32.00	32.00	24	0	51	0	0

```
05:57:59 (6556) INFO HtmlReporter Your report can be found at: file:///C:/Users/Asus/Desktop/new_converge/f
rontend/stryker-output/index.html
05:57:59 (6556) INFO MutationTestExecutor Done in 283 minutes and 1 second.
PS C:\Users\Asus\Desktop\new_converge\frontend>
```