**2020 Cloud IoT Services**

**Homework Assignment #2**

2020. 05. 04

**Homework Assignment**

1. **Task #1**: Create Applications for **AWS S3 Service**
   - Create **AWS S3 Bucket** and **Object** by AWS Web Console
     - Create a S3 Bucket
     - Create a S3 object in the bucket by uploading a file from your notebook through AWS Web Console
   - Create a **Node.JS Application with AWS SDK** to create a S3 object in the bucket
     - Need the **Credentials (Access Key & Secret Key)** for authentication & authorization
     - Create a S3 object in the bucket by uploading a file from your notebook

2. **Task #2**: Transform an **AWS Lambda** function to create a S3 object
   - Program a **Node.JS Lambda function** (i.e., index.js) to create a S3 object in the bucket created in the Task#1
     - Store input argument (i.e., event) into the S3 Object instead of a file in your notebook
     - Use AWS S3 SDK to create a S3 object. The Lambda function is similar to the Node.JS application in Task#1.
   - Also need to include the **Credentials (Access Key & Secret Key)** for authentication & authorization in your code. An example code is as follows:

```
// keys in the local file: credential-keys.js as follows:
//          exports.access_key = 'A..........X';
//          exports.secret_key = 'S.............L4';
var keys = require("./credential-keys.js");
var s3 = new AWS.S3({
      "accessKeyId": keys.access_key,
      "secretAccessKey": keys.secret_key
});
```

   - Zip **index.js**, the **credentials**, the **node_module (created by npm) & package-lock.json** into a single file
     - AWS SDK must be installed before this operation
   - Create an AWS Lambda function by uploading the compressed file

3. **Task #3**: Create a **Node.JS application** to invoke the AWS Lambda function in Task#2
    - Need the **Credentials (Access Key & Secret Key)** for authentication & authorization
    - Use AWS Lambda SDK to invoke the Lambda function

**Report Submission**

1. **Deadline**: 2020. 05. 11 (Monday)
2. **Report**
    - Document
        ① The **steps** to have been taken to accomplish the tasks: 한 일들을 단계별로 구체적으로 설명
        ② The **screen snapshots**: Web Console & Node.JS code 실행 화면을 캡쳐
    - Node.JS code
        ① Node.JS code (file sender & receiver): 실제 코드를 보고서에 포함