



Backend API Documentation

1.0.0 OAS 3.0

CFTrainer

Servers

http://localhost:3000

Assignments



POST /assignment/create Create assignment



Creates a new assignment within a group. Authentication Admin/Coach

Parameters

No parameters

Request body required

application/json

Example Value Schema

```
{  
  "title": "string",  
  "description": "string",  
  "parent_group": "string",  
  "due_date": "2026-01-27T07:18:55.691Z"  
}
```

Responses

Code	Description
------	-------------

201	Assignment created successfully
-----	---------------------------------

Code	Description
	<p>Media type</p> <p>application/json</p> <p>Controls Accept header.</p>
	<p>Example Value Schema</p> <pre>{ "_id": "string", "title": "string", "description": "string", "due_date": "2026-01-27T07:18:55.692Z", "parent_group": "string" }</pre>
400	<p>Bad request - Invalid group ID or missing required fields</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

Retrieves assignments matching optional filter criteria. All filters are optional and can be combined. Authentication Basic

Parameters

Name	Description
title string (query)	Filter by assignment title (partial match) <input type="text" value="title"/>
description string (query)	Filter by description (partial match) <input type="text" value="description"/>
parent_group string (query)	Filter by parent group ID <input type="text" value="parent_group"/>
due_date string(\$date-time) (query)	Filter by due date <input type="text" value="due_date"/>

Responses

Code	Description
200	Array of matching assignments Media type <input type="text" value="application/json"/> Controls Accept header.
	Example Value Schema <pre>[{ "_id": "string", "title": "string", "description": "string", "due_date": "2026-01-27T07:18:55.702Z", "parent_group": "string" }]</pre>
403	Unauthorized Media type

Code**Description****application/json****Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

GET**/assignment/get/{id}** Get assignment by ID

Retrieves a specific assignment by its ID. Authentication Basic

Parameters**Name****Description****id** * required

Assignment ID (must be valid MongoDB ObjectId)

string**(path)**

id

Responses**Code****Description**

200

Assignment found

Media type

application/json

Controls Accept header.

Example Value Schema

Code	Description
	<pre>{ "_id": "string", "title": "string", "description": "string", "due_date": "2026-01-27T07:18:55.704Z", "parent_group": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>Assignment not found</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

PUT **/assignment/update/{id}** Update assignment



Updates an existing assignment. Authentication Admin/Coach

Parameters

Name	Description
------	-------------

Name	Description
id * required string (path)	Assignment ID (must be valid MongoDB ObjectId) <input type="text" value="id"/>

Request body	application/json
--------------	------------------

Example Value Schema

```
{  
  "title": "string",  
  "description": "string",  
  "due_date": "2026-01-27T07:18:55.708Z"  
}
```

Responses

Code	Description
200	Assignment updated successfully Media type application/json Controls Accept header.
403	Unauthorized Media type application/json Example Value Schema <pre>{ "_id": "string", "title": "string", "description": "string", "due_date": "2026-01-27T07:18:55.708Z", "parent_group": "string" }</pre>
404	Assignment not found Media type

Code**Description****application/json****Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

DELETE /assignment/delete/{id} Delete assignment

Deletes an assignment and all associated student exercises. Authentication Admin/Coach

Parameters**Name****Description****id** * required

Assignment ID (must be valid MongoDB ObjectId)

string
(path)

id

Responses**Code****Description**

200

Assignment deleted successfully

403

Unauthorized

Media type

application/json

Code

Example Value Schema

```
{  
  "message": "string"  
}
```

404 Assignment not found

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

Authentication



POST /auth/login Login user with credentials



Authenticates a user with username and password, returning a JWT token for subsequent requests. Authentication N/A

Parameters

No parameters

Request body required

application/json

Example Value Schema

```
{  
  "username": "string",  
  "password": "string"
```

{

Responses

Code	Description
200	<p>Login successful</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;"> application/json </div> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "token": "string" }</pre>
400	<p>Invalid username or password</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;"> application/json </div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;"> application/json </div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

POST **/auth/register** Register new user account

^

Creates a new user account. Students can optionally provide a CodeForces account handle. Admins cannot be registered through this endpoint. Authentication N/A

Parameters

No parameters

Request body required

application/json

Example Value Schema

```
{  
  "username": "string",  
  "password": "string",  
  "role": "student",  
  "email": "string",  
  "cf_account": "string"  
}
```

Responses

Code	Description
------	-------------

201	User registered successfully
-----	------------------------------

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "token": "string"  
}
```

400	Bad request - Invalid role, duplicate username, or invalid cf_account for non-students
-----	--

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500	Server error
-----	--------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

Code**Description**

}

POST /auth/refresh-token Refresh expired JWT token

Generates a new JWT token using the current authentication session. Use this when the current token is about to expire. Authentication Basic

Parameters

No parameters

Responses**Code****Description**

200 Token refreshed successfully

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "token": "string"  
}
```

401 Unauthorized - Invalid or missing token

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

403 Unauthorized

Media type

application/json

Example Value Schema

```
{
```

Code

```
        "message": "string"  
    }
```

500 Server error

Media type

application/json

[Example](#) [Value](#) [Schema](#)

```
{  
    "message": "string"  
}
```

CodeForces Account



GET [/cfaccount/me](#) Get authenticated student's CodeForces account



Retrieves the CodeForces account information linked to the authenticated student. Authentication Student

Parameters

No parameters

Responses

Code**Description**

200 CodeForces account found

Media type

application/json

Controls Accept header.

[Example](#) [Value](#) [Schema](#)

```
{  
    "_id": "string",  
    "student_id": "string",  
    "cf_account": "string",  
    "is_verified_flag": true  
}
```

Code**Description**

403 Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

GET**/cfaccount/get** Get CodeForces accounts by filters

Retrieves CodeForces accounts matching optional filter criteria. Authentication Admin

Parameters**Name****Description**

student_id

Filter by student ID

**string
(query)**

student_id

cf_account

Filter by CodeForces username

**string
(query)**

cf_account

is_verified_flag

Filter by verification status (true/false)

**string
(query)**

is_verified_flag

Responses

Code	Description
200	<p>Array of matching CodeForces accounts</p> <p>Media type</p> <div style="border: 2px solid #007bff; padding: 2px; display: inline-block;">application/json</div> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>[{ "_id": "string", "student_id": "string", "cf_account": "string", "is_verified_flag": true }]</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 2px solid #007bff; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 2px solid #007bff; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

GET /cfaccount/get/{id} Get CodeForces account by ID



Retrieves a specific CodeForces account by its ID. Authentication Admin

Parameters

Name	Description
id * required	CFAccount ID (must be valid MongoDB ObjectId)

Name**Description****string***(path)*

id

Responses**Code****Description**

200

CodeForces account found

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "student_id": "string",  
  "cf_account": "string",  
  "is_verified_flag": true  
}
```

403

Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

404

Not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

Code

```
{  
  "message": "string"  
}
```

GET /cfaccount/start_verify Start CodeForces account verification process

Initiates verification of a CodeForces account. Returns a verification token and code to submit. Authentication Student

Parameters

No parameters

Responses**Code****Description**

200 Verification process started

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "verification_token": "string",  
  "cf_code": "string"  
}
```

403 Unauthorized

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json

Code**Description****Example Value** Schema

```
{  
  "message": "string"  
}
```

PUT**/cfaccount/end_verify/{verify_token}** Complete CodeForces account verification

Completes the verification process using the verification token received from start_verify endpoint. Authentication Student

Parameters**Name****Description****verify_token** * requiredstring
(path)

Verification token from start_verify endpoint

verify_token

Responses**Code****Description**

200

Account verified successfully

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "student_id": "string",  
  "cf_account": "string",  
  "is_verified_flag": true  
}
```

400

Unauthorized

Media type

application/json

Example Value Schema

Code

```
{  
  "message": "string"  
}
```

401

Invalid token

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

403

Unauthorized

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

PUT**/cfaccount/update/{id}** Update CodeForces account handle

Updates the CodeForces username for a student's account. Students can only update their own, admins can update any. Authentication Admin/Student

Parameters**Name** **Description**

id *** required** CFAccount ID (must be valid MongoDB ObjectId)
string

Name**Description****(path)**

id

Request body**application/json****Example Value** Schema

```
{  
  "cf_account": "string"  
}
```

Responses**Code****Description**

200 CFAccount updated successfully

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "student_id": "string",  
  "cf_account": "string",  
  "is_verified_flag": true  
}
```

403 Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

404 Not found

Media type

application/json**Example Value** Schema

Code Description

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

Challenges



POST **/challenge/create** Create challenge



Creates a new challenge for the authenticated student. Authentication Student

Parameters

No parameters

Request body **required**

application/json

Example Value Schema

```
{  
  "cf_code": "string"  
}
```

Responses

Code Description

201 Challenge created successfully

Media type

application/json

Code	Description
	<p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "_id": "string", "cf_code": "string", "student_id": "string", "is_completed_flag": true, "completion_type": "contest" }</pre>
400	<p>Bad request</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

POST **/challenge/create/{student_id}** Create challenge for student (admin)



Creates a new challenge for a specific student. Authentication Admin

Parameters

Name	Description
student_id * required string (path)	student_id

Request body	required
	application/json

Example Value Schema

```
{  
  "cf_code": "string"  
}
```

Responses

Code	Description
201	Challenge created Media type application/json Controls Accept header.
400	Bad request Media type application/json
	Example Value Schema <pre>{ "_id": "string", "cf_code": "string", "student_id": "string", "is_completed_flag": true, "completion_type": "contest" }</pre>

Code**Description**

403

Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

GET**/challenge/get** Get challenges with filters

Retrieves challenges matching optional criteria. Students see only their own. Authentication Admin/Student

Parameters**Name****Description**

student_id

string

(query)

student_id

cf_code

string

(query)

cf_code

is_completed_flag

string

(query)

is_completed_flag

completion_type

string

(query)

completion_type

Responses

Code	Description
200	<p>Array of challenges</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>[{ "_id": "string", "cf_code": "string", "student_id": "string", "is_completed_flag": true, "completion_type": "contest" }]</pre>
403	<p>Forbidden</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

GET **/challenge/get/{id}** Get challenge by ID



Retrieves a specific challenge by ID. Authentication Admin

Parameters

Name	Description
id * required string (path)	id

Responses

Code	Description
200	<p>Challenge found</p> <p>Media type</p> <p>application/json</p> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "_id": "string", "cf_code": "string", "student_id": "string", "is_completed_flag": true, "completion_type": "contest" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>Challenge not found</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

Code**Description**

500 Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

DELETE /challenge/delete/{id} Delete challenge  

Deletes a challenge. Students can only delete their own. Authentication Admin/Student

Parameters**Name****Description****id** * required

string

(path)

id

Responses**Code****Description**

200 Challenge deleted

400 Bad request

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

403 Unauthorized

Media type

Code**Description****application/json****Example Value** Schema

```
{  
  "message": "string"  
}
```

404

Challenge not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

PUT**/challenge/verify/{id}** Verify challenge completion

Marks a challenge as completed. Authentication Admin/Student

Parameters**Name****Description****id * required**

string

(path)

id

Request body

application/json

Example Value Schema

```
{  
  "completion_type": "string"  
}
```

Responses

Code	Description
------	-------------

200	Challenge verified
-----	--------------------

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "cf_code": "string",  
  "student_id": "string",  
  "is_completed_flag": true,  
  "completion_type": "contest"  
}
```

400	Verification failed
-----	---------------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

403	Unauthorized
-----	--------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

404	Challenge not found
-----	---------------------

Media type

Code**Description****application/json****Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

GET**/challenge/ask** Get random challenge problem

Returns a random CodeForces problem matching criteria. Authentication Student

Parameters**Name** **Description**

min_rating

min_rating

number

(query)

max_rating

max_rating

number

(query)

tags

tags

string

(query)**Responses**

Code	Description
200	<p>Challenge problem found</p> <p>Media type</p> <div style="border: 2px solid #007bff; padding: 2px; display: inline-block;">application/json</div> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "cf_code": "string", "name": "string", "rating": 0, "contestId": 0, "tags": ["string"] }</pre>
400	<p>Bad request</p> <p>Media type</p> <div style="border: 2px solid #007bff; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 2px solid #007bff; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 2px solid #007bff; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

Sends a direct message from the authenticated user to another user. Authentication Basic

Parameters

Name	Description
user_id * required string (path)	user_id

Request body	required
	application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

Responses

Code	Description
201	Message sent successfully
	Media type application/json Controls Accept header.
400	Bad request
	Media type application/json

Code

```
{  
  "message": "string"  
}
```

403 Blocked

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

GET**/direct-messages/conversation/** Get conversation partners

Retrieves list of user IDs that the authenticated user has conversation history with. Authentication Basic

Parameters

No parameters

Responses**Code****Description**

200 Array of user IDs

Media type

application/json

Controls Accept header.

Example Value [Schema](#)

Code**Description**

```
[  
  "string"  
]
```

403

Unauthorized

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

GET**/direct-messages/conversation/{user_id}** Get conversation messages

Retrieves all messages in conversation with specified user. Authentication Basic

Parameters**Name****Description****user_id** * required

string

(path)

user_id

Responses**Code****Description**

Code	Description
200	<p>Array of messages</p> <p>Media type</p> <div>application/json</div> <p>Controls Accept header.</p>
	<p>Example Value Schema</p> <pre>[{ "_id": "string", "sender_id": "string", "receiver_id": "string", "message": "string", "createdAt": "2026-01-27T07:18:55.766Z" }]</pre>
400	<p>Bad request</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

Parameters

Name	Description
user_id * required string (path)	user_id

Responses

Code	Description
201	User blocked Media type application/json Controls Accept header. Example Value Schema <pre>{ "user_id": "string", "blocked_user_id": "string" }</pre>
400	Bad request Media type application/json Example Value Schema <pre>{ "message": "string" }</pre>
403	Unauthorized Media type application/json Example Value Schema <pre>{ "message": "string" }</pre>

Code**Description**

500 Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

DELETE /direct-messages/unblock/{user_id} Unblock a user  

Removes a user from your block list. Authentication Basic

Parameters**Name****Description****user_id** * required

string

(path)

user_id

Responses**Code****Description**

200 User unblocked

400 User not in block list

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

403 Unauthorized

Media type

Code**Description****application/json****Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

GET**/direct-messages/blocked** Get blocked users

Retrieves list of all blocked user IDs. Authentication Basic

Parameters

No parameters

Responses**Code****Description**

200

Array of blocked user IDs

Media type

application/json

Controls Accept header.

Example Value Schema

```
[  
  "string"  
]
```

Code**Description**

403 Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

Exercises

**POST** [**/exercise/create**](#) Create exercise

Creates a new exercise within an assignment. Authentication Admin/Coach

Parameters

No parameters

Request body required**application/json****Example Value** Schema

```
{  
  "name": "string",  
  "cf_code": "string",  
  "parent_assignment": "string"  
}
```

Responses

Code	Description
201	<p>Exercise created successfully</p> <p>Media type</p> <div>application/json</div> <p>Controls Accept header.</p>
400	<p>Bad request</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "_id": "string", "name": "string", "cf_code": "string", "parent_assignment": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

Retrieves exercises matching optional filter criteria. All filters are optional. Authentication Basic

Parameters

Name	Description
name string (query)	Filter by exercise name (partial match) name
cf_code string (query)	Filter by CodeForces problem code cf_code
parent_assignment string (query)	Filter by parent assignment ID parent_assignment

Responses

Code	Description
200	Array of matching exercises Media type application/json Controls Accept header. Example Value Schema <pre>[{ "_id": "string", "name": "string", "cf_code": "string", "parent_assignment": "string" }]</pre>
403	Unauthorized Media type application/json Example Value Schema <pre>{ "message": "string" }</pre>

Code**Description**

}

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

GET **/exercise/get/{id}** Get exercise by ID

Retrieves a specific exercise by its ID. Authentication Basic

Parameters**Name****Description****id** * required

Exercise ID (must be valid MongoDB ObjectId)

**string
(path)**

id

Responses**Code****Description**

200

Exercise found

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "name": "string",  
  "cf_code": "string",  
  "parent_assignment": "string"  
}
```

Code**Description**

403

Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

404

Exercise not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

PUT**/exercise/update/{id}** Update exercise

Updates an existing exercise. Authentication Admin/Coach

Parameters**Name****Description****id** * required

Exercise ID (must be valid MongoDB ObjectId)

**string
(path)**

id

Request body

application/json

Example Value Schema

```
{  
  "name": "string"  
}
```

Responses

Code	Description
200	Exercise updated successfully
	Media type
	application/json
	Controls Accept header.
	Example Value Schema
	<pre>{ "_id": "string", "name": "string", "cf_code": "string", "parent_assignment": "string" }</pre>
403	Unauthorized
	Media type
	application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>
404	Exercise not found
	Media type
	application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>
500	Server error
	Media type
	application/json

Code	Description
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

DELETE /exercise/delete/{id} Delete exercise



Deletes an exercise. Associated student-exercise links may also be deleted. Authentication Admin/Coach

Parameters

Name	Description
id * required string (path)	Exercise ID (must be valid MongoDB ObjectId) id

Responses

Code	Description
200	Exercise deleted successfully
403	Unauthorized Media type application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

404 Exercise not found

Media type

application/json

Example Value Schema

```
{
```

Code

 "message": "string"
}

500 Server error

Media type

application/json

Example Value Schema

```
{  
    "message": "string"  
}
```

Following



POST **/following/create** Create following relationship between two students



Creates a following relationship where student_1 follows student_2. Admins can create followings for any student, but students can only create followings for themselves. Users cannot follow themselves. Authentication Admin/Student

Parameters

No parameters

Request body required

application/json

Example Value Schema

```
{  
    "student_2_id": "string",  
    "student_1_id": "string"  
}
```

Responses**Code****Description****201** Following created successfully

Media type

application/json

Code	Description
	<p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "_id": "string", "student_1_id": "string", "student_2_id": "string" }</pre>
400	<p>Bad request</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

GET /following/get Get followings by student IDs



Retrieves following relationships filtered by student IDs. Students can only view their own followings (as student_1_id). Admins can view all followings with any filter combination. Authentication Admin/Student

Parameters

Name	Description
student_1_id	Filter by follower ID string <i>(query)</i>
student_2_id	Filter by followed user ID string <i>(query)</i>

Responses

Code	Description
200	Array of following relationships Media type application/json Controls Accept header. Example Value Schema <pre>[{ "_id": "string", "student_1_id": "string", "student_2_id": "string" }]</pre>
403	Unauthorized Media type application/json Example Value Schema <pre>{ "message": "string" }</pre>
500	Server error Media type application/json Example Value Schema <pre>{ "message": "string" }</pre>

GET /following/get/{id} Get following relationship by ID



Retrieves a specific following relationship by its ID. Authentication Admin

Parameters

Name Description

id * required	Following relationship ID (must be valid MongoDB ObjectId) string (path)
	id

Responses

Code Description

200	Following relationship found

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "student_1_id": "string",  
  "student_2_id": "string"  
}
```

403	Unauthorized

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

404	Following not found

Media type

Code**Description****application/json****Example Value**

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value**

```
{  
  "message": "string"  
}
```

DELETE /following/delete/{id} Delete following relationship

Removes a following relationship. Students can only delete their own followings. Admins can delete any following.
Authentication Admin/Student

Parameters**Name****Description****id * required**

Following relationship ID (must be valid MongoDB ObjectId)

**string
(path)**

id

Responses**Code****Description**

200

Following deleted successfully

403

Unauthorized

Media type

application/json

Code

Description

Example Value Schema

```
{  
  "message": "string"  
}
```

404 Following not found

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

GET /following/count/{user_id} Get follower count for a student



Counts how many users are following the specified student (user_id). Authentication Basic

Parameters

Name Description

user_id * required Target student's ID (must be valid MongoDB ObjectId)

string
(path) user_id

Responses

Code	Description
200	<p>Follower count retrieved</p> <p>Media type</p> <div>application/json</div> <p>Controls Accept header.</p>
400	<p>Invalid user_id format</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "count": 0 }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

GET **/following** List students followed by authenticated user



Returns a list of usernames that the authenticated student is following. Authentication Student

Parameters

No parameters

Responses

Code	Description
------	-------------

200	List of followings
-----	--------------------

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "following": [  
    {  
      "name": "string"  
    }  
  ]  
}
```

403	Unauthorized
-----	--------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500	Server error
-----	--------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

Groups



POST [/group/create](#) Create group



Parameters

No parameters

Request body required

application/json

Example Value Schema

```
{  
  "name": "string",  
  "description": "string",  
  "parent_coach": "string"  
}
```

Responses

Code	Description
201	Group created
	Media type
	application/json
	Controls Accept header.
	Example Value Schema
	<pre>{ "_id": "string", "name": "string", "description": "string", "parent_coach": "string", "group_messages": [{ "sender_id": "string", "message": "string", "timestamp": "2026-01-27T07:18:55.806Z" }], "invite_code": "string" }</pre>
400	Bad request
	Media type
	application/json

```
{  
  "_id": "string",  
  "name": "string",  
  "description": "string",  
  "parent_coach": "string",  
  "group_messages": [  
    {  
      "sender_id": "string",  
      "message": "string",  
      "timestamp": "2026-01-27T07:18:55.806Z"  
    }  
  ],  
  "invite_code": "string"  
}
```

Code

```
{  
  "message": "string"  
}
```

403 Unauthorized

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

GET**/group/get** Get groups by filters

Retrieves groups matching optional criteria. Authentication Admin/Coach

Parameters**Name****Description**

name

string

(query)

name

description

string

(query)

description

parent_coach

string

(query)

parent_coach

Responses

Code	Description
200	<p>Array of groups</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>[{ "_id": "string", "name": "string", "description": "string", "parent_coach": "string", "group_messages": [{ "sender_id": "string", "message": "string", "timestamp": "2026-01-27T07:18:55.810Z" }], "invite_code": "string" }]</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

Retrieves a specific group by ID. Authentication Basic

Parameters

Name	Description
------	-------------

id * required

string
(path)

id

Responses

Code	Description
------	-------------

200 Group found

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "name": "string",  
  "description": "string",  
  "parent_coach": "string",  
  "group_messages": [  
    {  
      "sender_id": "string",  
      "message": "string",  
      "timestamp": "2026-01-27T07:18:55.813Z"  
    }  
  ],  
  "invite_code": "string"  
}
```

403 Unauthorized

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

Code**Description**

404

Group not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

PUT**/group/update/{id}** Update group

Updates group information. Authentication Admin/Coach

Parameters**Name****Description****id** * required

string

(path)

id

Request body

application/json**Example Value** Schema

```
{  
  "name": "string",  
  "description": "string"  
}
```

Responses

Code	Description
200	<p>Group updated</p> <p>Media type</p> <div>application/json</div> <p>Controls Accept header.</p>
	<p>Example Value Schema</p> <pre>{ "_id": "string", "name": "string", "description": "string", "parent_coach": "string", "group_messages": [{ "sender_id": "string", "message": "string", "timestamp": "2026-01-27T07:18:55.816Z" }], "invite_code": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>Group not found</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{</pre>

Code

```
        "message": "string"  
    }
```

DELETE /group/delete/{id} Delete group

Deletes a group and all associated data. Authentication Admin/Coach

Parameters**Name****Description****id** * requiredstring
(path)

id

Responses**Code****Description**

200 Group deleted

403 Unauthorized

Media type

application/json

Example Value Schema

```
{  
    "message": "string"  
}
```

404 Group not found

Media type

application/json

Example Value Schema

```
{  
    "message": "string"  
}
```

Code**Description**

500 Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

POST /group/create-invite-code/{id} Create invite code 🔒 ^

Generates a new invite code for group. Authentication Admin/Coach

Parameters**Name****Description****id** * required

string

(path)

id

Responses**Code****Description**

201 Invite code created

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "invite_code": "string"  
}
```

403 Unauthorized

Media type

application/json

Code**Description****Example Value** Schema

```
{  
  "message": "string"  
}
```

404

Group not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

GET

/group/get-invite-code/{id} Get invite code

Retrieves current invite code for group. Authentication Admin/Coach

Parameters**Name****Description****id** * required

string

(path)

id

Responses

Code	Description
200	<p>Invite code found</p> <p>Media type</p> <div>application/json</div> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "invite_code": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>Group not found</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

DELETE /group/delete-invite-code/{id} Delete invite code



Removes invite code for group. Authentication Admin/Coach

Parameters

Name	Description
id * required string (path)	id

Responses

Code	Description
200	Invite code deleted
403	Unauthorized
	Media type application/json
404	Group not found
	Media type application/json
500	Server error
	Media type application/json

Retrieves all messages in a group. Authentication Basic

Parameters

Name	Description
------	-------------

id * required

string

(path)

id

Responses

Code	Description
------	-------------

200 Array of messages

Media type

application/json

Controls Accept header.

Example Value Schema

```
[  
  {  
    "sender_id": "string",  
    "message": "string",  
    "timestamp": "2026-01-27T07:18:55.830Z"  
  }  
]
```

403 Unauthorized

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

404 Group not found

Media type

application/json

Example Value Schema

Code

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

POST **/group/send-message/{id}** Send message to group

Posts a message to group's message board. Authentication Basic

Parameters**Name****id** * required

string

(path)

id

Request body required**application/json****Example Value** Schema

```
{  
  "message": "string"  
}
```

Responses**Code****Description****201** Message posted

Code	Description
	<p>Media type</p> <p>application/json</p> <p>Controls Accept header.</p>
	<p>Example Value Schema</p> <pre>{ "sender_id": "string", "message": "string", "timestamp": "2026-01-27T07:18:55.833Z" }</pre>
400	<p>Bad request</p> <p>Media type</p> <p>application/json</p>
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <p>application/json</p>
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>Group not found</p> <p>Media type</p> <p>application/json</p>
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <p>application/json</p>
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

GET **/group/my-groups-summary** Get my groups summary



Retrieves summary of groups user is member of. Authentication Basic

Parameters

No parameters

Responses

200 Groups summary

Media type

application/json

Controls Accept header.

Example Value Schema

```
[  
  {  
    "groupId": "string",  
    "name": "string",  
    "ownerUsername": "string",  
    "members": 0,  
    "dueAssignments": 0,  
    "role": "member"  
  }  
]
```

403 Unauthorized

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

Code**Description****application/json****Example Value** **Schema**

```
{  
  "message": "string"  
}
```

GET **/group/details/{id}** Get group details

Retrieves detailed group information. Authentication Basic

Parameters**Name****Description****id** * required

string

(path)

id

Responses**Code****Description**

200

Group details

Media type

application/json

Controls Accept header.

Example Value **Schema**

```
{  
  "group": {  
    "_id": "string",  
    "name": "string",  
    "description": "string",  
    "owner": {  
      "_id": "string",  
      "username": "string"  
    }  
  },  
  "assignments": [  
  ]
```

Code**Description**

```
{  
  "_id": "string",  
  "title": "string",  
  "description": "string",  
  "due_date": "2026-01-27T07:18:55.838Z",  
  "exerciseCount": 0  
}  
]  
}
```

403 Unauthorized

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

404 Group not found

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json**Example Value** **Schema**

```
{  
  "message": "string"  
}
```

Statistics

**GET /stats/get-student-stats/{studentId}** Get student statistics

Retrieves aggregated statistics about a student's progress. Authentication Basic

Parameters

Name	Description
studentId * required string (path)	studentId

Responses

Code	Description
200	<p>Student statistics retrieved</p> <p>Media type</p> <p>application/json</p> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "user": { "userId": "string", "cfHandle": "string", "role": "string" }, "kpis": { "rating": 0, "solvedTotal": 0, "streakDays": 0 }, "ratingGraph": { "min": 0, "max": 0, "series": [{ "t": "2026-01-27", "rating": 0 }] }, "solvesByRating": { "binSize": 0, "bins": [{ "bin": 0, "count": 0 }] } }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "error": "Unauthorized" }</pre>

Code

```
        "message": "string"  
    }
```

404 Student not found

Media type

application/json**Example Value** Schema

```
{  
    "message": "string"  
}
```

500 Server error

Media type

application/json**Example Value** Schema

```
{  
    "message": "string"  
}
```

Student Exercises

**POST** [**/student-exercise/create**](#) Create student-exercise link

Creates a link between authenticated student and an exercise. Authentication Student

Parameters

No parameters

Request body required**application/json****Example Value** Schema

```
{  
    "exercise_id": "string"  
}
```

Responses

Code	Description
201	<p>Link created</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Controls Accept header.</p>
400	<p>Bad request</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "_id": "string", "student_id": "string", "exercise_id": "string", "completion_type": "contest" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 2px solid #00AEEF; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

POST `/student-exercise/create/{student_id}` Create student-exercise link (admin)



Parameters

Name	Description
student_id * required string (path)	student_id

Request body	required
	application/json

Example Value Schema

```
{
  "exercise_id": "string"
}
```

Responses

Code	Description
201	Link created Media type application/json Controls Accept header.
400	Bad request Media type application/json
	Example Value Schema { "_id": "string", "student_id": "string", "exercise_id": "string", "completion_type": "contest" }

Code**Description**

403

Unauthorized

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

GET**/student-exercise/get** Get student-exercise links

Retrieves links matching filter criteria. Authentication Basic

Parameters**Name****Description**

student_id

string

*(query)***student_id**

exercise_id

string

*(query)***exercise_id**

assignment_id

string

*(query)***assignment_id**

group_id

string

*(query)***group_id**

Name**Description**

completion_type

string

(query)

completion_type

Responses**Code****Description**

200 Array of student-exercise links

Media type

application/json

Controls Accept header.

Example Value Schema

```
[  
  {  
    "_id": "string",  
    "student_id": "string",  
    "exercise_id": "string",  
    "completion_type": "contest"  
  }  
]
```

400 Bad request

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

403 Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

Code**Description****application/json****Example Value** **Schema**

```
{  
  "message": "string"  
}
```

GET /student-exercise/get/{id} Get student-exercise link by ID

Retrieves a specific link. Authentication Admin

Parameters**Name** **Description****id** * requiredstring
(path)

id

Responses**Code****Description**

200 Link found

Media type

application/json

Controls Accept header.

Example Value **Schema**

```
{  
  "_id": "string",  
  "student_id": "string",  
  "exercise_id": "string",  
  "completion_type": "contest"  
}
```

403 Unauthorized

Media type

application/json

Code

Example Value Schema

```
{  
  "message": "string"  
}
```

404 Link not found

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

DELETE /student-exercise/delete/{id} Delete student-exercise link



Removes link between student and exercise. Authentication Admin

Parameters

Name	Description
------	-------------

id * required

string
(path)

id

Responses

Code	Description
200	Link deleted
403	Unauthorized
	Media type application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>
404	Link not found
	Media type application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>
500	Server error
	Media type application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>

Student Groups



POST [**/student-group/create**](#) Create student-group membership 

Adds a student to a group. Authentication Admin/Coach

Parameters

No parameters

Request body required

application/json

Example Value Schema

```
{  
  "group_id": "string",  
  "student_id": "string"  
}
```

Responses

Code	Description
------	-------------

201	Membership created
-----	--------------------

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "student_id": "string",  
  "group_id": "string"  
}
```

400	Bad request
-----	-------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

403	Unauthorized
-----	--------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500	Server error
-----	--------------

Media type

application/json

Code

Example Value Schema

```
{  
  "message": "string"  
}
```

GET /student-group/get Get student-group links



Retrieves membership links matching filters. Authentication Basic

Parameters

Name Description

group_id
string
(query)

group_id

student_id
string
(query)

student_id

Responses

Code Description

200 Array of membership links

Media type

application/json

Controls Accept header.

Example Value Schema

```
[  
  {  
    "_id": "string",  
    "student_id": "string",  
    "group_id": "string"  
  }  
]
```

Code**Description**

403

Unauthorized

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** [Schema](#)

```
{  
  "message": "string"  
}
```

GET**/student-group/get/{id}** Get student-group link by ID

Retrieves a specific membership link. Authentication Admin

Parameters**Name****Description****id** * required

string

(path)

id

Responses**Code****Description**

200

Link found

Media type

application/json

Controls Accept header.

Code	Description
	<p>Example Value Schema</p> <pre>{ "_id": "string", "student_id": "string", "group_id": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>Link not found</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

DELETE /student-group/delete/{id} Delete student from group 🔒 ⏚

Removes a student from a group. Authentication Admin/Coach

Parameters

Name	Description
------	-------------

Name**Description****id** * required

string

(path)

id

Responses**Code****Description**

200 Membership deleted

403 Unauthorized

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

404 Link not found

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

POST**/student-group/use-invite-code** Join group using invite code

Allows a student to join a group using an invite code. Authentication Student

Parameters

No parameters

Request body required

application/json

Example Value Schema

```
{  
  "invite_code": "string"  
}
```

Responses

Code	Description
------	-------------

201	Successfully joined group
-----	---------------------------

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "student_id": "string",  
  "group_id": "string"  
}
```

400	Bad request
-----	-------------

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

403	Unauthorized
-----	--------------

Media type

application/json

Code**Description****Example Value** Schema

```
{  
  "message": "string"  
}
```

404

Group not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

Admin Users

**POST** [**/admin/create**](#) Create user account  

Creates a new user with specified role. Authentication Admin

Parameters

No parameters

Request body required**application/json****Example Value** Schema

```
{  
  "username": "string",  
  "password": "string",  
  "role": "string",
```

```
"email": "string",
"cf_account": "string"
}
```

Responses

Code	Description
201	<p>User created</p> <p>Media type</p> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">application/json</div> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "_id": "string", "username": "string", "password_hash": "string", "email": "string", "role": "student" }</pre>
400	<p>Bad request</p> <p>Media type</p> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p>

Code

```
{  
  "message": "string"  
}
```

GET /admin/get Get users by filters

Retrieves users with sensitive info. Authentication Admin

Parameters**Name****Description****username****string****(query)****role****string****(query)****email****string****(query)****Responses****Code****Description****200**

Array of users with sensitive info

Media type

Controls Accept header.

Example Value**Schema**

```
[  
  {  
    "_id": "string",  
    "username": "string",  
    "password_hash": "string",  
    "email": "string",  
    "role": "student"  
  }]
```

Code**Description**

]

403

Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

GET**/admin/get/{id}** Get user by ID (sensitive info)

Retrieves user with sensitive information. Authentication Admin

Parameters**Name****Description****id** * requiredstring
(path)

id

Responses**Code****Description**

200

User found

Media type

Code	Description
	<p>application/json</p> <p>Controls Accept header.</p>
	<p>Example Value Schema</p> <pre>{ "_id": "string", "username": "string", "password_hash": "string", "email": "string", "role": "student" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <p>application/json</p>
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>User not found</p> <p>Media type</p> <p>application/json</p>
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <p>application/json</p>
	<p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

PUT [/admin/update/{id}](#) Update user

Updates user details. Authentication Admin



Parameters

Name	Description
------	-------------

id * required

string

(path)

id

Request body

application/json

Example Value Schema

```
{  
  "password": "string",  
  "role": "string",  
  "email": "string"  
}
```

Responses

Code	Description
------	-------------

200 User updated

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "username": "string",  
  "password_hash": "string",  
  "email": "string",  
  "role": "student"  
}
```

400 Bad request

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

Code**Description**

403

Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

404

User not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

DELETE `/admin/delete/{id}` Delete user 🔒 ^

Permanently deletes a user. Authentication Admin

Parameters**Name****Description****id** * required

string

(path)

id

Responses

Code	Description
------	-------------

200 User deleted

403 Unauthorized

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

404 User not found

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

500 Server error

Media type

application/json

Example Value Schema

```
{  
  "message": "string"  
}
```

GET [/admin/get-by-username/{username}](#) Get user by username (sensitive)  

Retrieves user by username with sensitive info. Authentication Admin

Parameters

Name	Description
------	-------------

Description

Name	Description
username <small>* required</small>	string (path)
Responses	
Code	Description
200	<p>User found</p> <p>Media type</p> <p>application/json</p> <p>Controls Accept header.</p> <p>Example Value Schema</p> <pre>{ "_id": "string", "username": "string", "password_hash": "string", "email": "string", "role": "student" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>User not found</p> <p>Media type</p> <p>application/json</p> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <p>application/json</p>

Code**Description****Example Value** Schema

```
{  
  "message": "string"  
}
```

Users

**GET** **/user/get** Get users (public info)

Retrieves users with only public information. Authentication Basic

Parameters

Name **Description**

username
string
(query)

role
string
(query)

email
string
(query)

Responses

Code **Description**

200 Array of users with public info

Media type

Controls Accept header.

Example Value Schema

```
[
```

```
{
```

Code	Description
	<pre> "_id": "string", "username": "string", "email": "string", "role": "student" }]</pre>
400	<p>Bad request</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre> { "message": "string" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre> { "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">application/json</div> <p>Example Value Schema</p> <pre> { "message": "string" }</pre>

GET **/user/get/{id}** Get user by ID (public info) 🔒 ⌂

Retrieves user with only public information. Authentication Basic

Parameters

Name	Description

Name**Description****id** * required

string

(path)

id

Responses**Code****Description**

200

User found

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "username": "string",  
  "email": "string",  
  "role": "student"  
}
```

403

Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

404

User not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json

Code**Description****Example Value** Schema

```
{  
  "message": "string"  
}
```

PUT**/user/update** Update own profile

Allows user to update their own email or password. Authentication Basic

Parameters

No parameters

Request body

application/json**Example Value** Schema

```
{  
  "email": "string",  
  "password": "string"  
}
```

Responses**Code****Description**

200 Profile updated

Media type

application/json

Controls Accept header.

Example Value Schema

```
{  
  "_id": "string",  
  "username": "string",  
  "email": "string",  
  "role": "student"  
}
```

Code**Description**

403

Unauthorized

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

404

Not found

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

500

Server error

Media type

application/json**Example Value** Schema

```
{  
  "message": "string"  
}
```

DELETE **/user/delete** Delete own account 🔒 ⏹

Permanently deletes the authenticated user's account. Authentication Basic

Parameters

No parameters

Responses**Code****Description**

Code	Description
200	Account deleted
403	Unauthorized
	Media type application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>
404	Not found
	Media type application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>
500	Server error
	Media type application/json
	Example Value Schema
	<pre>{ "message": "string" }</pre>

GET **/user/me** Get own profile  

Retrieves the authenticated user's complete profile. Authentication Basic

Parameters

No parameters

Responses

Code	Description
200	<p>User profile</p> <p>Media type</p> <div>application/json</div> <p>Controls Accept header.</p>
	<p>Example Value Schema</p> <pre>{ "_id": "string", "username": "string", "email": "string", "role": "student" }</pre>
403	<p>Unauthorized</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
404	<p>Not found</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>
500	<p>Server error</p> <p>Media type</p> <div>application/json</div> <p>Example Value Schema</p> <pre>{ "message": "string" }</pre>

Parameters

Name	Description
username <small>* required</small> <small>string (path)</small>	username

Responses

Code	Description
200	User found Media type application/json <small>Controls Accept header.</small> Example Value Schema <pre>{ "_id": "string", "username": "string", "email": "string", "role": "student" }</pre>
403	Unauthorized Media type application/json Example Value Schema <pre>{ "message": "string" }</pre>
404	User not found Media type application/json Example Value Schema <pre>{</pre>

Code

 "message": "string"
}

500 Server error

Media type

application/json

Example Value Schema

```
{  
    "message": "string"  
}
```

Schemas



```
Error  {  
    message  
        string  
        Error message describing the issue  
}
```

```
Assignment  {  
    _id  
        string  
        Unique identifier for the assignment  
    title  
        string  
        Title of the assignment  
    description  
        string  
        Detailed description of the assignment  
    due_date  
        string($date-time)  
        Due date of the assignment  
    parent_group  
        string  
        ID of the group this assignment belongs to  
}
```

```
CFAccount  {
  _id           string
                 CFAccount ID

  student_id    string
                 Associated student ID

  cf_account    string
                 CodeForces username

  is_verified_flag boolean
                 Whether account has been verified

}
```

```
Challenge    {
  _id           string
                 Unique identifier for the challenge

  cf_code        string
                 CodeForces problem code

  student_id    string
                 ID of the student who attempted the challenge

  is_completed_flag boolean
                 Indicates if the challenge has been completed

  completion_type string
                 Type of completion ("contest" or "normal")

  Enum:
    [ contest, normal ]
}
```

```
DirectMessage  {
  _id           string
                 Unique identifier for the direct message

  sender_id    string
                 ID of the user who sent the message

  receiver_id  string
                 ID of the user who received the message

  message        string
                 Content of the direct message

  createdAt     string($date-time)
                 Timestamp when the message was created

}
```

```
Exercise  {
  _id           string
                 Unique identifier for the exercise

  name          string
                 Name of the exercise

  cf_code       string
                 CodeForces problem code associated with the exercise

  parent_assignment string
                 ID of the assignment this exercise belongs to

}
```

```
Following  {
  _id           string
                 Unique identifier for the following relationship

  student_1_id  string
                 ID of the student who is following

  student_2_id  string
                 ID of the student being followed

}
```

```
Group {
    _id
        string
        Unique identifier for the group

    name
        string
        Name of the group

    description
        string
        Description of the group

    parent_coach
        string
        ID of the coach who created the group

    group_messages
        [
            {
                sender_id
                    string
                    ID of the user who sent the message

                message
                    string
                    Content of the message

                timestamp
                    string($date-time)
                    Timestamp when the message was sent
            }
        ]
    invite_code
        string
        Invite code for joining the group
}
```

```
StudentExercise {
    _id
        string
        Unique identifier for the student exercise record

    student_id
        string
        ID of the student

    exercise_id
        string
        ID of the exercise

    completion_type
        string
        Type of completion ("contest" or "normal")

        Enum:
            [ contest, normal ]
}
```

```
StudentGroup  {
  _id           string
  Unique identifier for the student-group relationship

  student_id    string
  ID of the student

  group_id     string
  ID of the group

}
```

```
User    {
  _id           string
  Unique identifier for the user

  username      string
  Username of the user

  password_hash string
  Hashed password of the user

  email         string
  Email address of the user

  role          string
  Role of the user in the system

  Enum:
    [ student, coach, admin ]
}
```

```
SafeUser  {
  _id           string
  Unique identifier for the user

  username      string
  Username of the user

  email         string
  Email address of the user

  role          string
  Role of the user in the system

  Enum:
    [ student, coach, admin ]
}
```

```
GroupMessage {
    sender_id
        string
        ID of the user who sent the message

    message
        string
        Content of the message

    timestamp
        string($date-time)
        Timestamp when the message was sent

}
```