

API Test Cases: Staff Check-in Module

Introduction

This document provides the test cases for the Staff Check-in module, based on the logic defined in `checkin_route.py`. These tests are designed to verify the functionality of the employee check-in and check-out processes.

The tests cover the two primary endpoints:

- **POST /checkin/in**: Handles the check-in process, with different logic based on employee roles.
- **PUT /checkin/out**: Handles the universal check-out process for all staff at the end of the day.

Testing Environment

- **Tool**: Postman
- **Base URL**: `http://127.0.0.1:5000`
- **Prerequisites**:
 - The application is running, and the database is seeded with the provided `seed.sql` data.
 - The current date for testing is assumed to be **Tuesday, August 5, 2025**.

Feature: Staff Check-in

- **Feature ID**: CHK-001
- **Endpoint**: `POST /checkin/in`
- **Description**: Verifies the logic for an employee checking in.

Test Case ID	Description	Test Steps	Expected Result
CHK-001-TC-001	Successful Check-in (Learning	1. Set method to POST.	ER : Status code is 201 Created . The response

	Advisor, On Time)	2. Set URL to {{baseUrl}}/checkin/in. 3. Set Body to raw JSON: { "employee_id": "EM005" }. 4. Send request between 09:00 and 09:15.	body contains a "Check-in successful" message and the new check-in record details with status "Checked In".
CHK-001-TC-002	Successful Check-in (Manager, Late)	1. Set method to POST. 2. Set URL to {{baseUrl}}/checkin/in. 3. Set Body to raw JSON: { "employee_id": "EM007" }. 4. Send request after 09:15.	ER: Status code is 201 Created . The response body contains a "Check-in successful" message and the new record details with status "Late".
CHK-001-TC-003	Successful Check-in (Teacher, On Time)	1. Set method to POST. 2. Set URL to {{baseUrl}}/checkin/in. 3. Set Body to raw JSON: { "employee_id": "EM001" }. 4. Send request before 18:45.	ER: Status code is 201 Created . The response body contains a "Check-in successful" message and the new record details with status "Checked In". (Note: Based on the seeded course 'C001' schedule 'Mon -

			Tue, 18:45 - 21:45')
CHK-001-TC-004	Successful Check-in (Teacher, Late)	<ol style="list-style-type: none"> 1. Set method to POST. 2. Set URL to {{baseUrl}}/checkin/in. 3. Set Body to raw JSON: { "employee_id": "EM001" }. 4. Send request after 19:00. 	ER: Status code is 201 Created . The response body contains a "Check-in successful" message and the new record details with status "Late".
CHK-001-TC-005	Failed Check-in (Non-existent Employee)	<ol style="list-style-type: none"> 1. Set method to POST. 2. Set URL to {{baseUrl}}/checkin/in. 3. Set Body to raw JSON: { "employee_id": "EM999" }. 4. Send request. 	ER: Status code is 404 Not Found . The response body contains the message: "Employee not found".
CHK-001-TC-006	Failed Check-in (Teacher with no classes today)	<ol style="list-style-type: none"> 1. (Requires setup) Create a teacher who has no classes on a Tuesday. 2. Set method to POST. 3. Set URL to {{baseUrl}}/checkin/in. 	ER: Status code is 404 Not Found . The response body contains the message: "No classes found for today".

		4. Set Body to raw JSON for the new teacher. 5. Send request.	
CHK-001-TC-007	Failed Check-in (Invalid Time for LA/Manager)	1. Set method to POST. 2. Set URL to {{baseUrl}}/checkin/in. 3. Set Body to raw JSON: { "employee_id": "EM005" }. 4. Send request before 09:00 or after 20:00.	ER: Status code is 400 Bad Request . The response contains the message: "Check-in time must be between 9:00 AM and 8:00 PM".

- **Results:**

Test Case ID	Result	Status	Notes
CHK-001-TC-001	<ul style="list-style-type: none"> • 400 Bad Request <pre>{ "error": { "checkin_time": ["Missing data for required field."], "checkout_time": ["Missing data for required field."] } }</pre>	FAILED	See CHK-BUG-001

	<pre>], "id": ["Missing data for required field."], "status": ["Missing data for required field."] }, "message": "Invalid input" } </pre>		
CHK-001-TC-002	Similar to CHK-001-TC-001	FAILED	See CHK-BUG-001
CHK-001-TC-003	Similar to CHK-001-TC-001	FAILED	See CHK-BUG-001
CHK-001-TC-004	Similar to CHK-001-TC-001	FAILED	See CHK-BUG-001
CHK-001-TC-005	Similar to CHK-001-TC-001	FAILED	See CHK-BUG-001
CHK-001-TC-006	Similar to CHK-001-TC-001	FAILED	See CHK-BUG-001
CHK-001-TC-007	Similar to CHK-001-TC-001	FAILED	See CHK-BUG-001

Feature: Staff Check-out

- **Feature ID:** CHK-002
- **Endpoint:** PUT /checkin/out
- **Description:** Verifies the logic for checking out all staff at the end of the day.

Test Case ID	Description	Test Steps	Expected Result
CHK-002-TC-001	Successful Mass Checkout	<ol style="list-style-type: none">1. (Requires setup) Ensure at least one staff member is "Checked In" or "Late".2. Set method to PUT.3. Set URL to {{baseUrl}}/checkin/out.4. Send request after 20:15.	ER: Status code is 200 OK . The response body contains a message like "Checked out X staff successfully." All previously checked-in staff now have a status of "Not Checked In" and a valid checkout_time.
CHK-002-TC-002	Failed Checkout (Too Early)	<ol style="list-style-type: none">1. Set method to PUT.2. Set URL to {{baseUrl}}/checkin/out.3. Send request before 20:15.	ER: Status code is 400 Bad Request . The response body contains the message: "Checkout is

			only allowed after 8:15 PM".
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- Results**

Test Case ID	Result	Status	Notes
CHK-002-TC-001	Similar to ER	PASSED	N/A
CHK-002-TC-002	Similar to ER	PASSED	N/A