Portfolio Assignment: Vinyl Record Storage

CS 493: Cloud Application Development

Spring 2020

Oregon State University

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URL: http://vinylrecordstorageapi.appspot.com/

Login: http://vinylrecordstorageapi.appspot.com/

Last Update: June 5, 3:30 PM Pacific

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Change log

Page	Change	Date
	Initial version.	Wed, June 3
Finished all documentation regarding Vinyl Records Thur, June		Thur, June 4
Added List all Users and update table of contents Fri, June 5		Fri, June 5
	Updated table of contents and added URL	Mon, June 8

Create a Vinyl Record Crate

Allows you to create a new vinyl record crate. Any additional attributes will be ignored.

POST /crates

Request

Request Parameters

None

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	Yes

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Туре	Description	Required?
location	String	The location of the crate.	Yes
color	String	The color of the crate.	Yes
capacity	Integer	Number of vinyl records that can be stored in crate. Must be	Yes
		greater than 0	

Request Body Example

```
{
    "location": "Attic",
    "color": "Red",
    "capacity": 28
}
```

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 3 required attributes, the crate must not be created, and 400 status code must be returned.
Failure	401 Unauthorized	If the authorization token is missing or invalid, the crate will not be created, and 401 status code must be returned.

Response Examples

• The vinyl attribute will be an empty array until a vinyl is assigned to the crate.

Success

```
Status: 201 Created

{
    "id": "abc123",
    "location": "Attic",
    "color": "Red",
    "capacity": 28
    "vinyl": [],
    "owner": "8675309",
    "self": "https://vinylrecordstorageapi.appspot.com/crates/abc123"
}
```

```
Status: 400 Bad Request

{
    "Error": "The request object is missing at least one valid, required attributes"
}

Status: 401 Unauthorized

{
    "Error": "Invalid or missing authorization token"
}
```

Get a Crate

Allows you to get an existing crate that belongs to the supplied authorized user and shows vinyl with title.

```
GET /crates/:crate_id
```

Request

Request Parameters

Name	Туре	Description	Required?
crate_id	String	ID of the crate	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	Yes

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes	
Success	200 OK		
Failure	401 Unauthorized	If the authorization token is missing or invalid, 401 status	
		code must be returned.	
Failure	403 Forbidden	Authorization token is valid but not associated with the	
		owner user of this crate	
Failure	404 Not Found	No crate with this crate_id exists	

Response Examples

Success

```
"self": "https://vinylrecordstorageapi.appspot.com/vinyl/123aaa"}
],
"owner": "8675309",
"self": "https://vinylrecordstorageapi.appspot.com/crates/abc123"
}
```

```
Status: 401 Unauthorized

{
    "Error": "Invalid or missing authorization token"
}

Status: 403 Forbidden

{
    "Error": "Action is forbidden by anyone other than owner of crate"
}

Status: 404 Not Found

{
    "Error": "No crate with this crate_id exists"
}
```

List all Crates

List all the crates that belong to the supplied authorized user. Lists vinyl along with title

GET /crates

Request

Request Parameters

None

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	No

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	Returns 5 crates at a time. If more than 5 crates exist or
		remain, attribute of next will contain a link to next
		pagination of results

Response Examples

Success

```
"id": "aed483",
 "location": "Basement",
 "color": "Black",
 "capacity": 10
 "vinyl": [],
 "owner": "8675309",
 "self": "https://vinylrecordstorageapi.appspot.com/crates/aed483"
},
 "id": "xyz123",
 "location": "Garage",
 "color": "Blue",
 "capacity": 12
 "vinyl": [],
"owner": "8675309",
 "self": "https://vinylrecordstorageapi.appspot.com/crates/xyz123"
 "id": "yyz123",
 "location": "Living Room",
 "color": "Yellow",
 "capacity": 11
 "vinyl": [],
 "owner": "8675309",
 "self": "https://vinylrecordstorageapi.appspot.com/crates/yyz123"
 "id": "xxr123",
 "location": "Hall Closet",
 "color": "Lavender",
 "capacity": 44
 "vinyl": [],
 "owner": "8675309",
 "self": "https://vinylrecordstorageapi.appspot.com/crates/xxr123"
}
],
"next": "https://vinylrecordstorageapi.appspot.com/crates?offset=5"
```

Delete a Crate

Allows you to delete a crate. Note that if the crate is currently occupied by any vinyl, they will be unloaded.

DELETE /crates/:crate_id

Request

Request Parameters

Name	Туре	Description	Required?
crate_id	String	ID of the crate	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	Yes

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	401 Unauthorized	If the authorization token is missing or invalid, the crate will not be created, and 401 status code must be returned.
Failure	403 Forbidden	Authorization token is valid but not associated with the owner user of this crate
Failure	404 Not Found	No crate with this crate_id exists

Response Examples

Success

Status: 204 No Content

```
Status: 401 Unauthorized

{
"Error": "Invalid or missing authorization token"
}
```

```
Status: 403 Forbidden

{
    "Error": "Action is forbidden by anyone other than owner of crate"
}

Status: 404 Not Found

{
    "Error": "No crate with this crate_id exists"
}
```

Edit a Crate By Individual Attribute

Allows you to edit a crate by individual attribute. At least one attribute is required, any unlisted attributes will be ignored. Must be the owner of the crate to edit.

PATCH /crates/:crate_id

Request

Request Parameters

Name	Туре	Description	Required?
crate_id	String	ID of the crate	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	Yes

Request Body

Required

Request Body MIME Type

application/json

Request JSON Attributes

Name	Туре	Description	Required?
location	String	The location of the crate.	No
color	String	The color of the crate.	No
capacity	Integer	Number of vinyl records that can be stored in crate.	No

Request Body Example

```
{
   "location": "Tool Shed"
}
```

Response

Response Body MIME Type

application/json

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	400 Bad Request	If the request has an invalid attribute, the crate must not be edited and a 400 response is returned.
Failure	401 Unauthorized	If the authorization token is missing or invalid, the crate will not be edited, and 401 status code must be returned.
Failure	403 Forbidden	Authorization token is valid but not associated with the owner user of this crate

Failure 404 Not Found No crate with this crate_id exists

Response Examples

Success

```
Status: 400 Bad Request

{
    "Error": "The request object is missing at least one valid, required attributes"
}

Status: 401 Unauthorized

{
    "Error": "Invalid or missing authorization token"
}

Status: 403 Forbidden

{
    "Error": "Action is forbidden by anyone other than owner of crate"
}

Status: 404 Not Found

{
    "Error": "No crate with this crate_id exists"
}
```

Edit a Crate Fully

Allows you to edit a crate, any unlisted attributes will be ignored. If vinyl records are assigned to crate, they will stay assigned to the same crate despite any attribute changes.

```
PUT /crates/:crate_id
```

Request

Request Parameters

Name	Type	Description	Required?
crate_id	String	ID of the crate	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	Yes

Request Body

Required

Request Body MIME Type

application/json

Request JSON Attributes

Name	Туре	Description	Required?
location	String	The location of the crate.	Yes
color	String	The color of the crate.	Yes
capacity	Integer	Number of vinyl records that can be stored in crate.	Yes

Request Body Example

```
{
   "location": "Living Room",
   "color": "Green",
   "capacity": 20
}
```

Response

Response Body MIME Type

application/json

Response Statuses

Outcome	Status Code	Notes	
Success	303 See Other	URL of updated crate in location header of response	
Failure	400 Bad Request	If the request has an invalid attribute, the crate must not	
		be edited and a 400 response is returned.	
Failure	401 Unauthorized	If the authorization token is missing or invalid, the crate	
		will not be edited, and 401 status code must be returned.	

Failure	403 Forbidden	Authorization token is valid but not associated with the	
		owner user of this crate	
Failure	404 Not Found	No crate with this crate_id exists	

Response Examples

Success

```
Status: 400 Bad Request

{
    "Error": "The request object is missing at least one valid, required attributes"
}

Status: 401 Unauthorized

{
    "Error": "Invalid or missing authorization token"
}

Status: 403 Forbidden

{
    "Error": "Action is forbidden by anyone other than owner of crate"
}

Status: 404 Not Found

{
    "Error": "No crate with this crate_id exists"
}
```

Create a Vinyl Record

Allows you to create a new vinyl record.

POST /vinyl

Request

Request Parameters

None

Request Headers:

Name	Value	Required?
Accept	application/json	Yes

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Туре	Description	Required?
artist	String	The name of the band or artist who made the record	Yes
title	String	Title of the album	Yes
release_year	Integer	The year the album was release (YYYY) as an integer	Yes

Request Body Example

```
{
   "artist": "Bruce Springsteen and the E Street Band",
   "title": "Born to Run",
   "release_year": 1975
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	If the request is missing any attribute, the vinyl record must not be created, and 400 status code must be returned.

Response Examples

Success

Status: 201 Created		
{		

```
"id": "123abc",
   "artist": "Bruce Springsteen and the E Street Band",
   "title": "Born to Run",
   "release_year": 1975,
   "crate": null,
   "self": "https://vinylrecordstorageapi.appspot.com/vinyl/123abc"
}
```

```
Status: 400 Bad Request

{
    "Error": "The request object is missing at least one of the required attributes"
}
```

Get a Vinyl Record

Allows you to get an existing vinyl record.

```
GET /vinyl/:vinyl_id
```

Request

Request Parameters

Name	Type	Description	Required?
vinyl_id	String	ID of the vinyl	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No vinyl with this vinyl_id exists

Response Examples

Success

```
Status: 200 OK

{
    "id": "123abc",
    "artist": "Bruce Springsteen and the E Street Band",
    "title": "Born to Run",
    "release_year": 1975,
    "crate": {
        "id": "abc123",
        "name": "Living Room",
        "color": "Green",
        "owner": "8675309",
        "self": "https://vinylrecordstorageapi.appspot.com/crates/abc123"
    },
    "self": "https://vinylrecordstorageapi.appspot.com/vinyl/123abc"
}
```

Failure

Status: 404 Not Found

{
 "Error": "No vinyl with this vinyl_id exists"
}

List all Vinyl Records

List all the vinyl records.

GET /vinyl

Request

Request Parameters

None

Request Headers:

Name	Value	Required?
Accept	application/json	Yes

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	Returns 5 records at a time. If more than 5 records exist
		or remain, attribute of next will contain a link to next
		pagination of results

Response Examples

Success

```
"title": "Run The Jewels 4",
    "release_year": 2020,
    "crate": null,
    "self": "https://vinylrecordstorageapi.appspot.com/vinyl/123123"
 },
  "id": "123aaa",
  "artist": "Steely Dan",
  "title": "Aja",
  "release_year": 1977,
  "crate": null,
   "self": "https://vinylrecordstorageapi.appspot.com/vinyl/123aaa"
  "id": "123bbb",
  "artist": "T. Rex",
  "title": "Electric Warrior",
  "release_year": 1971,
  "crate": null,
  "self": "https://vinylrecordstorageapi.appspot.com/vinyl/123bbb"
 },
  "id": "123cc",
  "artist": "Fun.",
  "title": "Aim and Ignite",
  "release_year": 2009,
  "crate": null,
  "self": "https://vinylrecordstorageapi.appspot.com/vinyl/123cc"
 }
],
"next": "https://vinylrecordstorageapi.appspot.com/vinyl?offset=5"
```

Edit a Vinyl Record By Individual Attribute

Allows you to edit a vinyl by individual attribute. At least one attribute is required, any unlisted attributes will be ignored. Must be the owner of the crate to edit if vinyl is in a crate.

PATCH /vinyl/:vinyl_id

Request

Request Parameters

Name	Туре	Description	Required?
vinyl_id	String	ID of the vinyl	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	No

Request Body

Required

Request Body MIME Type

application/json

Request JSON Attributes

Name	Туре	Description	Required?
artist	String	The name of the band or artist who made the record	No
title	String	Title of the album	No
release_year	Integer	The year the album was release (YYYY) as an integer	No

Request Body Example

```
{
    "title": "Greetings from Asbury Park"
}
```

Response

Response Body MIME Type

application/json

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	400 Bad Request	If the request has an invalid attribute, the vinyl must not
		be edited and a 400 response is returned.
Failure	401 Unauthorized	If the authorization token is missing or invalid, the vinyl
		will not be edited, and 401 status code must be returned.
Failure	403 Forbidden	Authorization token is valid but not associated with the
		owner user of this crate

Failure 404 Not Found No vinyl with this vinyl_id exists

Response Examples

Success

```
Status: 400 Bad Request

{
"Error": "The request object is missing at least one valid, required attributes"
}
Status: 401 Unauthorized

{
"Error": "Invalid or missing authorization token"
}
Status: 403 Forbidden

{
"Error": "Action is forbidden by anyone other than owner of crate"
}
Status: 404 Not Found

{
"Error": "No vinyl with this vinyl_id exists"
}
```

Edit a Vinyl Record Fully

Allows you to edit a vinyl record, any unlisted attributes will be ignored. If vinyl records are assigned to crate, they will stay assigned to the same crate despite any attribute changes. If vinyl record is assigned to crate, only a crate owner may edit the details

DIIT	/vinyl	/·vin	ıl id
PUI	/VIIIVI	/:vin\	/I IU

Request

Request Parameters

Name	Туре	Description	Required?
vinyl_id	String	ID of the vinyl	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	No

Request Body

Required

Request Body MIME Type

application/json

Request JSON Attributes

Name	Туре	Description	Required?
artist	String	The name of the band or artist who made the record	Yes
title	String	Title of the album	Yes
release_year	Integer	The year the album was release (YYYY) as an integer	Yes

Request Body Example

```
{
   "artist": "David Bowie",
   "title": "Blackstar",
   "release_year": 2016,
}
```

Response

Response Body MIME Type

application/json

Response Statuses

Outcome	Status Code	Notes
Success	303 See Other	URL of updated vinyl record in location header of
		response
Failure	400 Bad Request	If the request has an invalid attribute, the record must
		not be edited and a 400 response is returned.

Failure	401 Unauthorized	If the authorization token is invalid, the record will not be	
		edited, and 401 status code must be returned.	
Failure	403 Forbidden	Authorization token is valid but not associated with the	
		owner user of the crate in which this record exists	
Failure	404 Not Found	No vinyl with this vinyl_id exists	

Response Examples

Success

```
Status: 303 See Other

{
    "id": "123abc",
    "artist": "David Bowie",
    "title": "Blackstar",
    "release_year": 2016,
    "crate": {
        "id": "abc123",
        "name": "Living Room",
        "color": "Green",
        "owner": "8675309",
        "self": "https://vinylrecordstorageapi.appspot.com/crates/abc123"
        },
    "self": "https://vinylrecordstorageapi.appspot.com/vinyl/123abc"
}
```

```
Status: 400 Bad Request

{
    "Error": "The request object is missing at least one valid, required attributes"
}

Status: 401 Unauthorized

{
    "Error": "Invalid or missing authorization token"
}

Status: 403 Forbidden

{
    "Error": "Action is forbidden by anyone other than owner of crate"
}

Status: 404 Not Found

{
    "Error": "No vinyl with this vinyl_id exists"
}
```

Delete a Vinyl Record

Allows you to delete a vinyl record. If the record has a crate, it will be removed from the crate prior to being deleted. Additionally, if the record has a crate, only the crate owner may delete it.

```
DELETE /vinyl/:vinyl_id
```

Request

Request Parameters

Name	Туре	Description	Required?
vinyl_id	String	ID of the vinyl	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	No

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	401 Unauthorized	If the authorization token is missing or invalid, 401 status code must be returned.
Failure	403 Forbidden	Authorization token is valid but not associated with the owner user of this crate
Failure	404 Not Found	No vinyl with this vinyl_id exists

Response Examples

Success

Status: 204 No Content

```
Status: 401 Unauthorized

{
"Error": "Invalid or missing authorization token"
}
Status: 403 Forbidden
```

```
{
  "Error": "Action is forbidden by anyone other than owner of crate"
}
Status: 404 Not Found
{
  "Error": "No vinyl with this vinyl_id exists"
}
```

Vinyl Record Assigned a Crate

Crate is assigned a vinyl record. Crate must be associated with authenticated user.

PUT /crates/:crate_id/vinyl/:vinyl_id/store

Request

Request Parameters

Name	Туре	Description	Required?
crate_id	String	ID of the crates	Yes
vinyl_id	String	ID of the vinyl record	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	Yes

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes	
Success	204 No Content	Succeeds only if a crate exists with this crate_id, a vinyl record exists with this vinyl_id and the vinyl does not	
		have a crate.	
Failure	400 Bad Request	If the vinyl record already has a crate or crate is full.	
Failure	401 Unauthorized	If the authorization token is missing or invalid, 401 status code must be returned.	
Failure	403 Forbidden	Authorization token is valid but not associated with the	
railure	403 Forbiddell	owner user of this crate	
Failure	404 Not Found	No vinyl with this vinyl_id exists or crate with this	
		crate_id exists	

Response Examples

Success

Status: 204 No Content		
I Status, MM NO CONTENT		
1 Status, 207 NO CONTENT		

Status: 400 Bad Request	
{	

```
"Error": "The vinyl already has a crate or crate is full"
}
Status: 401 Unauthorized

{
   "Error": "Invalid or missing authorization token"
}
Status: 403 Forbidden

{
   "Error": "Action is forbidden by anyone other than owner of crate"
}
Status: 404 Not Found

{
   "Error": "The specified crate and/or vinyl doesn't exist"
}
```

Comment

• A vinyl record cannot be assigned to multiple crates.

Remove Vinyl Record from Crate

Vinyl record removed from crate. Crate must be associated with authorized user.

DELETE /crates/:crate_id/vinyl/:vinyl_id/withdraw

Request

Request Parameters

Name	Туре	Description	Required?
crate_id	String	ID of the crates	Yes
vinyl_id	String	ID of the vinyl record	Yes

Request Headers:

Name	Value	Required?
Accept	application/json	Yes
Authorization	"Bearer " + JWT	Yes

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	Succeeds only if a crate exists with this crate_id, a vinyl record exists with this vinyl_id and this crate contains this record.
Failure	400 Bad Request	If the vinyl to be withdrawn is not in the crate.
Failure	401 Unauthorized	If the authorization token is missing or invalid, 401 status code must be returned.
Failure	403 Forbidden	Authorization token is valid but not associated with the owner user of this crate
Failure	404 Not Found	No crate with this crate_id has a vinyl with this vinyl_id

Response Examples

Success

Status: 204 No Content

```
Status: 400 Bad Request
{
"Error": "This vinyl is not in this crate"
```

```
Status: 401 Unauthorized

{
"Error": "Invalid or missing authorization token"
}
Status: 403 Forbidden

{
"Error": "Action is forbidden by anyone other than owner of crate"
}
Status: 404 Not Found

{
"Error": "The specified crate and/or vinyl doesn't exist"
}
```

List all Users

List all registered users

GET /users

Request

Request Parameters

None

Request Headers:

Name	Value	Required?
Accept	application/json	Yes

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	Returns all user entities.

Response Examples

Success

```
Status: 200 OK

{
   "users": [
    {
       "id": "8675309",
       "email": "stanlemi@oregonstate.edu"
    },
    {
       "id": "5555555",
       "email": "kraikkonen@alfa.com"
    },
    {
       "id": "141414",
       "email: "svettel@ferrari.it"
    }
]
```

Other

Miscellaneous responses for errors.

PUT or DELETE /crates

Request

Request Parameters

Request Body

Required

Request Body MIME Type

application/json

Request JSON Attributes

Name	Туре	Description	Required?
location	String	The location of the crate.	No
color	String	The color of the crate.	No
capacity	Integer	Number of vinyl records that can be stored in crate.	No

Request Body Example

```
{
   "location": "Tool Shed"
}
```

Response

Response Body MIME Type application/json

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not	Method not supported by this endpoint
	Allowed	

Response Examples

Failure

```
Status: 405 Method Not Allowed

{
"Error": "Method is not allowed for this endpoint"
}
```

Error served when client requests content type not supported by endpoint

HTTP VERB /*

Request

Request Parameters

Request Headers:

Name	Value	Required?
Accept	text/csv	Yes

Request Body MIME Type

Any not supported, example: text/csv

Request Body Example

None

Response

Response Body MIME Type

application/json

Response Statuses

Outcome	Status Code	Notes
Failure	406 Not Acceptable	Content-type requested is not supported

Response Examples

```
Status: 406 Not Acceptable

{
    "Error": "Content-type requested is not supported by this endpoint"
}
```