The Jobs API

Ryan McKenzie – CS493 Portfolio Project

GCP Deployment URL:

Account Creation URL:

<u>Data Model</u>

Users			
Property	**Type**	**Required?**	**Valid Values**
Name	*String*	Yes	Managed by Auth0
ID	*String*	Yes	Managed by Auth0
Company	*String*	Yes	String, length < 55 Ex. "Gooble"

Jobs			
Property	**Type**	**Required?**	**Valid Values**
ID	*String*	Yes	Assigned by Datastore
Title	*String*	Yes	String, length < 50 Ex. "Software Engineer"
Company	*String* *Foreign Key Datastore*	Yes	String, length < 50 Ex. "Gooble"
Salary	*Int*	Yes	Integer 1 – 1,000,000 Ex. 100,000
Experience	*Int*	No	Integer 1 – 20 Ex. 5
Self	*String*	N/A	*Link to Resource

Companies			
Property	**Type**	**Required?**	**Valid Values**
ID	*String*	Yes	Assigned by Datastore

Name	String	Yes	String, length < 50 Ex. "Gooble"
Type	String	Yes	String, length < 50 Ex. "Fintech"
Description	String	Yes	String, length < 500
			Ex. "Providing Dogecoin for pets"
Website	String	Yes	String, length < 500 Ex. Gooble.com
Self	String	N/A	*Link to Resource

Entity Relationship

Jobs are related to companies. Any job posting that is posted must have a company associated with a company object (which must be created ahead of time). Every job has only one company. Jobs posted without companies are rejected. Conversely, a single company can be associated with many job postings, all of which will link back to the specific company entity. As a note, only users who are authorized to post jobs for a company may do so, and only those with this same authorization may post/delete the company entity itself. In theory, this would require some credentialing on the side of the company as well as verification the company is real, trustworthy, and so on, but for the sake of the project a company can simply be associated with any verified user.

User Model

The unique identifier for the user is supplied by authentication through Auth0 and is either a unique Auth0-provided identifier or a Google identifier. Requests that require a user identifier should provide their JWT, which will have been linked to a company upon creation of their account. A user entity in Datastore will keep track of users by an ID linked to their JWT and Company name, which will be used to determine privileges a user can access.

In terms of the relationship, one user can belong to only one company, but a company could be associated with many different users.

The API Specification begins on the next page.

Create a Company

POST /companies

Request
Path Parameters
None

Request Body
Required

Request Body Format
JSON

Request JSON Attributes

Name	Type	Description	Required?
Name	String	The name of the Company	Yes
Type	String	The business area	Yes
Description	String	A short description of the company	Yes
Website	String	A URL to the company website	Yes

Request Body Example
{
      "name": "Goobel",
      "type": "Edtech",
      "description": "We help teachers do things",
      "website": "goobelTeaching.com"
}

Response
Response Body Format

JSON

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	Missing or invalid attributes
Failure	403	Company already exists
Failure	406	Request does not accept JSON
Failure	401	Invalid or missing authorization

Response Examples
Success
Status: 201 Created
{

    "id": "abc123",
    "name": "goobel",
    "type": "edtech",
    "description": "We help teachers do things",
    "website": "goobelTeaching.com"
    "self": "https://<app>/companies/abc123"

}

Failure
Status: 400 Bad Request
{

    "Error": "Request object has missing or invalid attributes"

}

Create a Job

POST /jobs

Request
Path Parameters
None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
Title	String	The job title	Yes
Company	String	Company ID for Job's Company	Yes
Salary	Integer	Base salary for the job	Yes
Experience	Integer	Years of experience required	No

Request Body Example

{

    "title": "Software Engineer",

    "company": "Gooble",

    "salary": 80000,

    "experience": 1

}

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	Missing or invalid attributes
Failure	406	Request does not accept JSON
Failure	401	Invalid or missing authorization

Response Examples

Success

Status: 201 Created

{

    "id": "abc123",

    "title": "Software Engineer",

```
        "company": "Gooble",
        "salary": 80000,
        "experience": 1
        "self": https://<app>/jobs/abc123,
        "user": "Google auth || 211111"
}
```

Failure
Status: 400 Bad Request
```
{
        "Error": "Request object has missing or invalid attributes"
}
```


View All Companies

GET /companies

Request
Path Parameters
None

Request Body
None

Request Body Format
N/A

Request JSON Attributes
N/A

Request Body Example
N/A

Response
Response Body Format
JSON

Response Statuses

Outcome	Status Code	Notes

Success	200 OK	
Failure	406	Invalid content type request

<u>Response Examples</u>
Success
Status: 200 OK
{
       "companies": [
       {
       "id": "abc1",
       "name": "Goobel",
       "type": "Edtech",
       "description": "We help teachers do things",
       "website": "goobelTeaching.com"
       "self": ""https://<app>/companies/abc1"
       },
       {
       "id": "abc2",
       "name": "Goobel",
       "type": "Edtech",
       "description": "We help teachers do things",
       "website": "goobelTeaching.com"
       "self": "https://<app>/companies/abc2"
       },
       {
       "id": "abc3",
       "name": "Goobel",
       "type": "Edtech",
       "description": "We help teachers do things",
       "website": "goobelTeaching.com"
       "self": "https://<app>/companies/abc3"
       },
       {
       "id": "abc4",
       "name": "Goobel",
       "type": "Edtech",
       "description": "We help teachers do things",
       "website": "goobelTeaching.com"
       "self": "https://<app>/companies/abc4"
       },
       {

```
        "id": "abc5",
        "name": "Goobel",
        "type": "Edtech",
        "description": "We help teachers do things",
        "website": "goobelTeaching.com"
        "self": "https://<app>/companies/abc5"
        } ],
        "next": "https://<app>/companies/?offset=5
}
```

Failure

Status: 406

```
{
        "Error": "Invalid content-type requested"
}
```

View All Jobs

GET /jobs

Request

Path Parameters

None

Request Body

N/A

Request Body Format

N/A

Request JSON Attributes

N/A

Request Body Example

N/A

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes

Success	200 OK	
Failure	406	Invalid content type request

Response Examples

Success

Status: 200 OK

```
{

        "Jobs":
        [

                {

                        "id": "ab1",
                        "title": "Software Engineer",
                        "company": "Goobel",
                        "salary": 90000,
                        "experience": 2,
                        "self": "https://<app>/jobs/ab1"

                },

                {

                        "id": "ab2",
                        "title": "Software Engineer",
                        "company": "Goobel",
                        "salary": 90000,
                        "experience": 2,
                        "self": "https://<app>/jobs/ab2"

                },
                {

                        "id": "ab3",
                        "title": "Software Engineer",
                        "company": "Goobel",
                        "salary": 90000,
                        "experience": 2,
                        "self": "https://<app>/jobs/ab3"

                },
                {

                        "id": "ab4",
                        "title": "Software Engineer",
                        "company": "Goobel",
                        "salary": 90000,
                        "experience": 2,
```

```
                    "self": "https://<app>/jobs/ab4"
            },
            {
                    "id": "ab5",
                    "title": "Software Engineer",
                    "company": "Goobel",
                    "salary": 90000,
                    "experience": 2,
                    "self": "https://<app>/jobs/ab5"
            }
        ]
        "next": "https://<app>/jobs/?offset=5
}
```

Failure

Status: 406

```
{
        "Error": "Invalid content type requested"
}
```

View a Company

GET /companies/:company_id

Request
Path Parameters

Name	Type	Description
Company_id	String	The ID of the company

Request Body

None

Request Body Format

N/A

Request JSON Attributes

N/A

Request Body Example

N/A

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No company with this company_id exists
Failure	406	Invalid content type requested

Response Examples

Success

Status: 200 OK

{

    "id": "abc123",

    "name": "goobel",

    "type": "edtech",

    "description": "We help teachers do things",

    "website": "goobelTeaching.com"

    "self": "https://<app>/companies/abc123"

}

Failure

Status: 404 Not Found

{

    "Error": "No company with this company_id exists"

}

View a Job

GET /jobs/:job_id

Request

Path Parameters

Name	Type	Description
job_id	String	ID of the job

Request Body

None

Request Body Format

N/A

Request JSON Attributes

N/A

Request Body Example

N/A

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No job with this job_id exists
Failure	406	Invalid content type requested

Response Examples

Success

Status: 200 OK

```
{
        "id": "abc123",
        "title": "Software Engineer",
        "company": "Gooble",
        "salary": 80000,
        "experience": 1
        "self": "https://<app>/jobs/abc123"
}
```

Failure

Status: 404 Not Found

```
{
        "Error": "No job with this job_id exists"
}
```

Edit a Company

PUT /companies/:company_id
PATCH /companies/:company_id

Request
Path Parameters

Name	Type	Description
Company_id	String	ID of the company

Request Body
Required

Request Body Format
JSON

Request JSON Attributes

Name	Type	Description	Required(PUT)	Required(PATCH)
name	String	Name of the company	Yes	Yes
type	String	Type of company	Yes	No
description	String	Short description	Yes	No
website	String	Company URL	Yes	No

Request Body Example
{
        "name": "Goobil",
        "type": "Crypto",
        "description": "A company which does things", "website": "goobil.co"
}

Response
Response Body Format
JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	400 Bad Request	PUT Missing any value
Failure	404	No company with this company_id exists

Failure	403	Attempt to change name to unique name, or credentialed user cannot change this resource
Failure	406	Unsupported content type requested
Failure	401	Missing or invalid credentials

Response Examples
Success
{
    "name": "Goobil",
    "type": "Crypto",
    "description": "A company which does things",
    "website": "goobil.co"
}

Failure
Status: 400 Bad Request
{
    "Error": "The request object is missing at least one of the required attributes"
}

Edit a Job

PUT /jobs/:job_id
PATCH /jobs/:job_id

Request
Path Parameters

Name	Type	Description
job_id	String	ID of the job

Request Body
Required
Request Body Format
JSON

Request JSON Attributes

Name	Type	Description	Required(PUT)	Required(PATCH)
title	String	Job title	Yes	No
company	String	Company name for job	Yes	Forbidden
salary	Integer	Job's base pay	Yes	No

experience	Integer	Years of experience	Yes	No

Request Body Example

{

      "title": "Software Engineer",

      "company": "Googill",

      "salary": 95000,

      "experience": 2

}

Notes

A user's credentials are verified when editing a job, and Users cannot edit jobs belonging to other Users.

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	400 Bad Request	PUT Missing any value, attempt to change company
Failure	404	No job with this job_id exists
Failure	403	Credentialed user cannot access this resource, or attempt to change company name
Failure	406	Unsupported content type requested

Response Examples

Success

Status: 200 OK

{

      "id": "abc123",

      "title": "Software Engineer",

      "company": "Googill",

"salary": 95000,

      "experience": 2

      "self": "https://<app>/jobs/abc123

}

Failure

Status: 400 Bad Request

{

       "Error": "The request object is missing at least one required attribute"

}

Delete a Company

DELETE /companies/:company_id

Request
Path Parameters

Name	Type	Description
Company_id	String	ID of the company

Request Body

None

Request Body Format

N/A

Request JSON Attributes

N/A

Request Body Example

N/A

Response
Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	No company with this company_id exists
Failure	406	Unsupported content type requested

Failure	403 Forbidden	Credentialed but not permissioned to delete this resource
Failure	401	Missing or invalid credentials

Response Examples
Success
Status: 204 No Content

Failure
Status: 404 Not Found
{
        "Error": "No company with this company_id exsits"
}
# Delete a Job

DELETE /jobs/:job_id

Request
Path Parameters

Name	Type	Description
job_id	String	ID of the job

Request Body
None

Request Body Format
N/A

Request JSON Attributes
N/A

Request Body Example
N/A

Notes
Users cannot delete jobs belonging to other users.

Response
Response Body Format
Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	No job with this job_id exists
Failure	406	Unsupported content type requested
Failure	403 Forbidden	Credentialed but not permissioned to delete this resource
Failure	401	Missing or invalid credentials

Response Examples
Success
Status: 204 No Content

Failure
Status: 404 Not Found
{
        "Error": "No job with this job_id exists.
}

View All Users

GET /users

Request
Path Parameters
None

Request Body
None

Request Body Format
N/A

Request JSON Attributes
N/A

Request Body Example

N/A

Response

Response Body Format

List of JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	

Response Examples

Success

Status: 200 OK

```
[
        {
                "id": "p3rs0n",
                "company": "goobeel"
        }

]
```