

Appendix A

Mock-ups

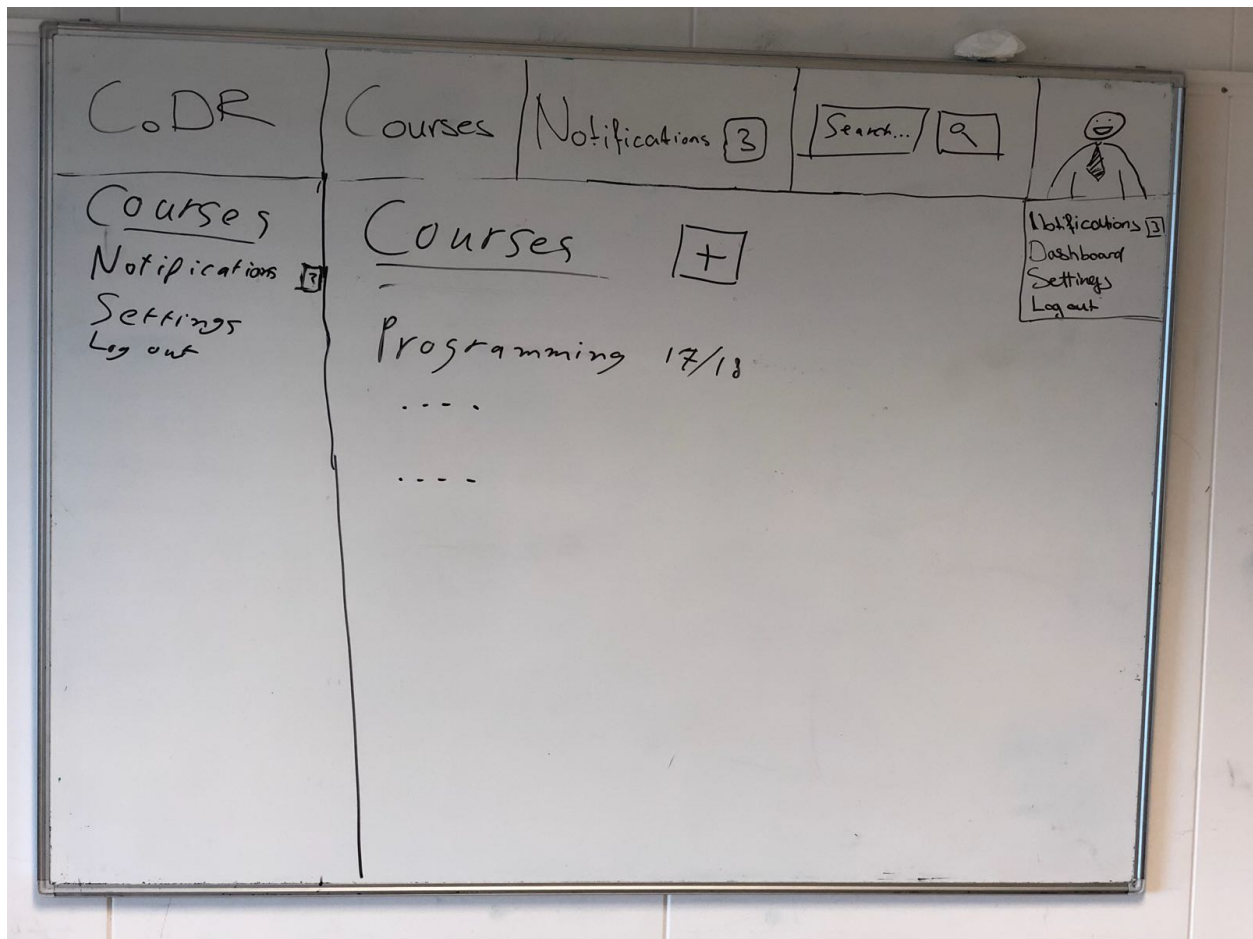


Figure A.1: The overview of the courses page with different exercises

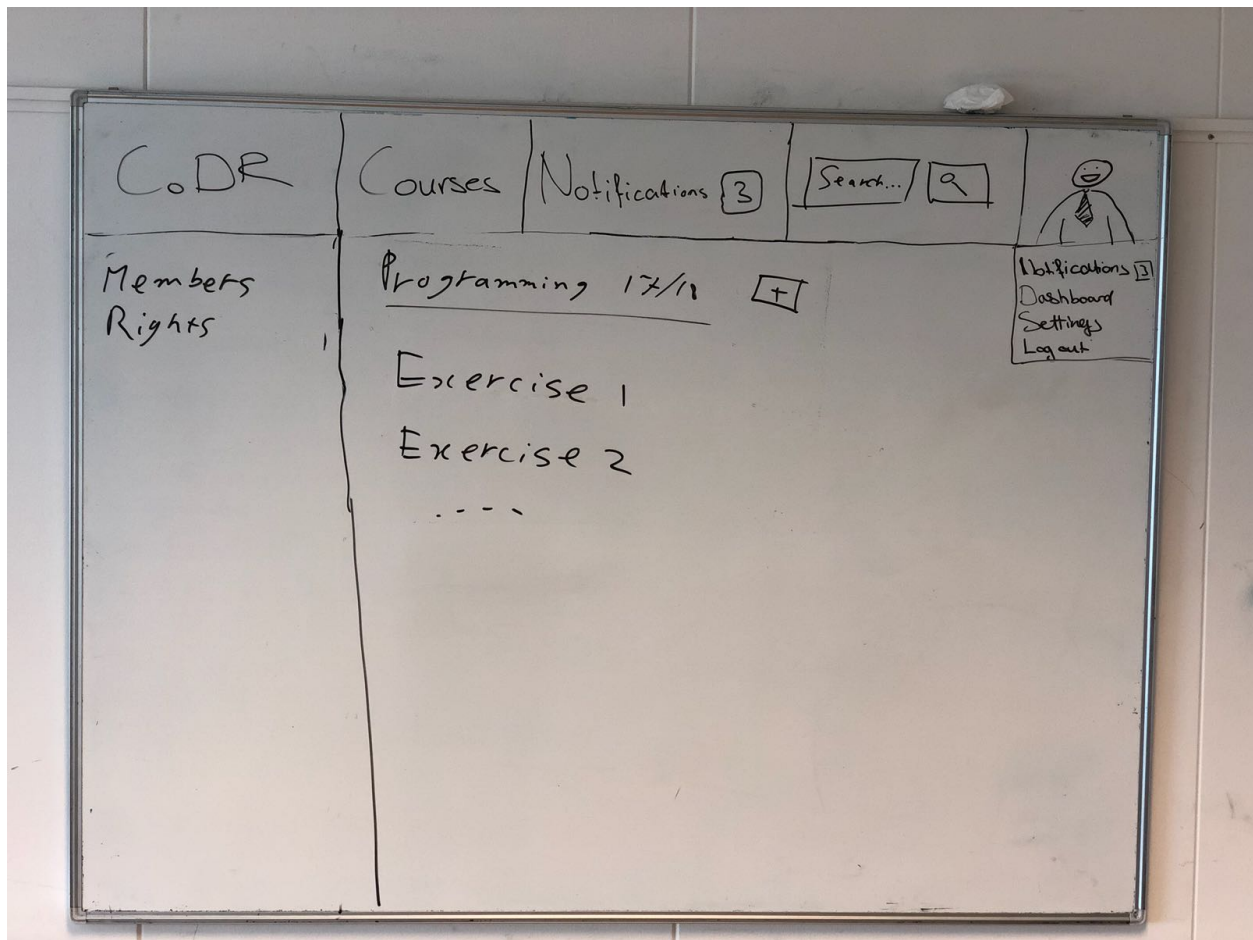


Figure A.2: The overview of a Course page with different courses

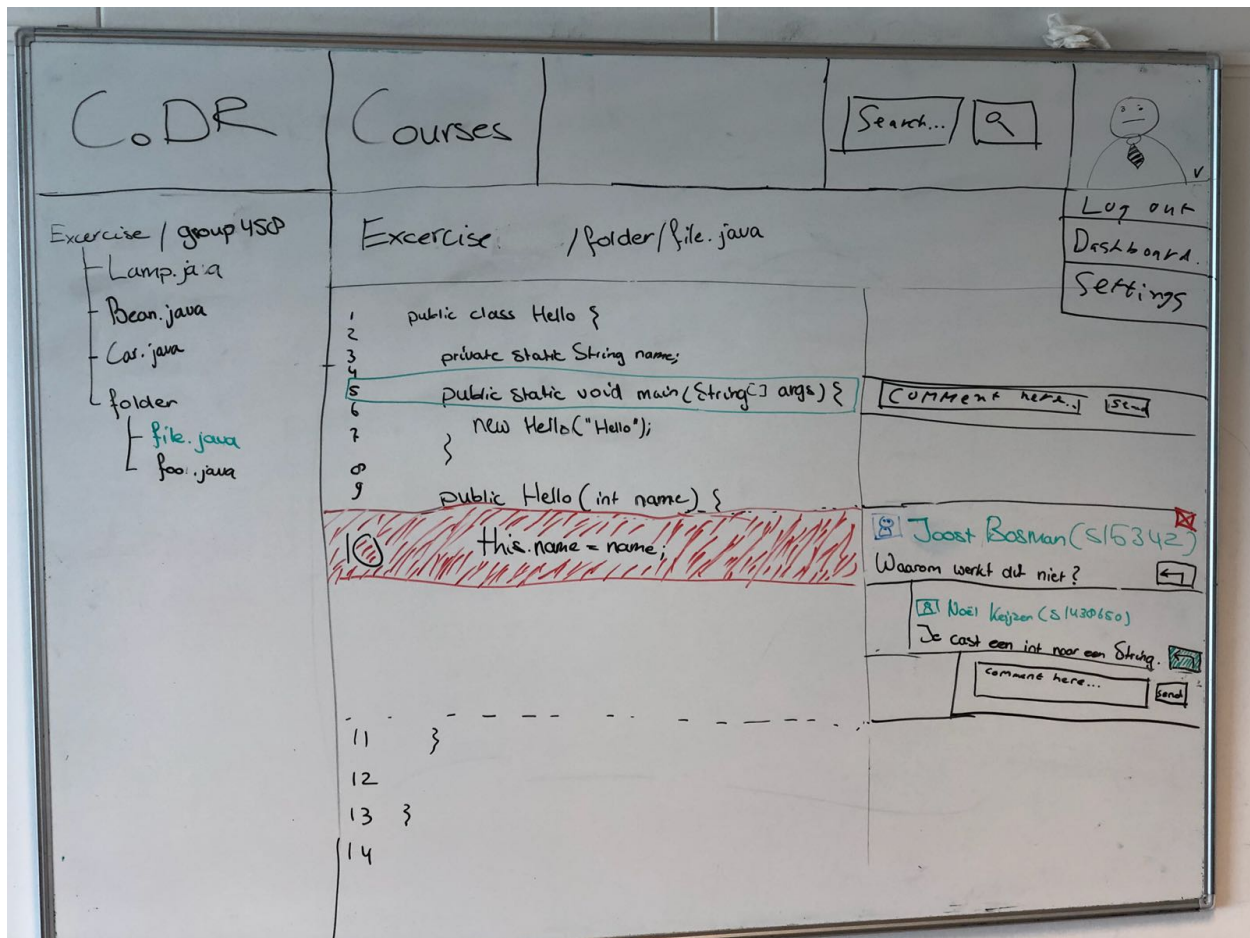


Figure A.3: The overview of a file page with a file and comments

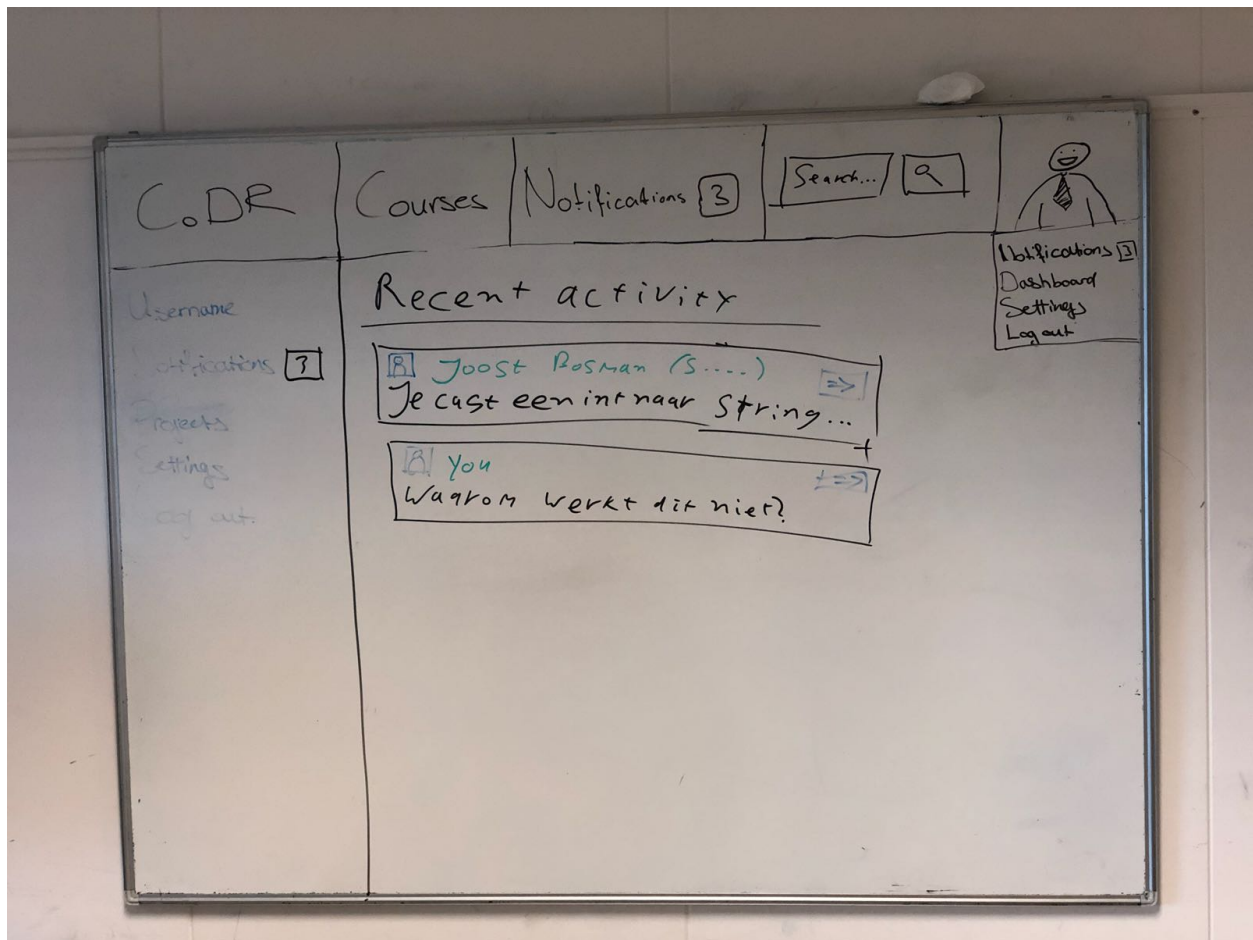


Figure A.4: The overview of a profile page with comments

Appendix B

Class diagram database

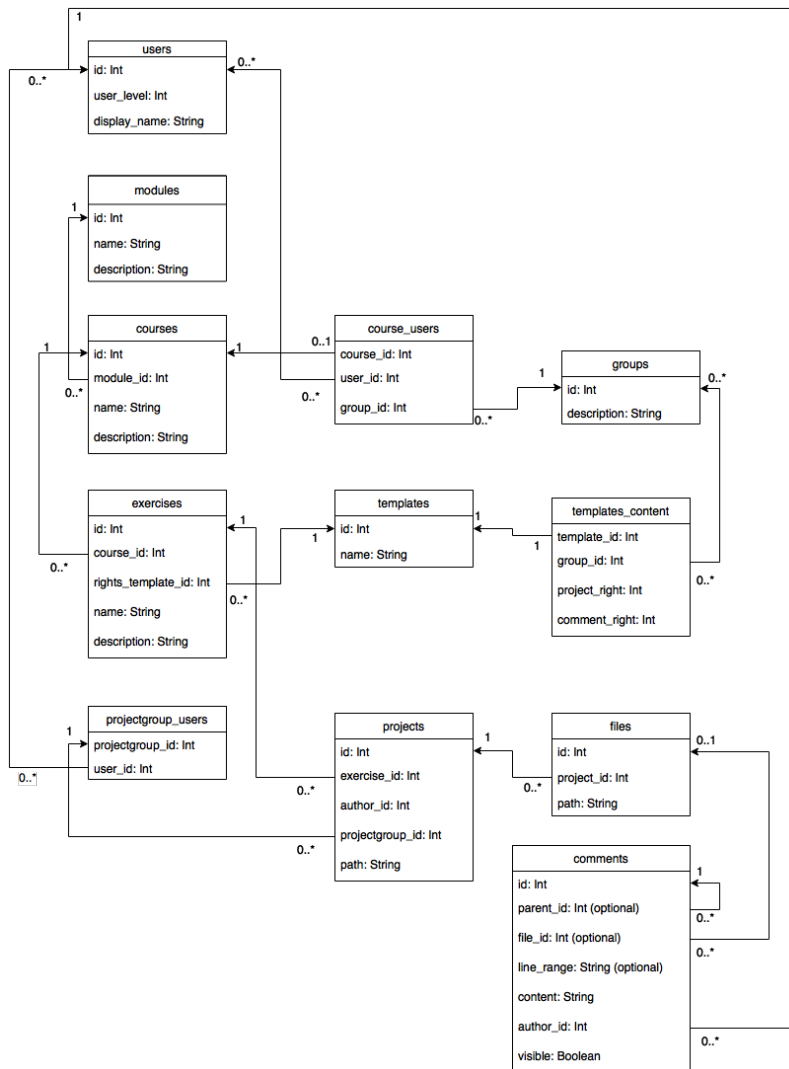


Figure B.1: Class diagram of the database

Appendix C

API specification

Overview

Version information

Version : 0.0.1

URI scheme

Host : localhost:10010

BasePath : /api

Schemes : HTTP, HTTPS

Consumes

- `application/json`
- `multipart/form-data`

Produces

- `application/json`

Definitions

CommentResponseHead

| Name | Schema |
|---|---|
| author_id <i>optional</i> | integer (int64) |
| author_name <i>optional</i> | string |
| can_delete <i>optional</i> | boolean |
| can_edit <i>optional</i> | boolean |
| can_toggle_visibility <i>optional</i> | boolean |
| children <i>optional</i> | < CommentResponseTail > array |
| content <i>optional</i> | string |
| course_id <i>optional</i> | integer (int64) |
| deleted <i>optional</i> | boolean |
| exercise_id <i>optional</i> | integer (int64) |
| file_id <i>optional</i> | integer (int64) |
| id <i>optional</i> | integer (int64) |
| line_range <i>optional</i> | string |
| module_id <i>optional</i> | integer (int64) |
| parent_id <i>optional</i> | integer (int64) |
| project_id <i>optional</i> | integer (int64) |
| timestamp <i>optional</i> | integer (int64) |
| visible <i>optional</i> | boolean |

CommentResponseList

Type : < [CommentResponseHead](#) > array

CommentResponseTail

| Name | Schema |
|---|------------------|
| author_id <i>optional</i> | integer (int64) |
| author_name <i>optional</i> | string |
| can_delete <i>optional</i> | boolean |
| can_edit <i>optional</i> | boolean |
| can_toggle_visibility <i>optional</i> | boolean |
| children <i>optional</i> | < object > array |
| content <i>optional</i> | string |
| course_id <i>optional</i> | integer (int64) |
| deleted <i>optional</i> | boolean |
| exercise_id <i>optional</i> | integer (int64) |
| file_id <i>optional</i> | integer (int64) |
| id <i>optional</i> | integer (int64) |
| line_range <i>optional</i> | string |
| module_id <i>optional</i> | integer (int64) |
| parent_id <i>optional</i> | integer (int64) |
| project_id <i>optional</i> | integer (int64) |
| timestamp <i>optional</i> | integer (int64) |
| visible <i>optional</i> | boolean |

CourseResponse

| Name | Schema |
|---------------------------------------|-----------------|
| description <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>optional</i> | string |

CourseResponseGet

| Name | Schema |
|---------------------------------------|------------------------------------|
| can_edit <i>required</i> | boolean |
| description <i>required</i> | string |
| exercises <i>optional</i> | < Exercise > array |
| id <i>optional</i> | integer (int64) |
| name <i>required</i> | string |

CourseUpdate

| Name | Schema |
|---------------------------------------|--------|
| description <i>optional</i> | string |
| name <i>optional</i> | string |

CurrentUser

| Name | Schema |
|--|-----------------|
| display_name <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |
| user_level <i>optional</i> | integer (int64) |

ErrorResponse

| Name | Schema |
|-----------------------------------|--------|
| message <i>optional</i> | string |

Exercise

| Name | Schema |
|--|-----------------------------------|
| description <i>required</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>required</i> | string |
| projects <i>optional</i> | < Project > array |
| rights_template_id <i>required</i> | integer (int64) |

File

| Name | Schema |
|------------------------------------|---|
| comments <i>required</i> | < CommentResponseHead > array |
| content <i>required</i> | < Line > array |
| id <i>required</i> | integer (int64) |
| path <i>required</i> | string |

Group

| Name | Schema |
|-------------------------------------|--------------------------------|
| Users <i>optional</i> | < User > array |
| id <i>optional</i> | integer (int64) |
| module_id <i>optional</i> | integer (int64) |

GroupList

Type : < [Group](#) > array

Line

Type : string

Module

| Name | Schema |
|---------------------------------------|-----------------|
| can_edit <i>optional</i> | boolean |
| can_view <i>optional</i> | boolean |
| description <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>optional</i> | string |

ModuleCourse

| Name | Schema |
|---------------------------------------|-----------------|
| description <i>required</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>required</i> | string |

ModuleList

| Name | Schema |
|------------------------------------|----------------------------------|
| can_edit <i>optional</i> | boolean |
| modules <i>optional</i> | < Module > array |

ModuleResponse

| Name | Schema |
|---------------------------------------|--|
| can_edit <i>optional</i> | boolean |
| courses <i>optional</i> | < ModuleCourse > array |
| description <i>optional</i> | string |
| groups <i>optional</i> | < Group > array |
| id <i>optional</i> | integer (int64) |
| name <i>optional</i> | string |

ModuleUpdate

| Name | Schema |
|---------------------------------------|---------------------------------|
| description <i>optional</i> | string |
| name <i>optional</i> | string |
| users <i>optional</i> | < users > array |

users

| Name | Schema |
|------------------------------------|-----------------|
| group_id <i>optional</i> | integer (int64) |
| user_id <i>optional</i> | integer (int64) |

Project

| Name | Schema |
|---|--------------------------------|
| files <i>optional</i> | < File > array |
| id <i>optional</i> | integer (int64) |
| projectgroup_id <i>required</i> | integer (int64) |

RightGroup

| Name | Schema |
|---------------------------------------|-----------------|
| description <i>required</i> | string |
| id <i>required</i> | integer (int64) |

Rights

| Name | Schema |
|--|--------------------------------|
| comment_rights <i>optional</i> | comment_rights |
| description <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |
| project_rights <i>optional</i> | project_rights |

comment_rights

| Name | Schema |
|----------------------------------|------------------------|
| member <i>optional</i> | member |
| other <i>optional</i> | other |
| owner <i>optional</i> | owner |

member

| Name | Schema |
|---|---------|
| can_delete <i>required</i> | boolean |
| can_edit <i>required</i> | boolean |
| can_toggle_visibility <i>required</i> | boolean |
| can_view <i>required</i> | boolean |

other

| Name | Schema |
|---|---------|
| can_delete <i>required</i> | boolean |
| can_edit <i>required</i> | boolean |
| can_toggle_visibility <i>required</i> | boolean |
| can_view <i>required</i> | boolean |

owner

| Name | Schema |
|---|---------|
| can_delete <i>required</i> | boolean |
| can_edit <i>required</i> | boolean |
| can_toggle_visibility <i>required</i> | boolean |
| can_view <i>required</i> | boolean |

project_rights

| Name | Schema |
|----------------------------------|------------------------|
| member <i>optional</i> | member |
| other <i>optional</i> | other |

member

| Name | Schema |
|--|---------|
| can_create_comment <i>required</i> | boolean |
| can_create_visible_comment <i>required</i> | boolean |
| can_delete <i>required</i> | boolean |
| can_edit <i>required</i> | boolean |
| can_view <i>required</i> | boolean |

other

| Name | Schema |
|--|---------|
| can_create_comment <i>required</i> | boolean |
| can_create_visible_comment <i>required</i> | boolean |
| can_delete <i>required</i> | boolean |
| can_edit <i>required</i> | boolean |
| can_view <i>required</i> | boolean |

Template

| Name | Schema |
|----------------------------------|----------------------------------|
| id <i>optional</i> | integer (int64) |
| name <i>optional</i> | string |
| rights <i>optional</i> | < Rights > array |

TemplateList

Type : < [Template](#) > array

User

| Name | Schema |
|--|-----------------|
| display_name <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |

UserCommentResponse

| Name | Schema |
|--------------------------------------|-----------------|
| author_id <i>optional</i> | integer (int64) |
| can_delete <i>optional</i> | boolean |
| can_edit <i>optional</i> | boolean |

| Name | Schema |
|---|-----------------|
| can_toggle_visibility <i>optional</i> | boolean |
| content <i>optional</i> | string |
| course_id <i>optional</i> | integer (int64) |
| deleted <i>optional</i> | boolean |
| exercise_id <i>optional</i> | integer (int64) |
| file_id <i>optional</i> | integer (int64) |
| id <i>optional</i> | integer (int64) |
| line_range <i>optional</i> | string |
| module_id <i>optional</i> | integer (int64) |
| parent_id <i>optional</i> | integer (int64) |
| project_id <i>optional</i> | integer (int64) |
| timestamp <i>optional</i> | integer (int64) |
| visible <i>optional</i> | boolean |

UserCommentResponseList

Type : < [UserCommentResponse](#) > array

UserList

Type : < [User](#) > array

Paths

POST /groups

Description

Creates a new group.

Parameters

| Type | Name | Description | Schema |
|------|--------------------------------|---|----------------------|
| Body | body <i>optional</i> | ID of the module for which the group should be created. | body |

body

| Name | Schema |
|-------------------------------------|-----------------|
| module_id <i>optional</i> | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------------------------|
| 201 | Success, new group has been created. | Response 201 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

Response 201

| Name | Schema |
|------------------------------|-----------------|
| id <i>optional</i> | integer (int64) |

GET /groups

Description

Returns a list of all groups.

Responses

| HTTP Code | Description | Schema |
|-----------|---|---------------------------|
| 200 | Success | GroupList |
| 401 | Error, user is not allowed to access this page. | No Content |
| 500 | Internal server error | No Content |

GET /groups/{group_id}

Description

Returns the details of the specified group.

Parameters

| Type | Name | Description | Schema |
|------|------------------------------------|---------------------------|-----------------|
| Path | group_id <i>required</i> | ID of the group to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|-----------------------|
| 200 | Success | Group |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, group could not be found. | No Content |
| 500 | Internal server error | No Content |

PUT /groups/{group_id}

Description

Updates the specified group.

Parameters

| Type | Name | Description | Schema |
|------|------------------------------------|-------------------------------|--------------------------------|
| Path | group_id <i>required</i> | ID of the group to update. | integer (int64) |
| Body | body <i>required</i> | Data for the group to update. | < body > array |

body

| Name | Schema |
|------------------------------|-----------------|
| id <i>optional</i> | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|-----------------------|
| 200 | Success | Group |
| 400 | Error, invalid input. | No Content |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, group could not be found. | No Content |
| 500 | Internal server error | No Content |

DELETE /groups/{group_id}

Description

Deletes the specified group.

Parameters

| Type | Name | Description | Schema |
|------|------------------------------------|----------------------------|-----------------|
| Path | group_id <i>required</i> | ID of the group to delete. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------|
| 204 | Success. | No Content |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, group could not be found. | No Content |
| 500 | Internal server error | No Content |

POST /modules

Description

Creates a new module.

Parameters

| Type | Name | Description | Schema |
|------|--------------------------------|--|----------------------|
| Body | body <i>required</i> | JSON representation of the module to create. | body |

body

| Name | Schema |
|---------------------------------------|--------|
| description <i>optional</i> | string |
| name <i>optional</i> | string |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------------------------|
| 201 | Success, new module has been created. | Response 201 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 405 | Error, invalid input. | No Content |
| 500 | Internal server error | No Content |

Response 201

| Name | Schema |
|---------------------------------------|-----------------|
| description <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>optional</i> | string |

GET /modules

Description

Returns a list of all modules.

Responses

| HTTP Code | Description | Schema |
|-----------|-------------|----------------------------|
| 200 | Success | ModuleList |

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 500 | Internal server error | No Content |

GET /modules/{module_id}

Description

Returns the details of the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|----------------------------|-----------------|
| Path | module_id <i>required</i> | ID of the module to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------------------|--------------------------------|
| 200 | Success | ModuleResponse |
| 404 | Error, module could not be found. | No Content |

PUT /modules/{module_id}

Description

Updates the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|--------------------------------|------------------------------|
| Path | module_id <i>required</i> | ID of the module to update. | integer (int64) |
| Body | body <i>optional</i> | Data for the module to update. | ModuleUpdate |

Responses

| HTTP Code | Description | Schema |
|-----------|---|--------------------------------|
| 200 | Success | ModuleResponse |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module could not be found. | No Content |

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

DELETE /modules/{module_id}

Description

Deletes the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|-----------------------------|-----------------|
| Path | module_id <i>required</i> | ID of the module to delete. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------------------|------------|
| 200 | Success. | No Content |
| 401 | Not allowed. | No Content |
| 404 | Error, module could not be found. | No Content |
| 500 | Internal server error | No Content |

POST /modules/{module_id}/courses

Description

Creates a new course for the given module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|---|------------------------------|
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Body | body <i>required</i> | JSON representation of the course to create. | CourseUpdate |

Responses

| HTTP Code | Description | Schema |
|-----------|---|--------------------------------|
| 201 | Success, new course has been created. | CourseResponse |
| 401 | Error, user is not allowed to access this page. | No Content |
| 405 | Error, invalid input | No Content |
| 500 | Internal server error | No Content |

GET /modules/{module_id}/courses

Description

Returns the courses of the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|---|-----------------|
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|---|
| 200 | Success | < Response 200 > array |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module could not be found. | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|---------------------------------------|-----------------|
| can_edit <i>optional</i> | boolean |
| description <i>required</i> | string |
| id <i>optional</i> | integer (int64) |
| module_id <i>optional</i> | integer (int64) |
| name <i>required</i> | string |

GET /modules/{module_id}/courses/{course_id}

Description

Returns the specified course for the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|----------------------------|-----------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|-----------------------------------|
| 200 | Success | CourseResponseGet |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course could not be found. | ErrorResponse |
| 500 | Internal server error | No Content |

PUT /modules/{module_id}/courses/{course_id}

Description

Updates the specified course for the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|---|------------------------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to update a course. | integer (int64) |
| Body | body <i>required</i> | Data for the course to update. | CourseUpdate |

Responses

| HTTP Code | Description | Schema |
|-----------|---|--------------------------------|
| 200 | Success | CourseResponse |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course could not be found. | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

DELETE /modules/{module_id}/courses/{course_id}

Description

Deletes the specified course from the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|---|-----------------|
| Path | course_id <i>required</i> | ID of the course to delete. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to delete a course. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------|
| 200 | Success. | No Content |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course could not be found. | No Content |
| 500 | Internal server error | No Content |

POST /modules/{module_id}/courses/{course_id}/exercises

Description

Adds a new exercise to the specified course.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|---|----------------------|
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Body | body <i>required</i> | JSON representation of the Exercise to create. | body |

body

| Name | Schema |
|--|-----------------|
| description <i>required</i> | string |
| name <i>required</i> | string |
| rights_template_id <i>required</i> | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------------------------|
| 201 | Success, new course has been created. | Response 201 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course could not be found. | No Content |
| 405 | Error, invalid input. | No Content |
| 500 | Internal server error | No Content |

Response 201

| Name | Schema |
|--|-----------------|
| course_id <i>required</i> | integer (int64) |
| description <i>required</i> | string |
| id <i>required</i> | integer (int64) |
| name <i>required</i> | string |
| rights_template_id <i>required</i> | integer (int64) |

GET

/modules/{module_id}/courses/{course_id}/exercises

Description

Returns a list of exercises for the specified course for the specified module.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|---|-----------------|
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|---|
| 200 | Success | < Response 200 > array |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course could not be found. | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|--|-----------------|
| course_id <i>optional</i> | integer (int64) |
| description <i>required</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>required</i> | string |
| rights_template_id <i>required</i> | integer (int64) |

GET

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}

Description

Returns the specified exercise.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|------------------------------|-----------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------------------------|
| 200 | Success | Response 200 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course or exercise could not be found. | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|--|--------------------------|
| can_edit <i>optional</i> | boolean |
| description <i>required</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>required</i> | string |
| projects <i>optional</i> | projects |
| rights_template_id <i>required</i> | integer (int64) |

projects

| Name | Schema |
|---|------------------------------|
| author_id <i>optional</i> | integer (int64) |
| can_delete <i>optional</i> | boolean |
| exercise_id <i>optional</i> | integer (int64) |
| id <i>optional</i> | integer (int64) |
| projectgroup <i>optional</i> | projectgroup |
| projectgroup_id <i>optional</i> | integer (int64) |

projectgroup

| Name | Schema |
|-------------------------------------|---------------------------------|
| id <i>optional</i> | integer (int64) |
| module_id <i>optional</i> | integer (int64) |
| users <i>optional</i> | < users > array |

users

| Name | Schema |
|--|-----------------|
| display_name <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |

PUT

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}

Description

Updates the specified exercise.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|---|----------------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to update a course. | integer (int64) |
| Body | body <i>required</i> | Data for the Exercise to update. | body |

body

| Name | Schema |
|--|-----------------|
| description <i>optional</i> | string |
| name <i>optional</i> | string |
| rights_template_id <i>optional</i> | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|--|------------------------------|
| 200 | Success | Response 200 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course or exercise could not be found | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|--|-----------------|
| description <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |
| name <i>optional</i> | string |
| rights_template_id <i>optional</i> | integer (int64) |

DELETE

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}

Description

Deletes the specified exercise.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|---|-----------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to delete a course. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------|
| 200 | Success. | No Content |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course or exercise could not be found. | No Content |
| 500 | Internal server error | No Content |

POST

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects

Description

Adds a new Project to the specified exercise.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|---|-----------------|
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |

| Type | Name | Description | Schema |
|------|-------------------------------------|---|----------------------|
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Body | body <i>required</i> | JSON representation of the Project to create. | body |

body

| Name | Schema |
|---|-----------------|
| projectgroup_id <i>optional</i> | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------------------------|
| 201 | Success, new course has been created. | Response 201 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course could not be found. | No Content |
| 405 | Error, invalid input. | No Content |
| 500 | Internal server error | No Content |

Response 201

| Name | Schema |
|---|-----------------|
| author_id <i>optional</i> | integer (int64) |
| exercise_id <i>optional</i> | integer (int64) |
| id <i>optional</i> | integer (int64) |
| projectgroup_id <i>optional</i> | integer (int64) |

GET

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects

Description

Returns all projects for an exercise

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|------------------------------|-----------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|--|---|
| 200 | Success | < Response 200 > array |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course or exercise or project could not be found. | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|---|-----------------|
| author_id <i>optional</i> | integer (int64) |
| exercise_id <i>optional</i> | integer (int64) |
| id <i>optional</i> | integer (int64) |
| projectgroup_id <i>optional</i> | integer (int64) |

GET

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}

Description

Returns the specified project.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|------------------------------|-----------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module to fetch. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|--|------------------------------|
| 200 | Success | Response 200 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course or exercise or project could not be found. | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|--|--|
| author_id <i>optional</i> | integer (int64) |
| can_create_comment <i>optional</i> | boolean |
| can_create_visible_comment <i>optional</i> | boolean |
| can_delete <i>optional</i> | boolean |
| can_edit <i>optional</i> | boolean |
| can_view <i>optional</i> | boolean |
| exercise_id <i>optional</i> | integer (int64) |
| files <i>optional</i> | < files > array |
| id <i>optional</i> | integer (int64) |
| project_groups <i>optional</i> | < project_groups > array |

files

| Name | Schema |
|--------------------------------|-----------------|
| id <i>optional</i> | integer (int64) |
| path <i>optional</i> | string |

project_groups

| Name | Schema |
|---------------------------------|---------------------------------|
| id <i>optional</i> | integer (int64) |
| users <i>optional</i> | < users > array |

users

| Name | Schema |
|--|-----------------|
| display_name <i>optional</i> | string |
| id <i>optional</i> | integer (int64) |

PUT

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}

Description

Updates the specified project.

Parameters

| Type | Name | Description | Schema |
|-------------|---------------------------------------|---|----------------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to update a course. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |
| Body | body <i>required</i> | Data for the project to update. | body |

body

| Name | Schema |
|---|-----------------|
| projectgroup_id <i>optional</i> | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------------------------|
| 200 | Success | Response 200 |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course or exercise or project could not be found | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|---|-----------------|
| author_id <i>optional</i> | integer (int64) |
| exercise_id <i>optional</i> | integer (int64) |
| id <i>optional</i> | integer (int64) |
| projectgroup_id <i>optional</i> | integer (int64) |

DELETE

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}

Description

Deletes the specified project.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|------------------------------|-----------------|
| Path | course_id <i>required</i> | ID of the course to fetch. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |

| Type | Name | Description | Schema |
|------|--------------------------------------|---|-----------------|
| Path | module_id <i>required</i> | ID of the module from which to delete a course. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|--|------------|
| 200 | Success. | No Content |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Error, module or course or exercise or project could not be found. | No Content |
| 500 | Internal server error | No Content |

POST

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}/files

Description

Saves a file to the database.

Parameters

| Type | Name | Description | Schema |
|----------|---------------------------------------|---|-----------------|
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |
| FormData | files <i>optional</i> | files to post | file |

Responses

| HTTP Code | Description | Schema |
|-----------|-------------|------------|
| 200 | Success | No Content |

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 401 | Not allowed | No Content |
| 405 | Invalid input | No Content |
| 500 | Internal server error | No Content |

Consumes

- `multipart/form-data`

GET

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}/files/{file_id}

Description

Returns the file with the specified id.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|---|-----------------|
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | file_id <i>required</i> | ID of file to fetch | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------------------------|
| 200 | Success | Response 200 |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|--------------------------------------|------------------|
| content <i>optional</i> | < string > array |
| id <i>optional</i> | integer (int64) |
| path <i>optional</i> | string |
| project_id <i>optional</i> | integer (int64) |

POST

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}/files/{file_id}/comments

Description

Creates a comment

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|---|-------------------------|
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | file_id <i>required</i> | ID of file to fetch comments for | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |
| Body | comment <i>required</i> | | comment |

comment

| Name | Schema |
|--------------------------------------|--------|
| content <i>optional</i> | string |
| line_range <i>optional</i> | string |

| Name | Schema |
|-------------------------------------|-----------------|
| parent_id <i>optional</i> | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|------------|---|------------|
| 201 | Success, new comment has been created. | No Content |
| 401 | Error, user is not allowed to access this page. | No Content |
| 404 | Not found. | No Content |
| 405 | Error, invalid input. | No Content |
| 500 | Internal server error | No Content |

PUT

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}/files/{file_id}/comments/{comment_id}

Description

Updates the specified comment.

Parameters

| Type | Name | Description | Schema |
|-------------|---------------------------------------|---|----------------------|
| Path | comment_id <i>required</i> | ID of comment | integer (int64) |
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | file_id <i>required</i> | ID of file to fetch comments for | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |
| Body | body <i>optional</i> | body of the request | body |

body

| Name | Schema |
|-----------------------------------|---------|
| content <i>optional</i> | string |
| visible <i>optional</i> | boolean |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 200 | Success | No Content |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 500 | Internal server error | No Content |

DELETE

/modules/{module_id}/courses/{course_id}/exercises/{exercise_id}/projects/{project_id}/files/{file_id}/comments/{comment_id}

Description

Deletes the specified comment.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|---|-----------------|
| Path | comment_id <i>required</i> | ID of comment | integer (int64) |
| Path | course_id <i>required</i> | ID of the course from which to fetch exercises. | integer (int64) |
| Path | exercise_id <i>required</i> | ID of the exercise to fetch. | integer (int64) |
| Path | file_id <i>required</i> | ID of file to fetch comments for | integer (int64) |
| Path | module_id <i>required</i> | ID of the module from which to fetch courses. | integer (int64) |
| Path | project_id <i>required</i> | ID of the project to fetch. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 204 | Item deleted | No Content |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 500 | Internal server error | No Content |

GET /modules/{module_id}/group

Description

Returns the groups for this module for the current user.

Parameters

| Type | Name | Description | Schema |
|------|-------------------------------------|--|-----------------|
| Path | module_id <i>required</i> | ID of the module from which to fetch groups. | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|---|
| 200 | Success | < Response 200 > array |
| 500 | Internal server error | No Content |

Response 200

| Name | Schema |
|------------------------------------|--------------------------------|
| group_id <i>optional</i> | integer (int64) |
| users <i>optional</i> | < User > array |

POST /right_groups

Description

Creates a new right_groups.

Parameters

| Type | Name | Description | Schema |
|------|--------------------------------|---------------------------------------|----------------------|
| Body | body <i>required</i> | Description of the new right's group. | body |

body

| Name | Schema |
|---------------------------------------|--------|
| description <i>optional</i> | string |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|----------------------------|
| 201 | Success | RightGroup |
| 401 | Not allowed | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

GET /right_groups

Description

Returns a list of all right_groups.

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|----------------------------|
| 200 | Success | RightGroup |
| 500 | Internal server error | No Content |

PUT /right_groups/{right_group_id}

Description

Updates the specified rights group.

Parameters

| Type | Name | Description | Schema |
|------|--|---------------------------------------|----------------------|
| Path | right_group_id <i>required</i> | ID of rights group | integer (int64) |
| Body | body <i>required</i> | Description of the new right's group. | body |

body

| Name | Schema |
|---------------------------------------|--------|
| description <i>optional</i> | string |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 200 | Right group updated | No Content |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

DELETE /right_groups/{right_group_id}

Description

Deletes the specified rights group.

Parameters

| Type | Name | Description | Schema |
|------|--|---------------------------------|-----------------|
| Path | right_group_id <i>required</i> | ID of the right group to delete | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 204 | Item deleted | No Content |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

POST /templates

Description

Creates a new template.

Parameters

| Type | Name | Description | Schema |
|------|--------------------------------|-------------------------|--------------------------|
| Body | body <i>required</i> | Rights for the template | Template |

Responses

| HTTP Code | Description | Schema |
|-----------|---|------------|
| 201 | Success, new template has been created. | No Content |
| 401 | Error, user is not allowed to access this page. | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

GET /templates

Description

Returns a list of all rights templates.

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------------------------|
| 200 | Success | TemplateList |
| 500 | Internal server error | No Content |

PUT /templates/{template_id}

Description

Updates the specified template.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|---------------------|------------------------|
| Path | template_id <i>required</i> | ID of template | integer (int64) |
| Body | body <i>optional</i> | body of the request | Rights |

Responses

| HTTP Code | Description | Schema |
|-----------|--------------------------|------------|
| 200 | Group rights updated | No Content |
| 201 | new group rights created | No Content |
| 401 | Not allowed | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

DELETE /templates/{template_id}

Description

Deletes the specified rights template.

Parameters

| Type | Name | Description | Schema |
|------|---------------------------------------|------------------------------|-----------------|
| Path | template_id <i>required</i> | ID of the template to delete | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 204 | Item deleted | No Content |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

GET /users

Description

Returns a list of all user accounts.

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|--------------------------|
| 200 | Success | UserList |
| 401 | Not allowed | No Content |
| 500 | Internal server error | No Content |

GET /users/current

Description

Returns information for the currently logged in user.

Responses

| HTTP Code | Description | Schema |
|-----------|-------------|-----------------------------|
| 200 | Success | CurrentUser |
| 401 | Not allowed | No Content |

GET /users/current/comments

Description

Return all comments that the current user can see.

Responses

| HTTP Code | Description | Schema |
|-----------|-------------|-------------------------------------|
| 200 | Success | CommentResponseList |
| 401 | Not allowed | No Content |

GET /users/{user_id}

Description

Returns the details of the specified user account.

Parameters

| Type | Name | Description | Schema |
|------|-----------------------------------|-------------------------------------|-----------------|
| Path | user_id <i>required</i> | ID of customer to fetch account for | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|-----------------------------|
| 200 | Success | CurrentUser |
| 401 | Not allowed | No Content |
| 404 | User_Id not found | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

PUT /users/{user_id}

Description

Updates the specified user account.

Parameters

| Type | Name | Description | Schema |
|------|-----------------------------------|-------------------------------------|----------------------|
| Path | user_id <i>required</i> | ID of customer to fetch account for | integer (int64) |
| Body | body <i>required</i> | body of the request | User |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|----------------------|
| 200 | Success | User |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

DELETE /users/{user_id}

Description

Deletes the specified user account.

Parameters

| Type | Name | Description | Schema |
|------|-----------------------------------|-------------------------------------|-----------------|
| Path | user_id <i>required</i> | ID of customer to fetch account for | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|------------|
| 204 | Item deleted | No Content |
| 401 | Not allowed | No Content |
| 404 | Id not found | No Content |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |

GET /users/{user_id}/comments

Description

Returns all comments for the specified user.

Parameters

| Type | Name | Description | Schema |
|------|-----------------------------------|-------------------------------------|-----------------|
| Path | user_id <i>required</i> | ID of customer to fetch account for | integer (int64) |

Responses

| HTTP Code | Description | Schema |
|-----------|-----------------------|---|
| 200 | Success | UserCommentResponseList |
| 405 | Incorrect input | No Content |
| 500 | Internal server error | No Content |