

# CS467 Quiz Creation Backend: API Spec

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## Change log

<b>Version</b>	<b>Change</b>	<b>Date</b>
1.0	Initial version.	October 23, 2021
2.0	Add title to quiz entity.	October 24, 2021

## URL

<https://cs467quizcreation.wl.r.appspot.com>

## Data Model

### Employee

Property Name	Notes
id	The id of the employee. Datastore automatically generates it.
name	String. Name of the employee.
email	String. Email of the employee.
quiz	Array. Quizzes the employee made. Will be empty on creation.
self	String. URL to the current employee.

### Quiz

Property Name	Notes
id	The id of the quiz. Datastore automatically generates it.
employee	String. ID of the employee who created the quiz.
title	String. Title of the quiz.
timeLimit	Integer. Amount of time allotted for the quiz in minutes.
question	Array of question objects.
self	String. URL to the current quiz.

### Question

Property Name	Notes
id	The id of the question. Datastore automatically generates it.
type	Integer. Question can be one of four types: 1 – true/false 2 – multiple choice 3 – check all that apply 4 – free form
points	Integer. Number of points the question is worth.
question	String. Question being asked.
answer	Variable. Depends on question type. Question type 1 – true/false { "id": "6311934051745792", "type": 1, "points": 5, "question": "Is 2 + 2 equal to 4?", "answer": true, "self":

```
"https://cs467quizcreation.wl.r.appspot.com/question/6311934051745
792"
}

Question type 2 – multiple choice
{
  "id": "6258658740535296",
  "type": 2,
  "points": 5,
  "question": "What is 2 + 2?",
  "answer": [
    {
      "answer": "4",
      "correct": true
    },
    {
      "answer": "1",
      "correct": false
    }
  ],
  "self":
  "https://cs467quizcreation.wl.r.appspot.com/question/6258658740535
296"
}

Question type 3 – check all that apply
{
  "id": "6258658740535296",
  "type": 3,
  "points": 5,
  "question": "Is math cool?",
  "answer": [
    {
      "answer": "yes",
      "correct": true
    },
    {
      "answer": "its ok",
      "correct": true
    },
    {
      "answer": "math is terrible",
      "correct": false
    }
  ],
  "self":
  "https://cs467quizcreation.wl.r.appspot.com/question/6258658740535
```

	<pre>296" }  Question type 4 – free form {   "id": "6258658740535296",   "type": 4,   "points": 10,   "question": "Why do you like math?",   "answer": None,   "self":   "https://cs467quizcreation.wl.r.appspot.com/question/6258658740535 296" } </pre>
self	String. URL to the current question.

## Employee

### Create an Employee

Allows you to create a new employee.

POST /employee

#### Request

##### Path Parameters

None

##### Request Body

Required

##### Request Body Format

JSON

##### Request JSON Attributes

Name	Type	Description	Required?
email	String	The email of the employee.	Yes
name	String	The name of the employee	Yes

##### Request Body Example

```
{
  "email": "email@gmail.com",
  "name": "Google"
}
```

#### Response

##### Response Body Format

## JSON

### Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	If the request is missing any of the 2 required attributes, the employee will not be created, and 400 status code will be returned.

### Response Examples

- The quiz attribute will be initialized as an empty array.

#### Success

Status: 201 Created

```
{  
  "id": "5973450497720320",  
  "name": "Google",  
  "email": "email@gmail.com",  
  "quiz": [],  
  "self": "https://cs467quizcreation.wl.r.appspot.com/employee/5973450497720320"  
}
```

#### Failure

Status: 400 Bad Request

Missing name attribute

```
{  
  "Error": "Request body is missing name attribute"  
}
```

Missing email attribute

```
{  
  "Error": "Request body is missing email attribute"  
}
```

## Get an Employee

Allows you to get an existing employee

GET /employee/:employee\_id

### Request

#### Path Parameters

Name	Type	Description
employee_id	String	ID of the employee

#### Request Body

None

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No employee with this employee_id exists

### Response Examples

#### Success

Status: 200 OK

Employee with no quizzes

```
{  
  "id": "5973450497720320",  
  "name": "Google",  
  "email": "email@gmail.com",  
  "quiz": [],  
  "self": "https://cs467quizcreation.wl.r.appspot.com/employee/5973450497720320"  
}
```

Employee with quizzes

```
{  
  "id": "5973450497720320",  
  "name": "Google",  
  "quiz": [  
    {  
      "quiz_id": "4869261918994432",  
      "self":  
      "https://cs467quizcreation.wl.r.appspot.com/quiz/4869261918994432"  
    },  
  ]  
}
```

```
{  
  "self":  
  "https://cs467quizcreation.wl.r.appspot.com/quiz/4904559168192512",  
  "quiz_id": "4904559168192512"  
}  
,  
  "email": "email@gmail.com",  
  "self": "https://cs467quizcreation.wl.r.appspot.com/employee/5973450497720320"  
}
```

### *Failure*

Status: 404 Not Found

```
{  
  "Error": "No employee with this employee_id exists"  
}
```

## Delete an Employee

Allows you to delete an employee. Note that if the employee has quizzes, deleting the employee will delete all the quizzes that employee has created and all the questions in those quizzes.

DELETE /employee/:employee\_id

### Request

#### Path Parameters

Name	Type	Description
employee_id	String	ID of the employee

#### Request Body

None

### Response

No body

#### Response Body Format

Success: No body

Failure: JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	No employee with this employee_id exists

#### Response Examples

##### Success

Status: 204 No Content

##### Failure

Status: 404 Not Found

{

  "Error": "No employee with this employee\_id exists"

}

# Question

## Create a Question

Allows you to create a new question. All newly created questions will not be assigned to a quiz.

POST /question

### Request

#### Path Parameters

None

#### Request Body

Required

#### Request Body Format

JSON

#### Request JSON Attributes

Name	Type	Description	Required?
type	Integer	The question type.	Yes
points	Integer	The number of points the question is worth.	Yes
question	String	The question being asked.	Yes
answer	Object.	JSON object. Variable based on question type.	Yes

#### Request Body Example

```
{  
  "type": 1,  
  "points": 5,  
  "question": "Is 2 + 2 equal to 4?",  
  "answer": true  
}
```

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	If the request is missing the type, points, question or answer attribute, the question will not be created, and 400 status code must be returned.

#### Response Examples

*Success*

Status: 201 Created

```
{  
  "id": "4897513676996608",  
  "type": 1,  
  "points": 5,  
  "question": "Is 2 + 2 equal to 4?",  
  "answer": true,  
  "self": "https://cs467quizcreation.wl.r.appspot.com/question/4897513676996608"  
}
```

*Failure*

Status: 400 Bad Request

Missing type attribute

```
{  
  "Error": "Request body is missing type attribute"  
}
```

Missing points attribute

```
{  
  "Error": "Request body is missing points attribute"  
}
```

Missing question attribute

```
{  
  "Error": "Request body is missing question attribute"  
}
```

Missing answer attribute

```
{  
  "Error": "Request body is missing answer attribute"  
}
```

## Get a Question

Allows you to get an existing question.

GET /question/:question\_id

### Request

#### Path Parameters

Name	Type	Description
question_id	String	ID of the question

### Request Body

None

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No question with this question_id exists

### Response Examples

#### Success

Status: 200 OK

```
{  
  "id": "4897513676996608",  
  "points": 5,  
  "answer": true,  
  "question": "Is 2 + 2 equal to 4?",  
  "type": 1,  
  "self": "https://cs467quizcreation.wl.r.appspot.com/question/4897513676996608"  
}
```

#### Failure

Status: 404 Not Found

```
{  
  "Error": "No question with this question_id exists"  
}
```

## Delete a Question

Allows you to delete a question.

DELETE /question/:question\_id

### Request

#### Path Parameters

Name	Type	Description
question_id	String	ID of the question

### Request Body

None

### Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	No question with this question_id exists

### Response Examples

#### Success

Status: 204 No Content

#### Failure

Status: 404 Not Found

```
{  
  "Error": "No question with this question_id exists"  
}
```

## Quiz

## Create a Quiz

Allows you to create a new quiz. All newly created quizzes will not have any questions.

POST /quiz

### Request

#### Path Parameters

None

## Request Body

Required

### Request Body Format

JSON

#### Request JSON Attributes

Name	Type	Description	Required?
employee	String	The id of the employee entity who is creating the quiz. Id must exist.	Yes
title	String	The title of the quiz.	Yes
timeLimit	Integer	The number of minutes allowed to take the quiz.	Yes
question	Array	Empty array of question entities.	Yes

#### Request Body Example

```
{  
  "employee": "{{employee_1}}",  
  "title": "Match Quiz",  
  "timeLimit": 10,  
  "question": []  
}
```

## Response

### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	If the request is missing the employee, question or timeLimit attribute, the quiz will not be created, and 400 status code will be returned.
Failure	404 Not Found	If the employee id does not exist, a 404 status code will be returned.

#### Response Examples

##### Success

Status: 201 Created

```
{  
  "id": "6222836767129600",  
  "employee": "6276636802547712",  
  "title": "Math Quiz",  
  "timeLimit": 10,  
  "question": [],  
  "self": "https://cs467quizcreation.wl.r.appspot.com/quiz/6222836767129600"  
}
```

##### Failure

Status: 400 Bad Request

```
Missing employee attribute
{
    "Error": "Request body is missing employee attribute"
}

Missing timeLimit attribute
{
    "Error": "Request body is missing timeLimit attribute"
}

Missing question attribute
{
    "Error": "Request body is missing question attribute"
}

Missing title attribute
{
    "Error": "Request body is missing title attribute"
}

Status: 404 Not Found

No employee with this id exists
{
    "Error": "No employee with this employee_id exists"
}
```

## Add a Question to the Quiz

Allows you to add a question that has already exists to a quiz that already exists.

POST /quiz/:quiz\_id/question/:question\_id

### Request

#### Path Parameters

Name	Type	Description
quiz_id	String	ID of the quiz
question_id	String	ID of the question

#### Request Body

None

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	404 Not Found	If the quiz_id and or question_id do not exist a 404 status will be returned.

#### Response Examples

##### Success

Status: 201 Created

```
{  
  "id": 4827979632869376,  
  "employee": "6235354516422656",  
  "title": "Math Quiz",  
  "timeLimit": 10,  
  "question": [  
    {  
      "type": 1,  
      "points": 5,  
      "question": "Is 2 + 2 equal to 4?",  
      "answer": true,  
      "id": "5738294193160192",  
      "self":  
        "https://cs467quizcreation.wl.r.appspot.com/question/5738294193160192"  
    },  
    {  
      "self": "https://cs467quizcreation.wl.r.appspot.com/quiz/4827979632869376"  
    }  
  ]  
}
```

##### Failure

```
Status: 404 Not Found
No quiz with this id exists
{
    "Error": "No quiz with this quiz_id exists"
}

No question with this id exists
{
    "Error": "No question with this question_id exists"
}
```

## Delete a Quiz

Allows you to delete a quiz. Will delete all the questions associated with this quiz and will remove the quiz from the employee quiz array.

DELETE /quiz/:quiz\_id

### Request

#### Path Parameters

Name	Type	Description
quiz_id	String	ID of the quiz

#### Request Body

None

### Response

No body

#### Response Body Format

Success: No body

Failure: JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	No quiz with this quiz_id exists

#### Response Examples

##### *Success*

Status: 204 No Content

##### *Failure*

Status: 404 Not Found

{

  "Error": "No quiz with this quiz\_id exists"

}