

CS467 Quiz Creation Backend: API Spec

Bryan Roberts CS467

robertb2@oregonstate.edu

Change log

Versio n	Change	Date
1.0	Initial version.	October 23, 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.
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/6258658740535296"
}

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/6258658740535296"
}
```

	<pre> } 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/6258658740535296" } </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
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}}",  
  "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",  
  "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"
}
```

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",  
  "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"

}