Amazon Web Services S3 + Heroku Deployment

Alex Chen
Setting up AWS

https://aws.amazon.com -> Create Account

-> Personal Account -> Enter Info -> Basic Plan

Then, sign into console!
Clone the repo!

git clone https://github.com/mit6148-workshops/amazon-s3-workshop.git

Let’s explore our app!

-> open up js/gallery.js
function refreshGrid()
{
    var grid = document.querySelector('.grid');

    var msnry = new Masonry( grid, {
        itemSelector: '.grid__item',
        columnWidth: '.grid__sizer',
        gutter: 15,
        percentPosition: true
    });

    imagesLoaded( grid ).on( 'progress', function() {
        // layout Masonry after each image loads
        msnry.layout();
    });
}

// adds all the photos located in the bucket
function addAllPhotos(bucketUrl, data){
    document.getElementById("photogrid").innerHTML = "";
    for (i = 0; i < data.Contents.length; i++){
        photoUrl = bucketUrl + encodeURIComponent(data.Contents[i].Key);
        var item = document.createElement("a");
        item.classList.add("grid__item");
        if (i == 0){
            item.classList.add("grid__sizer")
        }
        item.innerHTML = "<div class='item__overlay'></div><img src='' + photoUrl + '' />";
        document.getElementById("photogrid").appendChild(item);
    }
    refreshGrid();
}
Clone the repo!

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Let’s explore our app!

-> open up index.html
AWS Configuration

Open up js/photo.js
var albumBucketName = 'alex-chen-cool-photos';
var bucketRegion = 'us-east-1';
var IdentityPoolId = 'us-east-1:20c8e41f-fd64-4051-8c70-05939a1e4831';

// update the configurations for AWS to use our credentials
AWS.config.update({
    region: bucketRegion,
    credentials: new AWS.CognitoIdentityCredentials({
        IdentityPoolId: IdentityPoolId
    })
});

// create an S3 instance that we can use to access the database
var s3 = new AWS.S3({
    apiVersion: '2006-03-01',
    params: {Bucket: albumBucketName}
});
Curious about what the Identity Pool is?

What is a bucket?
What is a bucket?
What is a bucket?
What is a bucket?

https://s3.amazonaws.com/cool-staff/joanne.jpg
In general...

https://s3.amazonaws.com/<bucketname>/<filename>
Ok back to the code
Task #1: Implement `viewAlbum()`

Hint: Use `s3.listObjects`, documented here [https://docs.aws.amazon.com/AWSJavaScriptSDK/latest/AWS/S3.html#listObjects](https://docs.aws.amazon.com/AWSJavaScriptSDK/latest/AWS/S3.html#listObjects)

And you should finish the callback by calling `addAllPhotos`, which takes a `bucketUrl` and the data you get from `s3.listObjects`
// get all the data from the bucket and call addAllPhotos to display it

function viewAlbum() {
    s3.listObjects({}, function(err, data) {
    
    });
}
// get all the data from the bucket and call addAllPhotos to display it
function viewAlbum() {
  s3.listObjects({}, function(err, data) {
    if (err) {
      return alert('There was an error viewing your album: ' + err.message);
    }

    var bucketUrl = 'https://s3.amazonaws.com/' + albumBucketName + '/'
    addAllPhotos(bucketUrl, data);
  });
}
Task #2: Implement addPhoto()

Hint: Use s3.upload, documented here

https://docs.aws.amazon.com/AWSJavaScriptSDK/latest/AWS/S3.html#upload-property

The “body” parameter can be filled with the File object named “file”
function addPhoto() {
    // get the file out of the upload widget
    var files = document.getElementById('photoupload').files;
    if (!files.length) {
        return alert('Please choose a file to upload first. ');
    }
    var file = files[0];
    var photoKey = files[0].name;
    // TODO: upload the file to s3
    s3.upload({
        Key: photoKey,
        Body: file,
        ACL: 'public-read'
    }, function(err, data) {
        if (err) {
            return alert('There was an error uploading your photo: ' ,
                          err.message);
        }
    });
}
```javascript
function addPhoto() {
    // get the file out of the upload widget
    var files = document.getElementById('photoupload').files;
    if (!files.length) {
        return alert('Please choose a file to upload first.);
    }
    var file = files[0];
    var photoKey = files[0].name;
    // TODO: upload the file to s3
    s3.upload({
        Key: photoKey,
        Body: file,
        ACL: 'public-read'
    }, function(err, data) {
        if (err) {
            return alert('There was an error uploading your photo: ',
                         err.message);
        }
        console.log('Successfully uploaded photo.');?></viewAlbum();
    });
}
```
Great job!

Questions?
Heroku deployment