UNIT TESTING

[1] Auth Controller

1)Sign Up

```
PASS src/controller/auth.controller.early.test/signup.early.test.js

signup() signup method

V should return an error if any field is missing (4 ms)

V should sign up a new user successfully (1 ms)

V should return an error if the user already exists (1 ms)

V should return an error if OTP is not verified (1 ms)

V should handle errors during signup (36 ms)

Test Suites: 1 passed, 1 total

Tests: 5 passed, 5 total

Snapshots: 0 total

Time: 3.619 s, estimated 4 s

Ran all test suites matching /signup.early.test.js/i.
```

2)Verify Email

```
PASS src/controller/auth.controller.early.test/verifyEmail.early.test.js

verifyEmail() verifyEmail method

Happy Paths

✓ should verify the email and create a new user when the verification token is valid (25 ms)

Edge Cases

✓ should return an error if the verification token is invalid or expired (4 ms)

✓ should handle server errors gracefully (15 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 3.927 s, estimated 8 s
```

3) Login

4) Forgot Password

```
PASS src/controller/auth.controller.early.test/forgotPassword.early.test.js

forgotPassword() forgotPassword method

Happy Paths

V should send a password reset email if the user is found (4 ms)

Edge Cases

V should return an error if the user is not found (1 ms)

V should handle errors thrown during execution (30 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 3.664 s, estimated 8 s

Ran all test suites matching /forgotPassword.early.test.js/i.
```

5) Reset Password

6) Logout

```
PASS src/controller/auth.controller.early.test/logout.early.test.js

logout() logout method

Happy Paths

✓ should return a success message when logout is called (6 ms)

Edge Cases

✓ should handle unexpected additional properties in the request object gracefully (1 ms)

✓ should handle a missing response object gracefully (26 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 3.801 s

Ran all test suites matching /logout.early.test.js/i.
```

For auth controller file:

```
Test Suites: 1 failed, 6 passed, 7 total
Tests: 3 failed, 23 passed, 26 total
Snapshots: 0 total
Time: 6.874 s, estimated 7 s
Ran all test suites matching /auth.controller.early.test/i.
```

In this file all function works but some test case fail due to data base constraints but we check manually website is absolutely running fine.



[2] User Controller

1)Get Student

2) Get User

```
PASS src/controller/user.controller.early.test/getUser.early.test.js (15.921 s)
getUser() getUser method
Happy Paths
✓ should return user data when a valid user ID is provided (5 ms)
Edge Cases
✓ should return a 400 error if there is a database error

Test Suites: 1 passed, 1 total
Tests: 2 passed, 2 total
Snapshots: 0 total
Time: 17.201 s
```

3) Insert User

4) Join Class

5) Update User

```
PS C:\Users\VIDHI\OneDrive\Desktop\LFY\backend> npx jest updateUser.early.test.js

PASS src/controller/user.controller.early.test/updateUser.early.test.js

updateUser() updateUser method

Happy Paths

v should update a user successfully and return the updated user (4 ms)

Edge Cases

v should return a 400 error if the user ID is invalid (1 ms)

v should return a 400 error if the update data is invalid (1 ms)

v should handle unexpected errors gracefully

Test Suites: 1 passed, 1 total

Tests: 4 passed, 4 total

Snapshots: 0 total

Time: 1.543 s, estimated 17 s
```

6) Validate User

```
PS C:\Users\VIDHI\OneDrive\Desktop\LFY\backend> npx jest validateUser.early.test.js

PASS src/controller/user.controller.early.test/validateUser.early.test.js

validateUser() validateUser method

Happy paths

v should return a token and user data when credentials are valid (3 ms)

Edge cases

v should return 401 when user is not found (1 ms)

v should return 401 when password is incorrect (1 ms)

v should return 400 when an error occurs (1 ms)

Test Suites: 1 passed, 1 total

Tests: 4 passed, 4 total

Snapshots: 0 total

Time: 1.639 s, estimated 17 s
```

7) Delete User

```
PS C:\Users\VIDHI\OneDrive\Desktop\LFY\backend> npx jest deleteUser.early.test.js

PASS src/controller/user.controller.early.test/deleteUser.early.test.js

deleteUser() deleteUser method

Happy Paths

/ should delete a user and return the deleted user object when a valid ID is provided (3 ms)

Edge Cases

/ should return a 400 error if the user ID is not found (1 ms)

/ should return a 400 error if an error occurs during deletion (1 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 1.677 s, estimated 17 s

Ran all test suites matching /deleteUser.early.test.js/i.
```

For User Controller file:



[3] Class Controller

1)Insert Class

2) Update Class

```
PS C:\Users\VIDHI\OneDrive\Desktop\LFY\backend> npx jest updateClass.early.test.js

pass src/controller/class.controller.early.test/updateClass.early.test.js

updateClass() updateClass method

Happy Paths

v should update the class successfully and return the updated class (4 ms)

Edge Cases

v should return a 400 error if the class ID is invalid (1 ms)

v should return a 400 error if the update data is invalid (1 ms)

v should handle unexpected errors gracefully (1 ms)

Test Suites: 1 passed, 1 total

Tests: 4 passed, 4 total

Snapshots: 0 total

Time: 2.016 s

Ran all test suites matching /updateClass.early.test.js/i.
```

3) Get Classes

For Class Controller:



[4] Lesson Controller

1)Insert Lesson

2) Get Lesson

3) Update Lesson

```
PASS src/controller/lesson.controller.early.test/updateLesson.early.test.js

updateLesson() updateLesson method

Happy Paths

√ should update a lesson successfully and return the updated lesson (7 ms)

Edge Cases

√ should return a 401 error if there is a validation error (2 ms)

√ should handle unexpected errors gracefully (2 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 3.123 s

Ran all test suites matching /updateLesson.early.test.is/i.
```

4) Delete Lesson

```
PASS src/controller/lesson.controller.early.test/deleteLesson.early.test.js

deleteLesson() deleteLesson method

Happy Paths

✓ should delete a lesson and return the deleted lesson object (10 ms)

Edge Cases

✓ should return a 400 status if the lesson ID is invalid (3 ms)

✓ should return a 400 status if the lesson does not exist (2 ms)

Test Suites: 1 passed, 1 total

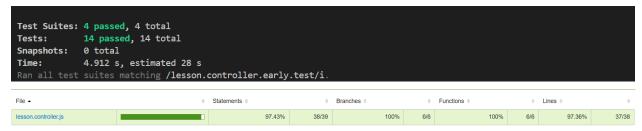
Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 3.323 s

Ran all test suites matching /deleteLesson.early.test.js/i.
```

For lesson controller file:



[5]Assignment Controller

1) Insert Assignment

```
PASS src/controller/assignment.controller.early.test/insertAssignment.early.test.js

insertAssignment() insertAssignment method

Happy Paths

✓ should successfully insert an assignment when class is found (34 ms)

Edge Cases

✓ should return 404 if class is not found

✓ should handle errors during assignment insertion (15 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 1.883 s

Ran all test suites matching /insertAssignment.early.test.js/i.
```

2) Get Assignment

3) Update Assignment

```
PASS
src/controller/assignment.controller.early.test/updateAssignment.early.test.js
updateAssignment() updateAssignment method
Happy Paths
✓ should update an assignment successfully and return the updated assignment (4 ms)
Edge Cases
✓ should return a 400 error if the update operation fails (1 ms)
✓ should handle the case where the assignment ID does not exist (1 ms)

Test Suites: 1 passed, 1 total
Tests: 3 passed, 3 total
Snapshots: 0 total
Time: 1.415 s, estimated 2 s
Ran all test suites matching /updateAssignment.early.test.js/i.
```

4) Submit Assignment

5) Delete Assignment

```
PASS src/controller/assignment.controller.early.test/deleteAssignment.early.test.js

deleteAssignment() deleteAssignment method

Happy paths

✓ should delete an assignment and return it with status 200 (3 ms)

Edge cases

✓ should return 400 if an error occurs during deletion (1 ms)

✓ should return 200 with null if the assignment does not exist (1 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

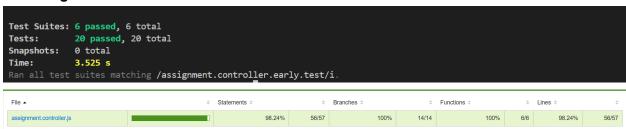
Snapshots: 0 total

Time: 1.398 s

Ran all test suites matching /deleteAssignment.early.test.js/i.
```

6) Submit Work

For Assignment controller file:



[6] Announcement Controller

1) Create Announcement

```
PASS src/controller/announcement.controller.early.test/createAnnouncement.early.test.js

createAnnouncement() createAnnouncement method

Happy Paths

v should create an announcement successfully when all conditions are met (4 ms)

Edge Cases

v should return 400 if the class is not found (1 ms)

v should return 400 if the user is not the class teacher (1 ms)

v should handle errors during announcement creation (1 ms)

Test Suites: 1 passed, 1 total

Tests: 4 passed, 4 total

Snapshots: 0 total

Time: 1.601 s, estimated 2 s

Ran all test suites matching /createAnnouncement.early.test.js/i.
```

2) Get Announcement

```
PASS src/controller/announcement.controller.early.test/getAnnouncement.early.test.js

getAnnouncement() getAnnouncement method

Happy Paths

v should return announcements for a valid class (4 ms)

Edge Cases

v should return 404 if class is not found (1 ms)

v should handle errors and return 500 status (1 ms)

Test Suites: 1 passed, 1 total

Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 1.466 s

Ran all test suites matching /getAnnouncement.early.test.is/i.
```

3) Update Announcement

4) Delete Announcement

For announcement controller file:

```
PASS
PASS
PASS
Src/controller/announcement.controller.early.test/createAnnouncement.early.test.js
src/controller/announcement.controller.early.test/getAnnouncement.early.test.js
src/controller/announcement.controller.early.test/deleteAnnouncement.early.test.js

Test Suites: 4 passed, 4 total
Tests: 17 passed, 17 total
Snapshots: 0 total
Time: 2.638 s
Ran all test suites matching /announcement.controller.early.test/i.
```



[7] Material Controller

1) Insert Material

```
PASS src/controller/material.controller.early.test/insertMaterial.early.test.js
insertMaterial() insertMaterial method
Happy paths

v should insert a new material successfully (8 ms)

Edge cases
v should return 400 if class is not found (2 ms)
v should handle errors during material saving (1 ms)
v should handle errors during class saving (1 ms)

Test Suites: 1 passed, 1 total
Tests: 4 passed, 4 total
Snapshots: 0 total
Time: 1.496 s

Page all test suites matching /insertMaterial early test is/i
```

2) Get Material

3) Update Material

4) Delete Material

```
PASS src/controller/material.controller.early.test/deleteMaterial.early.test.js

deleteMaterial() deleteMaterial method

Happy Path

✓ should delete the material and return the deleted material object (3 ms)

Edge Cases

✓ should return 400 if an error occurs during deletion (1 ms)

✓ should return 200 with null if the material does not exist (1 ms)

Test Suites: 1 passed, 1 total

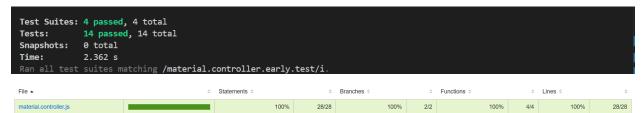
Tests: 3 passed, 3 total

Snapshots: 0 total

Time: 1.361 s, estimated 2 s

Ran all test suites matching /deleteMaterial.early.test.is/i.
```

For material controller file:



[8] Resource Controller

1)Insert Resource

```
PASS src/controller/resource.controller.early.test/insertResource.early.test.js
insertResource() insertResource method
Happy Paths

/ should insert a resource successfully when lesson exists (5 ms)

Edge Cases

/ should return 404 if lesson is not found (5 ms)

/ should return 400 if resource saving fails (1 ms)

/ should handle unexpected errors gracefully (1 ms)

Test Suites: 1 passed, 1 total
Tests: 4 passed, 4 total
Snapshots: 0 total
Time: 1.602 s
Ran all test suites matching /insertResource.early.test.js/i.
```

2) Update Resource

```
PASS src/controller/resource.controller.early.test/updateResource.early.test.js

updateResource() updateResource method

Happy Paths

v should update a resource successfully and return the updated resource (4 ms)

Edge Cases

v should return a 400 error if the resource ID is invalid (1 ms)

v should return a 400 error if validation fails (1 ms)

v should handle unexpected errors gracefully (1 ms)

Test Suites: 1 passed, 1 total

Tests: 4 passed, 4 total

Snapshots: 0 total

Time: 1.566 s
```

3) Get Resource

4) Delete Resource

```
Happy Paths

√ should delete a resource and update the lesson references (18 ms)

Edge Cases

× should return 404 if the lesson is not found (2 ms)

√ should handle errors during resource deletion (1 ms)

√ should handle errors during lesson update (1 ms)
```

Test Suites: 1 failed, 1 total

Tests: 1 failed, 3 passed, 4 total

Snapshots: 0 total

Time: 1.643 s, estimated 5 s

Ran all test suites matching /deleteResource.early.test.js/i.

Database error

For Resource Controller File



Final Conclusion

```
Tests: 21 failed, 153 passed, 174 total
Snapshots: 0 total
Time: 13.803 s, estimated 14 s
Ran all test suites.
```

This include extra testcase

