ASSIGNMET 3

Assignment Date	01-10-2022
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Maximum Mark	2 Marks

1.Create a Bucket in IBM object storage.

Import Credentials

```
credentials = {
    'IBM_API_KEY_ID': '********************************',
    'IAM_SERVICE_ID': '********************************',
    'ENDPOINT': '********************************',
    'IBM_AUTH_ENDPOINT': '********************************',
    'BUCKET': '********************************',
    'FILE': 'wine.csv'
}
cos = ibm_boto3.client(service_name='s3',
    ibm_api_key_id=credentials['IBM_API_KEY_ID'],
    ibm_service_instance_id=credentials['IAM_SERVICE_ID'],
    ibm_auth_endpoint=credentials['IBM_AUTH_ENDPOINT'],
    config=Config(signature_version='oauth'),
    endpoint_url=credentials['ENDPOINT'])
```

File Uploads

```
# Upload file wine.csv from wine folder into project bucket as wine_data.csv
cos.upload_file(Filename='wine/wine.csv',Bucket=credentials['BUCKET'],Key='wine_data.csv'
) # upload zip file
cos.upload_file('wine.gz', credentials['BUCKET'],'wine.gz')
# Upload pickle object
cos.upload_file('GB_Classification_model.pkl', credentials['BUCKET'],'GB_Classification_model.pkl')
# upload file like object
with open('wine.csv', 'rb') as data:
    cos.upload_fileobj(data, credentials['BUCKET'], 'wine_bytes')
from ibm_botocore.client import Config
import ibm_boto3

def upload_file_cos(credentials,local_file_name,key):
    cos = ibm_boto3.client(service_name='s3',
    ibm_api_key_id=credentials['IBM_API_KEY_ID'],
    ibm_service_instance_id=credentials['IAM_SERVICE_ID'],
    ibm_auth_endpoint=credentials['IBM_AUTH_ENDPOINT'],
    config=Config(signature_version='oauth'),
    endpoint_url=credentials['ENDPOINT'])
    try:
        res=cos.upload_file(Filename=local_file_name, Bucket=credentials['BUCKET'],Key=key)
    except Exception as e:
        print(Exception, e)
    else:
        print(' File Uploaded')

upload_file_cos(credentials,'GB_Classification_model.pkl','GB_Classification_model1.pkl')
```

```
 File Uploaded
```

File Downloads

```
cos.download_file(Bucket=credentials['BUCKET'],Key='wine.csv',Filename='data/wine1.csv')
# download file like object
with open('wine_copy.csv', 'wb') as data:
    cos.download_fileobj(credentials['BUCKET'], 'wine_bytes', data)
from ibm_botocore.client import
Config import ibm_boto3

def download_file_cos(credentials,local_file_name,key):
    cos = ibm_boto3.client(service_name='s3',
    ibm_api_key_id=credentials['IBM_API_KEY_ID'],
    ibm_service_instance_id=credentials['IAM_SERVICE_ID'],
    ibm_auth_endpoint=credentials['IBM_AUTH_ENDPOINT'],
    config=Config(signature_version='oauth'),
    endpoint_url=credentials['ENDPOINT'])
    try:
        res=cos.download_file(Bucket=credentials['BUCKET'],Key=key,Filename=local_file_name)
    except Exception as e:
        print(Exception, e)
    else:
        print('File Downloaded')
download_file_cos(credentials,'model/GB_model.pkl','GB_Classification_model.pkl')
File Downloaded
```

New Credentials

```
cos_credentials={
  "apikey": "***********************",
  "endpoints": "***********************",
  "iam_apikey_description": "***********************",
  "iam_apikey_name": "***********************",
  "iam_role_crn": "**********************",
  "iam_serviceid_crn": "**********************",
  "resource_instance_id": "**********************"
}

auth_endpoint = 'https://iam.bluemix.net/oidc/token'
service_endpoint = 'https://s3-api.us-geo.objectstorage.softlayer.net'

cos = ibm_boto3.client('s3',
                       ibm_api_key_id=cos_credentials['apikey'],
                       ibm_service_instance_id=cos_credentials['resource_instance_id'],
                       ibm_auth_endpoint=auth_endpoint,
                       config=Config(signature_version='oauth'),
                       endpoint_url=service_endpoint)
```

List Buckets

```
for bucket in cos.list_buckets()['Buckets']:
   print(bucket['Name'])
bluemixaccounts-hyx4v4raz-catalog-0422c6e2
buckettest
communitycosdf0fcb47bb7d48a1a847cee6cbe1bc57
cos-test-bucket1
cos-test-bucket2
cos1ab43f6f665aa4daaa9066513b83bdd32
cosproject062645eac3ca4746837c8897df3b7a0e
coswithoutenv2e0e51cec9bf472abaaf00aeebfdef7d
datacatalogandrefinetestc74f307cb1a74fec995e80d930357bac
demo9840d8da1d6049a8aa1da5e6906c41ee
dsx-sy8mm45a-catalog-0422c6e2
dsxenterpriseupsell0a087e0d42b24ba39ed1005696eec475
```

```
havi-r1hrlcyf-catalog-0422c6e2
havi914f33ced6824072956624141061 2716
music-bygusmcaz-catalog-0422c6e2
```

Create/Delete Buckets:

```
cos.create_bucket(Bucket='bucket1-test')
{'ResponseMetadata': {'HTTPHeaders': {'content-length': '0',
   'date': 'Tue, 30 Jan 2018 21:11:08 GMT',
   'server': 'Cleversafe/3.12.1.28',
   'x-amz-request-id': '6a8e444f-4ffa-4e0e-9f98-946df69ef346',
   'x-clv-request-id': '6a8e444f-4ffa-4e0e-9f98-946df69ef346',
   'x-clv-s3-version': '2.5'},
  'HTTPStatusCode': 200,
  'HostId': '',
  'RequestId': '6a8e444f-4ffa-4e0e-9f98-946df69ef346',
'RetryAttempts': 0}}
cos.delete_bucket(Bucket='bucket1-test')
{'ResponseMetadata': {'HTTPHeaders': {'date': 'Tue, 30 Jan 2018 21:11:20 GMT',
   'server': 'Cleversafe/3.12.1.28',
   'x-amz-request-id': '631459c0-a70e-4492-83e3-52e2ff1e86b5',
   'x-clv-request-id': '631459c0-a70e-4492-83e3-52e2ff1e86b5',
   'x-clv-s3-version': '2.5'},
  'HTTPStatusCode': 204,
  'HostId': '',
  'RequestId': '631459c0-a70e-4492-83e3-52e2ff1e86b5',
  'RetryAttempts': 0}}
```

2. Upload an 5 images to the object storage and use the same page in your HTML code.

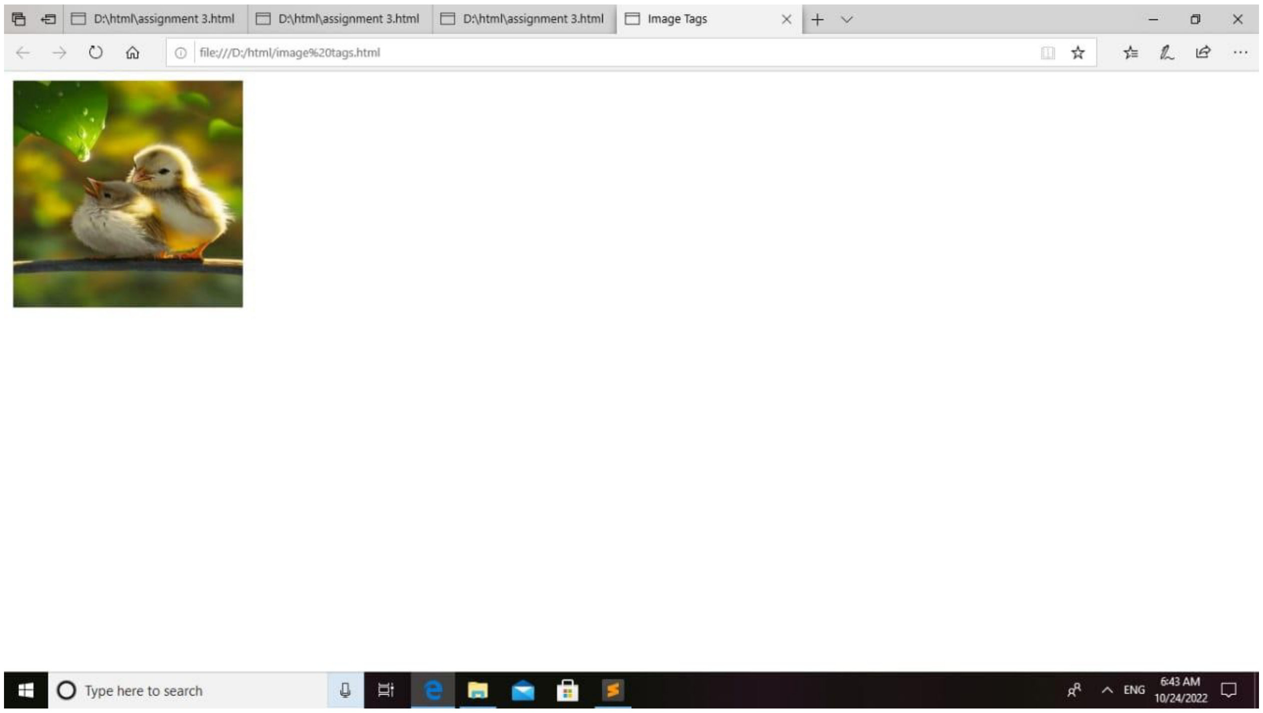
```
// upload to COS
```

```
  await cos.upload({
    Bucket: COS_BUCKET_NAME,
    Key: `${fileDetails.userId}/${fileDetails.id}/${fileDetails.name}`,
    Body: fs.createReadStream(file.path),
    ContentType: fileDetails.type,
  }).promise();
```

Program:

```
      <!DocType html>
<html>
<head>
    <title> Display Images </title>
</head>
<body>
    <img src="C:\User\ELCOT\Pictures\Helo\birds.JPEG" alt=birds height="200 px" width="200 px">
</body>
</html>
```

Output:


D:\html\assignment 3.html
D:\html\assignment 3.html
D:\html\assignment 3.html
Image Tags
file:///D:/html/image%20tags.html
Type here to search
ENG
6:43 AM
10/24/2022

4. Design a chatbot using IBM Watson assistant for hospital.Ex.User comes with query to know the branches for that hospital in your city.Submit the web URL of that chatbot as a assignment.

Program:

```
        import json
import logging
import os

logging.basicConfig(level=logging.INFO)
LOG = logging.getLogger(_name_)

default_name = 'insurance-voice-bot'
default_json = 'data/skill-insurance-voice-bot.json'
description = "Assistant workspace created by watson-voice-bot."
```

```
def init_skill(assistant_client):
    """Verify and/or initialize the Assistant workspace.

    If a WORKSPACE_ID is specified in the runtime environment,
    make sure that workspace exists. If no WORKSTATION_ID is
    specified then try to find it using a lookup by name.
    Name will be taken from the global default_name unless overridden
    using the WORKSPACE_NAME environment variable.

    If a workspace is not found by ID or name, then try to
    create one from the JSON in file name specified by default_json.
    Use the name as mentioned above so future lookup will find what
    was created.

    :param assistant_client: Assistant service client
    :param object environ: runtime environment variables
    :return: ID of Assistant workspace to use
    :rtype: str
    :raise Exception: When workspace is not found and cannot be created
    """

    # Get the actual workspaces
    workspaces = assistant_client.list_workspaces().get_result()[
        'workspaces']

    env_workspace_id = os.environ.get('WORKSPACE_ID')
    if env_workspace_id:
        # Optionally, we have an env var to give us a WORKSPACE_ID.
        # If one was set in the env, require that it can be found.
        LOG.info("Using WORKSPACE_ID=%s" % env_workspace_id)
        for workspace in workspaces:
            if workspace['workspace_id'] == env_workspace_id:
                ret = env_workspace_id
                break
        else:
            raise Exception("WORKSPACE_ID=%s is specified in a runtime "
                            "environment variable, but that workspace "
                            "does not exist." % env_workspace_id)
    else:
        # Find it by name. We may have already created it.
        name = os.environ.get('WORKSPACE_NAME', default_name)
        for workspace in workspaces:
            if workspace['name'] == name:
                ret = workspace['workspace_id']
                LOG.info("Found WORKSPACE_ID=%(id)s using lookup by "
                         "name=%(name)s" % {'id': ret, 'name': name})
                break
        else:
            # Not found, so create it.
            LOG.info("Creating workspace from " + default_json)

            with open(default_json) as workspace_file:
                workspace = json.load(workspace_file)

            created = assistant_client.create_workspace(
                name=name,
                description=description,
                language=workspace['language'],
                metadata=workspace['metadata'],
                intents=workspace['intents'],
                entities=workspace['entities'],
                dialog_nodes=workspace['dialog_nodes'],
                counterexamples=workspace['counterexamples']).get_result()
            ret = created['workspace_id']
            LOG.info("Created WORKSPACE_ID=%(id)s with "
                     "name=%(name)s" % {'id': ret, 'name': name})
    return ret
```

5. Create Watson assistant service with 10 steps and use 3 conditions in it.Load that script that in html page.

Program:

have the following empty page with the chatbot script so far :

```
<body style="height: 100%;">
<script src=https://assistant-web.watsonplatform.net/loadWatsonAssistantChat.js></script>
<script>
  window.loadWatsonAssistantChat({
    integrationID: "some id", // The ID of this integration.
    region: "eu-gb" // The region your integration is hosted in.
  }).then(function(instance){
    instance.render();
  });
</script>
</body>
</html>

<body style="height: 100%;">
```

```
<script src=https://assistant-web.watsonplatform.net/loadWatsonAssistantChat.js></script>
<script>
  window.loadWatsonAssistantChat({
    integrationID: "some id", // The ID of this integration.
    region: "eu-gb", // The region your integration is hosted in.
    options.openChatByDefault: true
  }).then(function(instance){
    instance.render();
  });
</script>
</body>
</html>
```

```
window.watsonAssistantChatOptions = {
    integrationID: "############", // The ID of this integration.
    region: "eu-gb", // The region your integration is hosted in.
    serviceInstanceID: "############", // The ID of your service instance.
    onLoad: function(instance) { instance.render(); },
    openChatByDefault: true
  };
  setTimeout(function(){
    const t=document.createElement('script');
    t.src="https://web-chat.global.assistant.watson.appdomain.cloud/versions/" +
(window.watsonAssistantChatOptions.clientVersion || 'latest') + "/WatsonAssistantChatEntry.js"
    document.head.appendChild(t);
  });
```