

Project Overview

Implement a simple LEAVE application using AWS Lambda and Serverless framework.
The application can be used by employees to keep track of his/her leave times.
This application will allow users to create/remove/update/get LEAVE items.

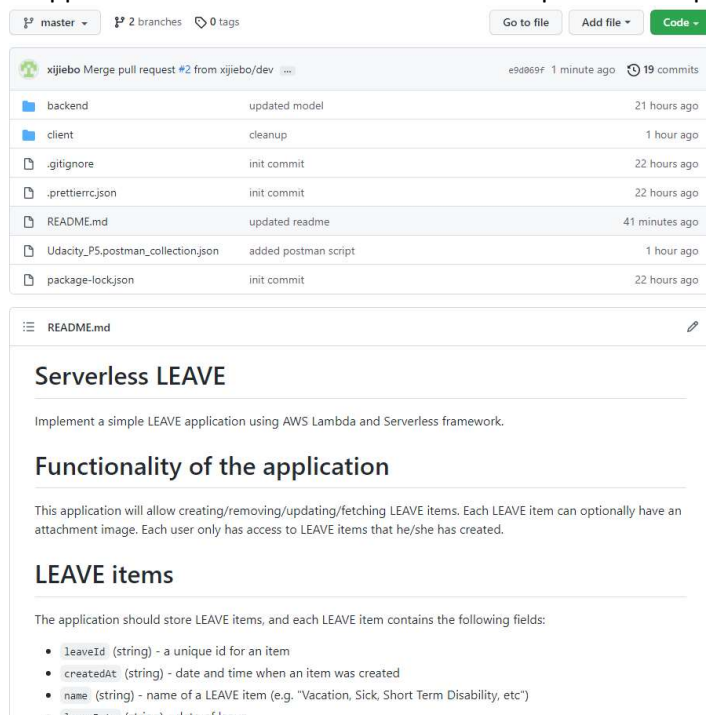
Each LEAVE item contains the following fields:

- leaveId (string) - a unique id for an item
- createdAt (string) - date and time when an item was created
- name (string) - name of a LEAVE item (e.g. "Vacation")
- leaveDate (string) - date and time of the Leave
- hours (number) – Number of hours of the Leave
- attachmentUrl (string) (optional) - a URL pointing to an image attached to a LEAVE item (e.g. document related with sick leave)

LEAVE items are stored in dynamo db table.
Attachments are stored in S3 bucket.

Project source code structure

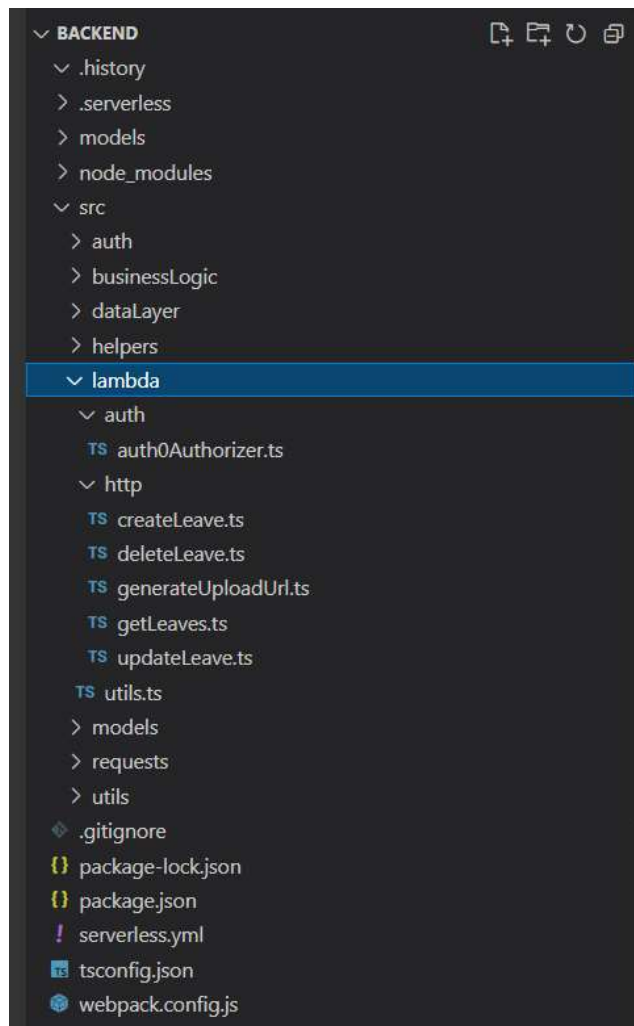
The application consists **backend** and **client**. A postman script is also developed for testing.



The screenshot shows a GitHub pull request interface. At the top, it says 'xijiebo Merge pull request #2 from xijiebo/dev'. Below this is a table of files that were changed in the pull request:

File	Change	Time
backend	updated model	21 hours ago
client	cleanup	1 hour ago
.gitignore	init commit	22 hours ago
.prettierrc.json	init commit	22 hours ago
README.md	updated readme	41 minutes ago
Udacity_PS.postman_collection.json	added postman script	1 hour ago
package-lock.json	init commit	22 hours ago

Below the table, the 'README.md' file is open, showing the project's documentation. The title is 'Serverless LEAVE'. The description is 'Implement a simple LEAVE application using AWS Lambda and Serverless framework.' The section 'Functionality of the application' states: 'This application will allow creating/removing/updating/fetching LEAVE items. Each LEAVE item can optionally have an attachment image. Each user only has access to LEAVE items that he/she has created.' The section 'LEAVE items' states: 'The application should store LEAVE items, and each LEAVE item contains the following fields:' followed by a bulleted list of fields: leaveId (string) - a unique id for an item, createdAt (string) - date and time when an item was created, name (string) - name of a LEAVE item (e.g. "Vacation, Sick, Short Term Disability, etc"), and leaveDate (string) - date of leave.



Backend AWS deployment

Functions (31) Last fetched 2 minutes ago Actions Create function

Filter by tags and attributes or search by keyword 7 matches

"serverless-leave-app-dev-" Clear filters

<input type="checkbox"/>	Function name	Description	Package type	Runtime	Code size	Last modified
<input type="checkbox"/>	serverless-leave-app-dev-DeleteLeave	-	Zip	Node.js 12.x	13.3 MB	1 hour ago
<input type="checkbox"/>	serverless-leave-app-dev-Auth	-	Zip	Node.js 12.x	13.3 MB	1 hour ago
<input type="checkbox"/>	serverless-leave-app-dev-custom-resource-apigw-cw-role	-	Zip	Node.js 12.x	10.3 kB	1 hour ago
<input type="checkbox"/>	serverless-leave-app-dev-GenerateUploadUrl	-	Zip	Node.js 12.x	13.3 MB	1 hour ago
<input type="checkbox"/>	serverless-leave-app-dev-UpdateLeave	-	Zip	Node.js 12.x	13.3 MB	1 hour ago
<input type="checkbox"/>	serverless-leave-app-dev-CreateLeave	-	Zip	Node.js 12.x	13.3 MB	1 hour ago
<input type="checkbox"/>	serverless-leave-app-dev-GetLeaves	-	Zip	Node.js 12.x	13.3 MB	1 hour ago

aws Services Search for services, features, blogs, docs, and more [Alt+S]

Amazon API Gateway APIs > dev-serverless-leave-app (bab6xae261) > Resources > / (znbasw28z)

APIs
Custom Domain Names
VPC Links

API: dev-serverless-leave-app

Resources

Stages
Authorizers
Gateway Responses

Resources

- /
- /leaves
 - GET
 - OPTIONS
 - POST
- /leaved{
 - DELETE
 - OPTIONS
 - PATCH
- /attachment
 - OPTIONS
 - POST

Actions

/ Methods

Frontend

Compiled successfully!

You can now view **typescript-app** in the browser.

Local: http://localhost:3000/

On Your Network: http://192.168.1.122:3000/

Note that the development build is not optimized.
To create a production build, use `npm run build`.

[Home](#) [Log In](#)

Please log in

Log in

[Home](#) [Log Out](#)

Leaves

Vacation 01/20/2022 8 [Add](#)

[Home](#) [Log Out](#)

Leaves

Doctor Appointment 02/05/2022 4 [Add](#)

Vacation 01/22/2022 8 [Edit](#) [Delete](#)

Doctor Appointment 02/05/2022 4 [Edit](#) [Delete](#)





Update leave

Doctor Appointment 02/05/2022 2 **Update**



Upload new image

Choose File No file chosen **Upload**

Leaves

Vacation	Date	Hours	
Doctor Appointment	02/05/2022	2	Add  
Vacation	01/22/2022	8	 

Leaves

Vacation	Date	Hours	
Vacation	01/22/2022	8	 

Postman testing

Create Leave

A screenshot of the Postman interface for a POST request. The URL is `https://{{apilid}}.execute-api.us-east-1.amazonaws.com/dev/leaves`. The request body is a JSON object: `{ "name": "Vacation", "leaveDate": "01/20/2022", "hours": 8 }`. The response status is 201 Created, with a time of 2.72 s and size of 754 B. The response body is a JSON object: `{ "item": { "userId": "google-oauth2|102064322176066731005", "leaveId": "e3d9e3d4-920f-4da6-a062-6748e6f24f22", "createdAt": "2022-01-09T18:39:22.754Z", "name": "Vacation", "leaveDate": "01/20/2022", "hours": 8 } }`.

```
POST https://{{apilid}}.execute-api.us-east-1.amazonaws.com/dev/leaves

{
  "name": "Vacation",
  "leaveDate": "01/20/2022",
  "hours": 8
}
```

Status: 201 Created Time: 2.72 s Size: 754 B Save Response

```
{
  "item": {
    "userId": "google-oauth2|102064322176066731005",
    "leaveId": "e3d9e3d4-920f-4da6-a062-6748e6f24f22",
    "createdAt": "2022-01-09T18:39:22.754Z",
    "name": "Vacation",
    "leaveDate": "01/20/2022",
    "hours": 8
  }
}
```

Update leave

A screenshot of the Postman interface for a PATCH request. The URL is `https://{{apilid}}.execute-api.us-east-1.amazonaws.com/dev/leaves/{{leaveId}}`. The request body is a JSON object: `{ "name": "Vacation", "leaveDate": "01/20/2022", "hours": 6 }`. The response status is 200 OK, with a time of 2.10 s and size of 549 B. The response body is empty.

```
PATCH https://{{apilid}}.execute-api.us-east-1.amazonaws.com/dev/leaves/{{leaveId}}

{
  "name": "Vacation",
  "leaveDate": "01/20/2022",
  "hours": 6
}
```

Status: 200 OK Time: 2.10 s Size: 549 B Save Response

Get all leaves

GET [https://\(apid\).execute-api.us-east-1.amazonaws.com/dev/leaves](https://(apid).execute-api.us-east-1.amazonaws.com/dev/leaves) Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies

Key	Value	Description
<input checked="" type="checkbox"/> Postman-Token	<calculated when request is sent>	
<input checked="" type="checkbox"/> Host	<calculated when request is sent>	
<input checked="" type="checkbox"/> User-Agent	PostmanRuntime/7.28.2	
<input checked="" type="checkbox"/> Accept	*/*	
<input checked="" type="checkbox"/> Accept-Encoding	gzip, deflate, br	
<input checked="" type="checkbox"/> Connection	keep-alive	
<input checked="" type="checkbox"/> Authorization	Bearer ({{authToken}})	

Body Cookies Headers (13) Test Results Status: 200 OK Time: 138 ms Size: 750 B Save Response

Pretty Raw Preview Visualize JSON

```

1  {
2    "items": [
3      {
4        "leaveDate": "01/2022",
5        "userId": "google-oauth2|102064322176066731005",
6        "leaveId": "e3d9e3d4-920f-4da6-a062-6748e6f24f22",
7        "createdAt": "2022-01-09T18:39:22.754Z",
8        "hours": 6,
9        "name": "Vacation"
10     }
11   ]
12 }

```

Delete Leave

DELETE [https://\(apid\).execute-api.us-east-1.amazonaws.com/dev/leaves/\(\(leaveId\)\)](https://(apid).execute-api.us-east-1.amazonaws.com/dev/leaves/((leaveId))) Send

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies

Headers Hide auto-generated headers

KEY	VALUE	DESCRIPTION		Bulk Edit	Presets
<input checked="" type="checkbox"/> Postman-Token	<calculated when request is sent>				
<input checked="" type="checkbox"/> Host	<calculated when request is sent>				
<input checked="" type="checkbox"/> User-Agent	PostmanRuntime/7.28.2				
<input checked="" type="checkbox"/> Accept	*/*				
<input checked="" type="checkbox"/> Accept-Encoding	gzip, deflate, br				
<input checked="" type="checkbox"/> Connection	keep-alive				
<input checked="" type="checkbox"/> Content-Type	application/json				
<input checked="" type="checkbox"/> Authorization	Bearer ({{authToken}})				
Key	Value	Description			

Body Cookies Headers (13) Test Results Status: 200 OK Time: 2.12 s Size: 549 B Save Response

Pretty Raw Preview Visualize JSON

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