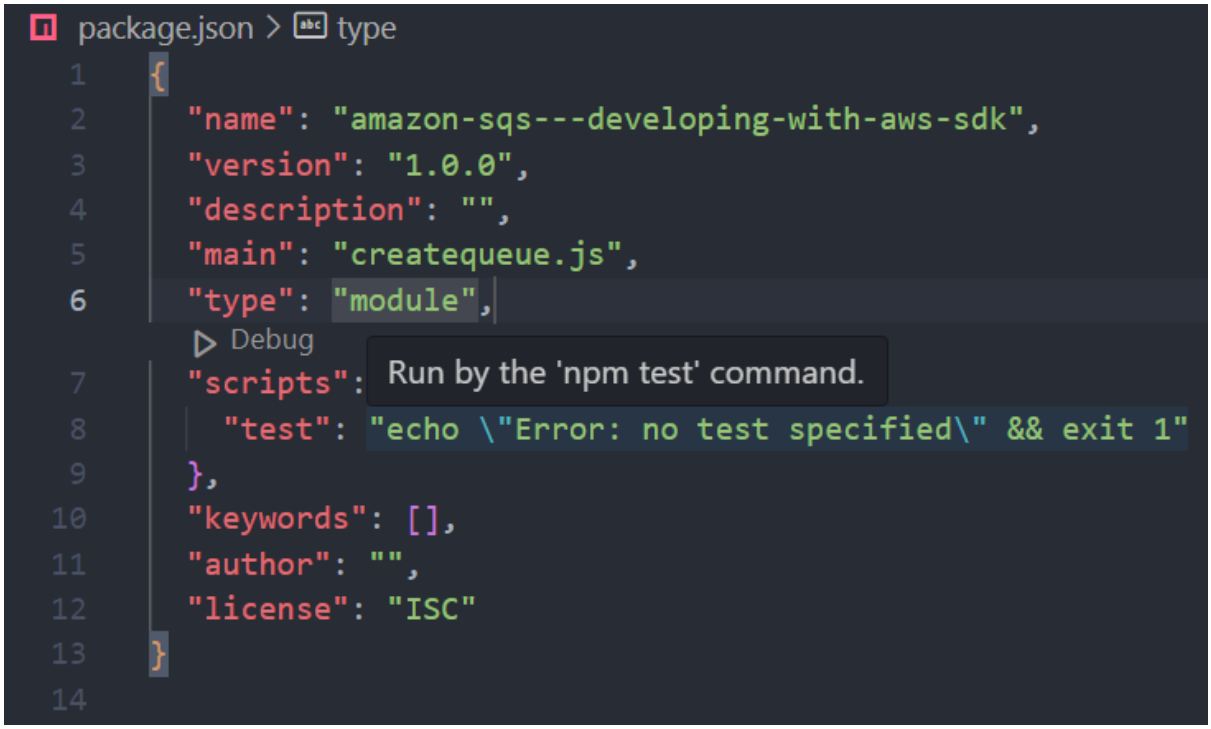
😄 Amazon Simple Queue Service

1. Now we are going to work with Amazon SQS using AWS SDK. So first, we are going to create a folder and then open it using VS Code.
2. After that we need to create some files in it. First will be the commands text file which contains all the necessary commands regarding our lab.
3. Then we will create a sqsClient.js file. After that, we will run the **npm init -y** command so that I can create an SDK. After running this command, we created a package file.

```
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK> npm init -y
Wrote to D:\AWS Serveless\Amazon SQS - Developing with AWS SDK\package.json:

{
  "name": "amazon-sqs---developing-with-aws-sdk",
  "version": "1.0.0",
  "description": "",
  "main": "createqueue.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC"
}
```

4. Open the package file after line 5 we need to add a new line for type module as you can see in the snapshot.



5. Then we are going to run the below command to install the node modules.

npm install @aws-sdk/client-sqs

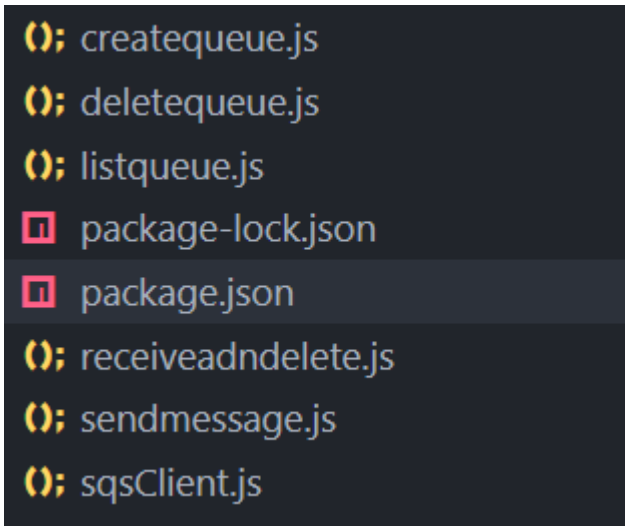
```
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK> npm install @aws-sdk/client-sqs
>>

added 79 packages, and audited 80 packages in 2s

2 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK>
```

6. After that we will create several files to work in this lab. The **dot js** file that you are seeing in the snapshot, you have to create all of it. You can get the code files from GitHub.



7. First, we are going to run the create queue file using the node command. This will create a new SQS Queue on the console.

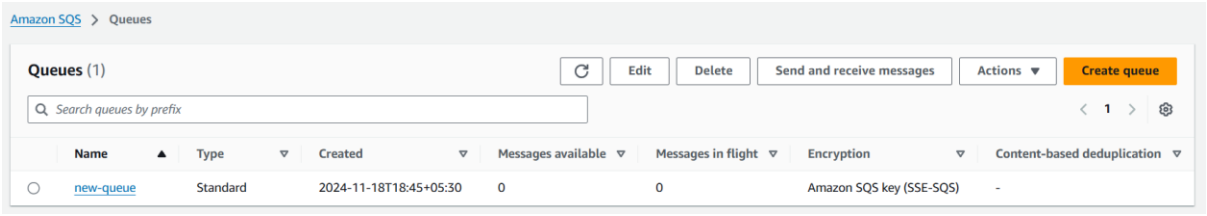
createqueue.js > ...

```
import { CreateQueueCommand } from "@aws-sdk/client-sqs";
import { sqsClient } from "./sqsClient.js";

const params = {
    QueueName: "new-queue",
    Attributes: {
        DelaySeconds: "60",
        MessageRetentionPeriod: "86400"
    }
};

export const run = async () => {
    try {
      const data = await sqsClient.send(new CreateQueueCommand(params));
      console.log("Success", data);
    } catch (err) {
      console.log("Error", err);
    }
};
run();
```

8. We have created our SQS queue by using SDK. You can see this queue on the console as well.



9. Then we will run the list queue file to list the queue from our AWS console.

listqueue.js > ...

```
import { ListQueuesCommand } from "@aws-sdk/client-sqs";
import { sqsClient } from "./sqsClient.js";

export const run = async () => {
    try {
      const data = await sqsClient.send(new ListQueuesCommand({}));
      console.log("Success", data);
    } catch (err) {
      console.log("Error", err);
    }
};
run();
```

10. Here you can see that we get the Queue URL and we have listed our queue.

```
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK> node .\listqueue.js
Success {
  '$metadata': {
    httpStatusCode: 200,
    requestId: '7a8bda17-a49e-530b-b165-85a2e4561196',
    extendedRequestId: undefined,
    cfId: undefined,
    attempts: 1,
    totalRetryDelay: 0
  },
  QueueUrls: [ 'https://sqs.us-east-1.amazonaws.com/878893308172/new-queue' ]
}
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK>
```

11. In the end we will delete our Queue by running the delete queue file. In this file you need to change the Queue URL with yours.

```
deletequeue.js > params > QueueUrl
1   import { DeleteQueueCommand } from "@aws-sdk/client-sqs";
2   import { sqsClient } from "./sqsClient.js";
3
4   const params = {
5     QueueUrl: "https://sqs.us-east-1.amazonaws.com/878893308172/new-queue"
6   };
7
8   export const run = async () => {
9       try {
10        const data = await sqsClient.send(new DeleteQueueCommand(params));
11        console.log("Success", data);
12      } catch (err) {
13        console.log("Error", err);
14      }
15  };
16  run();
```

12. Here you can see that our queue has been deleted.

```
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK> node .\deletequeue.js
Success {
  '$metadata': {
    httpStatusCode: 200,
    requestId: '20188da7-724f-5529-9616-d212336a0e4b',
    extendedRequestId: undefined,
    cfId: undefined,
    attempts: 1,
    totalRetryDelay: 0
  }
}
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK>
```

13. Now we are going to send messages onto our queue but for that, we need to create a queue because we just deleted it. So, first, run the create queue file.

14. After that copy the Queue URL and paste it inside the send message file and run this file.

```
sendmessage.js > ...
1   import { SendMessageCommand } from "@aws-sdk/client-sqs";
2   import { sqsClient } from "./sqsClient.js";
3
4   const params = {
5       QueueUrl: "xxxxxx",
6       DelaySeconds: 10,
7       MessageBody: "test send message from nodejs app using aws sdk"
8     };
9
10
11  export const run = async () => {
12      try {
13        const data = await sqsClient.send(new SendMessageCommand(params));
14        console.log("Success", data);
15      } catch (err) {
16        console.log("Error", err);
17      }
18  };
19  run();
```

15. Once you have created the queue and run the send message file using the node command then you will see the message body and the ID which means that we have successfully sent a message to our queue.

```
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK> node .\sendmessage.js
Success {
  '$metadata': {
    httpStatusCode: 200,
    requestId: '2689c354-a7e5-5919-a582-9ce1e5d0dc54',
    extendedRequestId: undefined,
    cfId: undefined,
    attempts: 1,
    totalRetryDelay: 0
  },
  MD5OfMessageBody: 'c8f891b66a62a035abac51999c9df25e',
  MessageId: 'f4cfa155-86d9-4ee7-ba24-b3d719d169cf'
}
```

16. After that we are going to work with the receive and delete file. In this file too you need to change the Queue URL with yours and run the file using the node command.

receiveadndelete.js > ...

```
import { ReceiveMessageCommand, DeleteMessageCommand } from "@aws-sdk/client-sqs";
import { sqsClient } from "./sqsClient.js";

const queueURL = "https://sqs.us-east-1.amazonaws.com/878893308172/new-queue";

const params = {
    QueueUrl: queueURL,
    VisibilityTimeout: 20,
    WaitTimeSeconds: 0,
    MaxNumberOfMessages: 10,
    MessageAttributeNames: ["All"]
};

export const run = async () => {
    try {
      const data = await sqsClient.send(new ReceiveMessageCommand(params));
      // put your business logic
```

17. As you can see below, we received the message and then deleted the message using our file.

```
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK> node .\receiveadndelete.js
Message deleted {
  '$metadata': {
    httpStatusCode: 200,
    requestId: '5557f3b6-2b1d-56e4-9a0c-ac0368ccff05',
    extendedRequestId: undefined,
    cfId: undefined,
    attempts: 1,
    totalRetryDelay: 0
  }
}
Success {
  '$metadata': {
    httpStatusCode: 200,
    requestId: '767e5950-2fbe-504f-b7a6-06e56c6fc9ae',
    extendedRequestId: undefined,
    cfId: undefined,
    attempts: 1,
    totalRetryDelay: 0
  },
  Messages: [
    {
      Body: 'test send message from nodejs app using aws sdk',
      MD5OfBody: 'c8f891b66a62a035abac51999c9df25e',
      MessageId: 'f4cfa155-86d9-4ee7-ba24-b3d719d169cf',
      ReceiptHandle: 'AQEBKMqd2ZPnA2Q+FAXkhATPP1S2AcuX8iGxzE5nIjF7JAxgehzC5sGkTVFwShegbsbBjSa84DRNfu7rErC/+eNMYi2Rq0lr/KEKp
ryei0Kn7SsjqwUuc0pY/tAMmW8rLMw1UNMoLwJEdiJSs5IQFDQJgXoEeyWC3xKIQXngu5kGQwFvXxTHTSpfNnzsk+fMnWvK2UFlfxHRFC6S/G5HFAhF3GDeGqpF
UjoZSLIBCVexEZ+qllk00i5krleutAJTaUGSpK++jGLrxylzJb9irz6/cFA4lyNOP2PZti0piyFKJG+IefTGBrRmSCWB2QrIhxCxjjknX8ZPPXfanrl8wYN5g5a
oIfZhkB+bbmq4qe20h5OtQ8dtB160u4BCCJ2y7B2x'
    }
  ]
}
PS D:\AWS Serveless\Amazon SQS - Developing with AWS SDK>
```

18. You can also verify this from the management console.