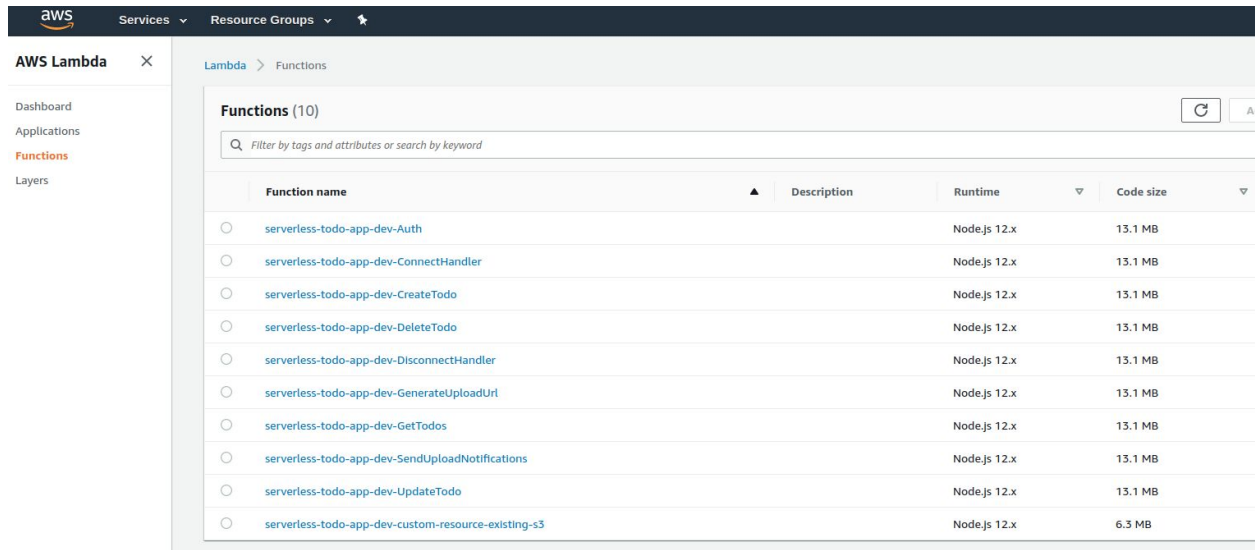


1. All project code is stored in a GitHub repository and the link to the repository is as follows:

<https://github.com/stonexjr/cloud-developer/tree/course-04/course-04/project/c4-final-project-starter-code>

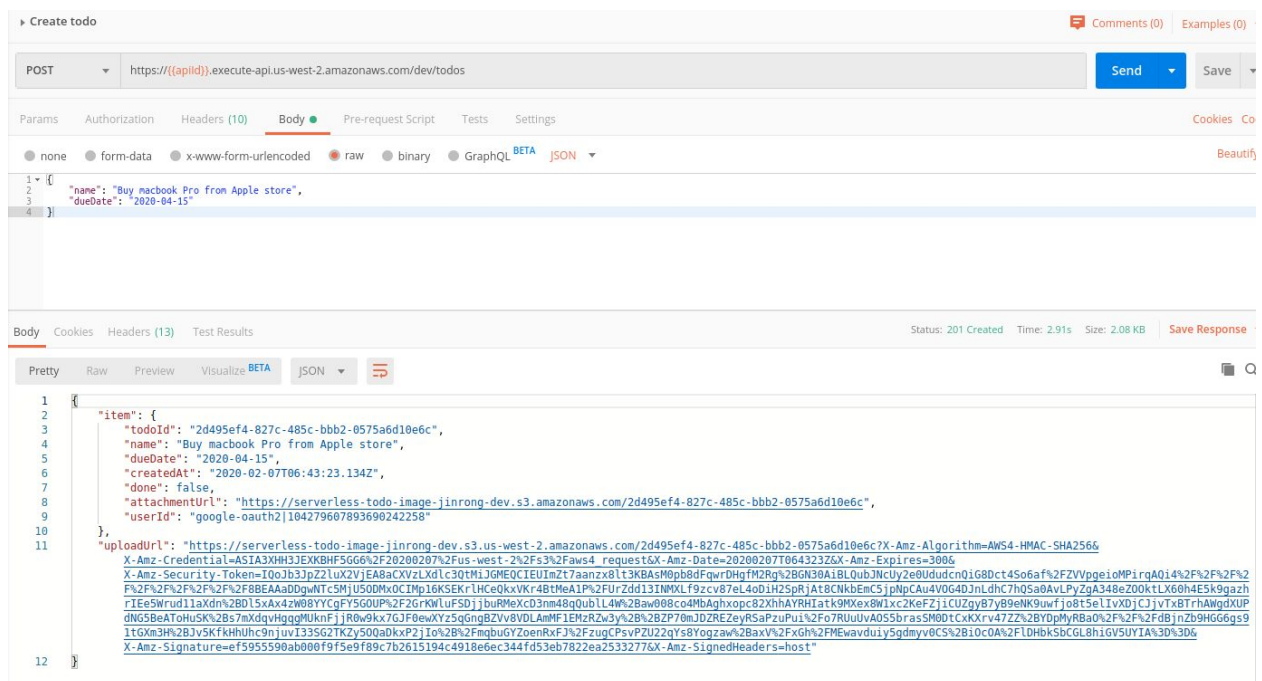
2.1 The list of AWS Lambda function



The screenshot shows the AWS Lambda console with a list of 10 functions. The functions are all named 'serverless-todo-app-dev-' followed by a specific action. They all use the 'Node.js 12.x' runtime and have varying code sizes. The functions are:

Function name	Description	Runtime	Code size
serverless-todo-app-dev-Auth		Node.js 12.x	13.1 MB
serverless-todo-app-dev-ConnectHandler		Node.js 12.x	13.1 MB
serverless-todo-app-dev-CreateTodo		Node.js 12.x	13.1 MB
serverless-todo-app-dev-DeleteTodo		Node.js 12.x	13.1 MB
serverless-todo-app-dev-DisconnectHandler		Node.js 12.x	13.1 MB
serverless-todo-app-dev-GenerateUploadUrl		Node.js 12.x	13.1 MB
serverless-todo-app-dev-GetTodos		Node.js 12.x	13.1 MB
serverless-todo-app-dev-SendUploadNotifications		Node.js 12.x	13.1 MB
serverless-todo-app-dev-UpdateTodo		Node.js 12.x	13.1 MB
serverless-todo-app-dev-custom-resource-existing-s3		Node.js 12.x	6.3 MB

2.2 CreateTodo Lambda function succeed



The screenshot shows the AWS CLI 'Create todo' command output. The command is a POST request to 'https://(apidl).execute-api.us-west-2.amazonaws.com/dev/todos'. The response is a JSON object with the following fields:

```
{
  "name": "Buy macbook Pro from Apple store",
  "dueDate": "2020-04-15"
}
```

The response also includes a 'statusCode' of 201, indicating that the function was created successfully. The response is formatted as JSON and includes a 'Pretty' button for better readability.

2.3 When createTodo Lambda function didn't by Request Validator

The screenshot shows a REST client interface for a POST request. The URL is `https://{{apiId}}.execute-api.us-west-2.amazonaws.com/dev/todos`. The request body is a JSON object: `{ "name": "Buy macbook Pro from Apple store", "dueDate": 123 }`. The response body is `{ "message": "Invalid request body" }`.

Create todo

POST `https://{{apiId}}.execute-api.us-west-2.amazonaws.com/dev/todos`

Params Authorization Headers (10) **Body** Pre-request Script Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **BETA** **JSON**

```
1 {  
2   "name": "Buy macbook Pro from Apple store",  
3   "dueDate": 123  
4 }
```

Body Cookies Headers (15) Test Results

Pretty Raw Preview Visualize **BETA** **JSON**

```
1 {  
2   "message": "Invalid request body"  
3 }
```

2.4 WhenUpdateTodo Lambda function didn't by Request Validator

DynamoDB

- Dashboard
- Tables
 - Create table
 - Delete table
- Backups
- Reserved capacity
- Preferences
- DAX
- Dashboard
- Clusters
- Subnet groups
- Parameter groups
- Events

TODOS-dev Close

Overview Items Metrics Alarms Capacity Indexes Global Tables Backups Contributor Insights Triggers Access control Tags

Create item Actions

Scan: [Table] TODOS-dev: userid, todoid View 1 to 6 items

Scan [Table] TODOS-dev: userid, todoid Add filter Start search

	userid	todoid	attachmentUrl	createdAt
	google-oauth2[104279607893690242258]	02a039e7-2fa9-4c91-97dc-b0d423630c46	https://serverless-todo-image-jirong-dev.s3.amazonaws.com/02a039e7-2f...	2020-02-07T05:43:26
	google-oauth2[104279607893690242258]	2030709d-f572-43b0-bf94-7c16b0cc6948	https://serverless-todo-image-jirong-dev.s3.amazonaws.com/2030709d-f5...	2020-02-07T05:35:23
	google-oauth2[104279607893690242258]	2d495ef4-827c-485c-bbb2-c575ba6d10edc	https://serverless-todo-image-jirong-dev.s3.amazonaws.com/2d495ef4-82...	2020-02-07T06:43:23
	google-oauth2[104279607893690242258]	89ab8bc3-c69b-4fc6-b11d-9301d2e79b0b	https://serverless-todo-image-jirong-dev.s3.amazonaws.com/89ab8bc3-c6...	2020-02-07T05:12:46
	google-oauth2[104279607893690242258]	bfa37347-526b-4798-b449-61kc6b9ffac6	https://serverless-todo-image-jirong-dev.s3.amazonaws.com/bfa37347-52...	2020-02-07T05:35:10
	google-oauth2[104279607893690242258]	e5dcbf9c-084d-4344-b4de-e065215e1a1	https://serverless-todo-image-jirong-dev.s3.amazonaws.com/e5dcbf9c-08...	2020-02-07T06:13:23

[illegible]

localhost:3000

Home

Log Out

TODOs

+


New task

To change the world...

☐

build starship


2020-02-13



☒

Buy milk in Trader Joes

2019-12-11



Incognito

Filter

10 ms20 ms30 ms40 ms50 ms60 ms70 ms80 ms90 ms100 ms

Recording network activity...
Perform a request or hit **Ctrl+R** to record the reload.
[Learn more](#)

Console Search

topFilterDefault levels

upload@rt1

https://serverless-todo-image-1iorong-dev.s3.us-west-2.amazonaws.com/82a939-c7e92eb-6f-aez-SignedHeaders=host

EditTodo.tsx:57

Fetching todos

todos-api.ts:8

EditTodo.tsx:58

Todos: > Object

todos-api.ts:16

Failed to load resource: the server responded with a status of 403 (Forbidden)

serverless-todo-image-1iorong-dev.s3.us-west-2.amazonaws.com/82a939-c7e92eb-6f-aez-SignedHeaders=host

EditTodo.tsx:57

upload@rt1

https://serverless-todo-image-1iorong-dev.s3.us-west-2.amazonaws.com/203970-4edf967-4X-Aez-SignedHeaders=host

EditTodo.tsx:57

Fetching todos

todos-api.ts:8

EditTodo.tsx:58

Todos: > Object

todos-api.ts:16

3.3 Upload new image page

React App

localhost:3000/todos/2030709d-f572-43b0-bf94-7c16b00c6948/edit

localhost:3000 says
File was uploaded!

OK

Home Log Out

Upload new image

File

Choose File mars.jpg

Uploading file

3 requests 4.0 KB tr

Console Search

uploadUrl: https://serverless-todo-image-lanrop-dev.s3.us-west-2.amazonaws.com/02a030-c7e97eb-6X-Amz-SignedHeaders=host EditTodo.tsx:57

Fetching todos: todos_api.ts:8

Todos: Object todos_api.ts:16

Failed to load resource: the server responded with a status of 403 (Forbidden) serverless-todo-image-lanrop-dev.s3.us-west-2.amazonaws.com/203070-dedf067-6X-Amz-SignedHeaders=host EditTodo.tsx:57

Fetching todos: todos_api.ts:8

Todos: Object todos_api.ts:16

uploadUrl: https://serverless-todo-image-lanrop-dev.s3.us-west-2.amazonaws.com/203070-85a1c72-6X-Amz-SignedHeaders=host EditTodo.tsx:57

Network

Hide data URLs

XHR JS CSS Img Media Font Doc WS Manifest Other

6000 ms 8000 ms 10000 ms 12000 ms 14000 ms 16000 ms

General

Request URL: https://qx6c7d6p1.execute-api.us-west-2.amazonaws.com/dev/todos/2030709d-f572-43b0-bf94-7c16b00c6948/attachment

Request Method: POST

Status Code: 200

Remote Address: 99.84.232.107:443

Referrer Policy: no-referrer-when-downgrade

Response Headers

access-control-allow-credentials: true

access-control-allow-origin: *

content-length: 1219

content-type: application/json

date: Fri, 07 Feb 2020 06:19:43 GMT

status: 200

Via: 1.1 6ecf574c848f26fb93b4bc63ae69709b.cloudfront.net (CloudFront)

x-amz-apigw-id: Hgtr4HEPHcF9g==

x-amz-cf-id: dnmv75BbcVFXI356QIqK5Skw2U2B8d6Iwrt3J1FXl0tWlArEp_Q==

x-amz-cf-pop: SF05-C3

x-amzn-requestid: 97ff05bb-fc06-4fb5-b5c3-bd5013cae79d

x-amzn-trace-id: Root=1-5e30817f-99140b6840da38835f67908

x-cache: Miss from CloudFront

Request Headers

authority: qx6c7d6p1.execute-api.us-west-2.amazonaws.com

method: POST

path: /dev/todos/2030709d-f572-43b0-bf94-7c16b00c6948/attachment

4. Service Map of Distributed Tracing



5. CloudWatch - Lambda function log

Create Metric Filter			Actions
Filter: Log Group Name Prefix			x
Log Groups	Insights	Expire Events After	
/aws/lambda/create-group	Explore	Never Expire	
/aws/lambda/get-groups	Explore	Never Expire	
/aws/lambda/myLambda	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-Auth	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-ConnectHandler	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-CreateTodo	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-DeleteTodo	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-DisconnectHandler	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-GenerateUploadUrl	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-GetTodos	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-SendUploadNotifications	Explore	Never Expire	
/aws/lambda/serverless-todo-app-dev-UpdateTodo	Explore	Never Expire	
/aws/rds/instance/database-instance-udagram-dev/postgresql	Explore	Never Expire	
/ecs/first-run-task-definition	Explore	Never Expire	
RDSOSMetrics	Explore	1 month (30 days)	

aws

Services

Resource Groups

CloudWatch

Dashboards

Alarms

ALARM

INSUFFICIENT

OK

Billing

Logs

Log groups

Insights

Metrics

Events

Rules

Event Buses

ServiceLens

Service Map

Traces

Synthetics

Canaries

Thresholds

Contributor Insights

Settings

Favorites

CloudWatch > Log Groups > /aws/lambda/serverless-todo-app-dev-CreateTodo > 2020/02/07/[\$LATEST]1c5c36496ad34d01b2306a0519b8cfb7

Filter events

Time (UTC +00:00)	Message
2020-02-07	
No older events found at the moment. Retry .	
06:13:23	START RequestId: 4857df7f-0b45-41f4-949c-ecef4cc72a32 Version: \$LATEST
06:13:23	{ "message": "User google-oauth2 104279607893690242258 is creating new todo.", "level": "info", "name": "createTodo.ts" }
06:13:23	{ "message": "User google-oauth2 104279607893690242258 is creating new todo.", "level": "info", "name": "createTodo.ts" }
06:13:23	2020-02-07T06:13:23.377Z 4857df7f-0b45-41f4-949c-ecef4cc72a32 ERROR (node:9) [DEP0005] DeprecationWarning: Buffer() is deprecated. Use Buffer.allocUnsafe(), or Buffer.from() methods instead.
06:13:23	END RequestId: 4857df7f-0b45-41f4-949c-ecef4cc72a32
06:13:23	END RequestId: 4857df7f-0b45-41f4-949c-ecef4cc72a32
06:13:23	REPORT RequestId: 4857df7f-0b45-41f4-949c-ecef4cc72a32 Duration: 266.56 ms Billed Duration: 300 ms Memory Size: 1024
No newer events found at the moment. Retry .	