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
havi914f33ced68240729566241410612716 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.

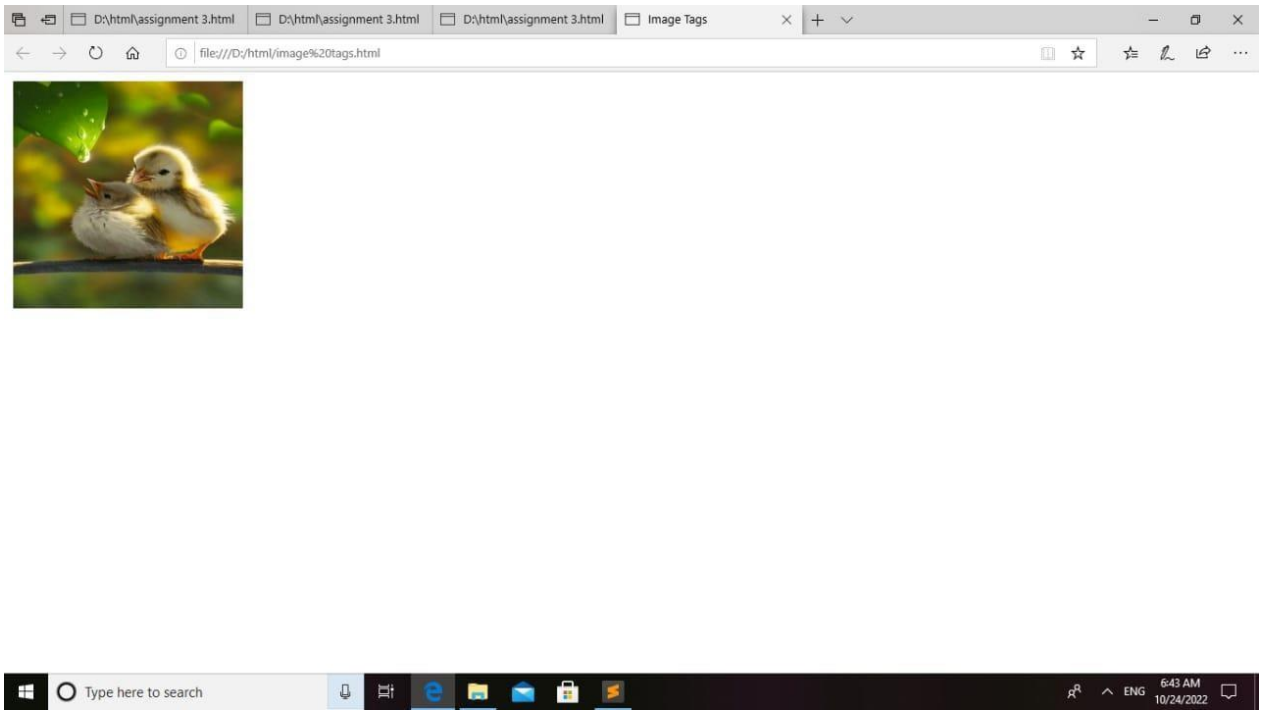
```
// upload to COS
  await cos.upload({
    Bucket: COS_BUCKET_NAME,
    Key: `${fileDetails.userId}/${fileDetails.id}/${fileDetails.name}`,
    Body: fs.createReadStream(file.path),
    ContentType: fileDetails.type,
  }).promise();
```

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:



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_res
            ult() 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);
  });
```