

6장. mongodb Atlas cloud upload

순서

I. 사전작업

1. git 설치, heroku signup, Heroku CLI 설치, mongodb signup, 몽고디비설치,
2. 그외 사전 작업들(logo만들기, Procfile, .gitignore, package.json 내용추가...)

II. mongodb Atlas cloud 를 이용한 application upload(17 slide)

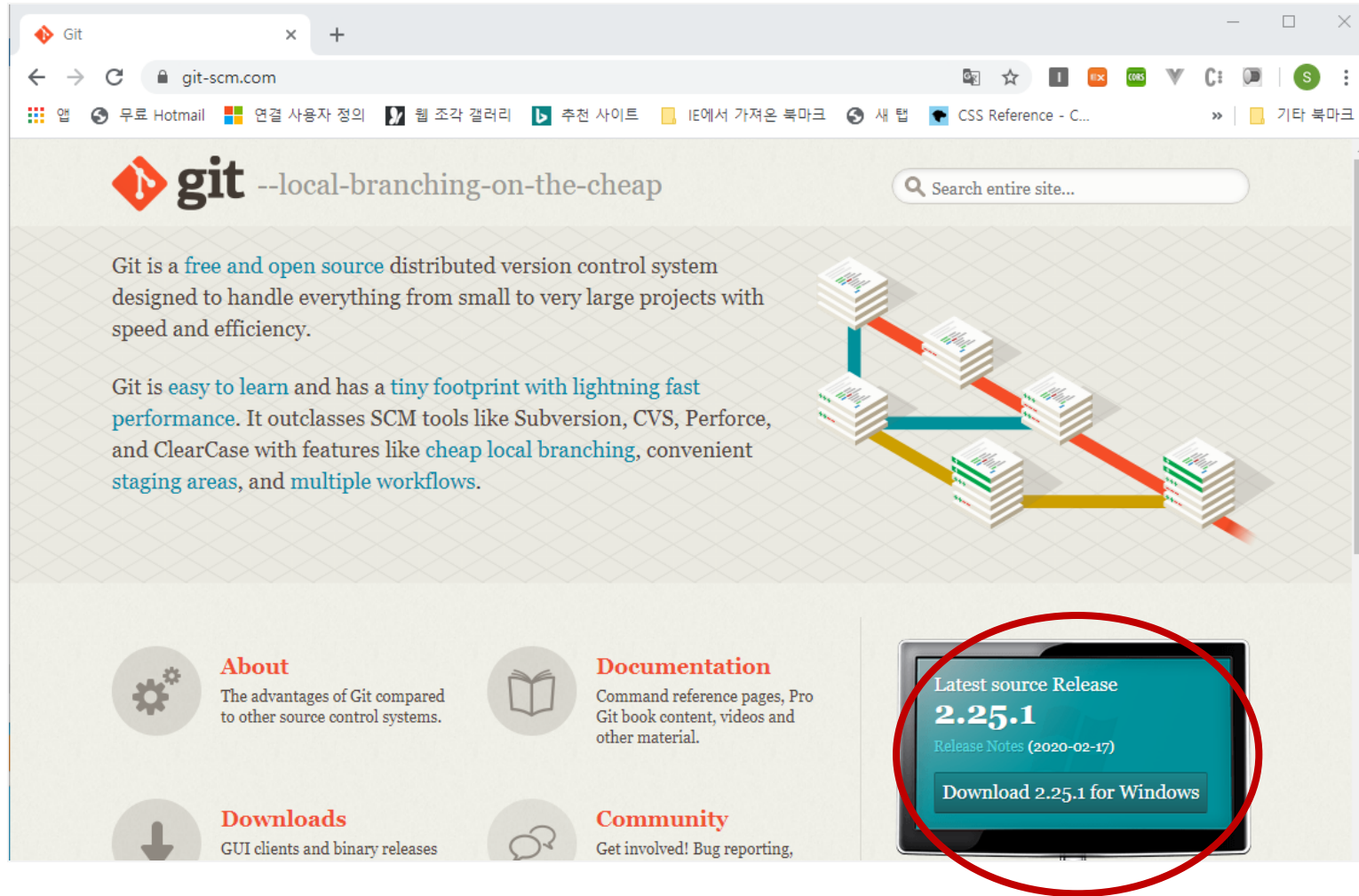
1. heroku Heroku application 만들기(20slide)
2. mongodb Atlas cloud 환경조성(26slide)
3. mongo compass로 db와 heroku연결 및 Atlas cloud mongodb 에 db upload(46slide)
4. git을 이용해서 heroku에 애플리기(69slide)

III. <실습>

1. 사전 작업

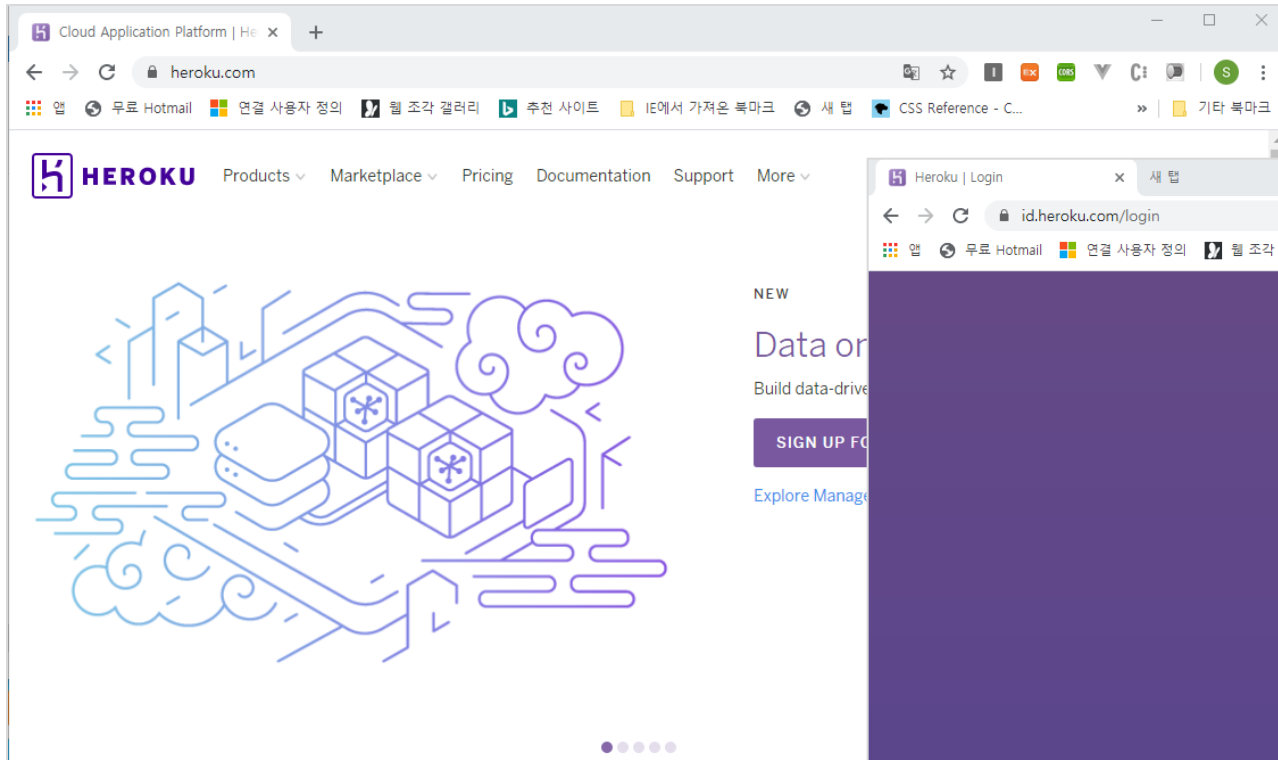
Preparing the Application - Git 설치

- Git 설치 : <https://git-scm.com/downloads>

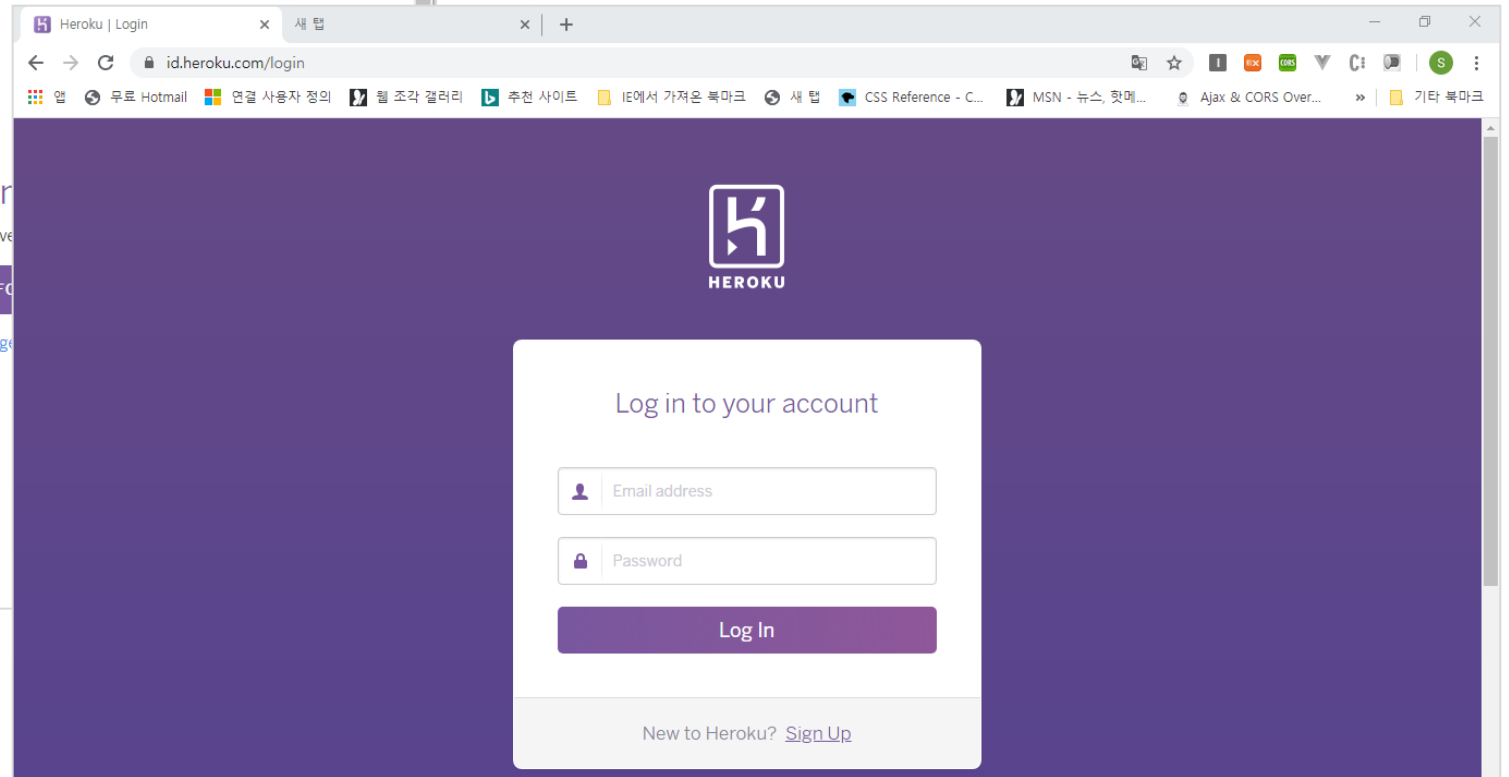


Creating a Heroku account - Heroku에 Account 만들기

- 헤로쿠 - <https://www.heroku.com/>
- Heroku에 Account 만들기 - 인적사항기록 - (shyoon63@gmail.com /*****@**23)

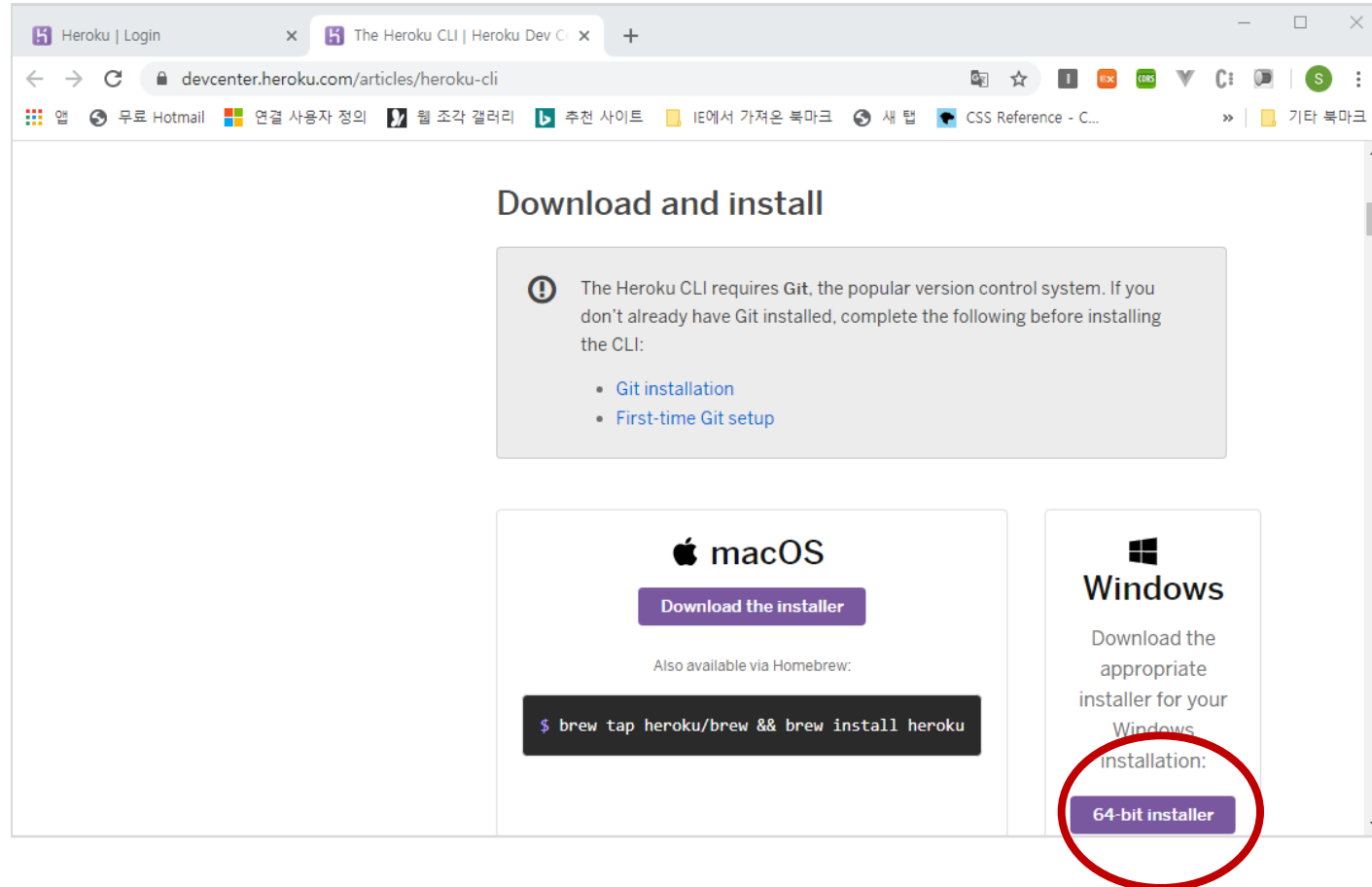


mail로 back해서
Link click하여 인증하기!!!



Installing the Heroku CLI

- Heroku 서비스를 사용하기 위해서는 Heroku CLI를 설치
- command line interface 가능하게 하는 것
- <https://devcenter.heroku.com/articles/heroku-cli> - Windows 64-bit Installer 선택 -> 설치



nodejs heroku hosting(1/2)

step1:

C:\nodejs\sunnysoft>

C:\nodejs\sunnysoft>Procfile <= 확장자 없이 대소문자 구분해서 만들기, 자동실행

web: npm start

Procfile

web: npm start

step2:

.gitignore 파일 만들기: <= heroku 에 모두 있으므로 무시하라는 의미

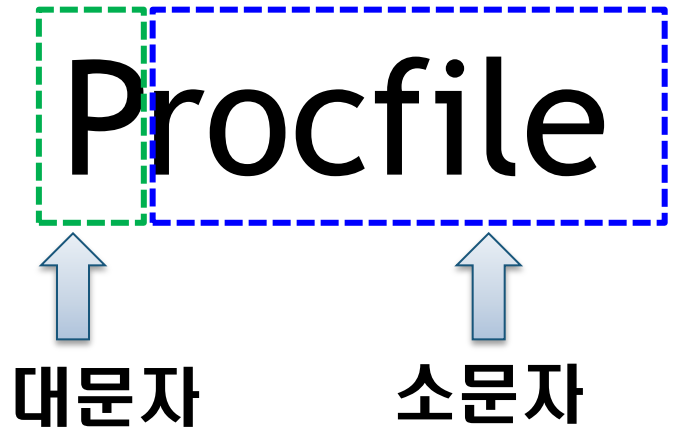
Dependency directory

node_modules

npm-debug.log

.gitignore

Dependency directory
node_modules



nodejs heroku hosting(2/2) - package.json 내용 추가

```
{
  "name": "express_example",
  "version": "1.0.0",
  "description": "",
  "main": "app.js",
  "scripts": {
    "start": "node app.js",
    "test": "echo \\\"Error: no test specified\\\" && exit 1"
  },
  "author": "",
  "license": "ISC",
  "dependencies": {
    "body-parser": "^1.19.0",
    "cookie-parser": "^1.4.4",
    "cors": "^2.8.5",
    "errorhandler": "^1.5.1",
    "express": "^4.17.1",
    "express-error-handler": "^1.1.0",
    "express-session": "^1.17.0",
    "fs": "0.0.1-security",
    "multer": "^1.4.2",
    "path": "^0.12.7"
  }
}
```

"start": "node app.js",

index.html - 모바일화면에서 사용할 로고 만들고 홈화면 추가

▪ <https://sunnyportfolio.herokuapp.com> 사이트만들기

- 구글 정책에서 https만 되도록 바뀜
- heroku에 **sunnyportfolio** (app이름)만들기 - **학생 개인별로 다르게 만들기**

▪ 아래와 같이 로그파일을 만든 후 /imgs에 저장하고 index.html 소스 수정

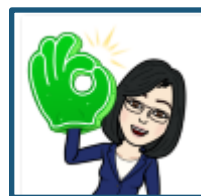
- Android

```
<link rel="shortcut icon" href="./logo.png">
```

- Apple

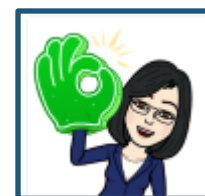
```
<link rel="apple-touch-icon" href="./logo_apple.png">
```

로고는 학생이 직접만들기



logo.png

Android 기기: 192 X 192 픽셀



logo_apple.png

Apple 기기: 180 X 180 픽셀

뒤에 배경이 있어야
없으면 검정색으로 표시

홈화면 추가

1)안드로이드Mobile phone - url 입력 후 메뉴[⋮] - 홈화면추가 - 이름 붙이기(Map Tracker)

2)아이폰Mobile phone - 사파리브라우저(나침판)-url 입력 후 -가운데 밑에 버튼[+] 누른 후- 홈화면추가

로컬실행에서 그림
(logo.png) 이 브라우
저 좌측 상단에 변경
된 것을 확인



핸드폰 쿠키 삭제

- Chrome 앱의 경우
 1. Android 스마트폰 또는 태블릿에서 Chrome 앱을 엽니다.
 2. 오른쪽 상단에서 더보기 를 탭합니다.
 3. 방문 기록 인터넷 사용 기록 삭제를 탭합니다.
 4. 상단에서 기간을 선택합니다. ...
 5. '쿠키 및 사이트 데이터'와 '캐시된 이미지 또는 파일' 옆의 체크박스를 선택합니다.

- iPhone, iPad 또는 iPod touch에서...
 1. 방문 기록과 쿠키를 삭제하려면 설정 > Safari로 이동하여
 2. '방문 기록 및 웹 사이트 데이터 지우기'를 탭합니다.

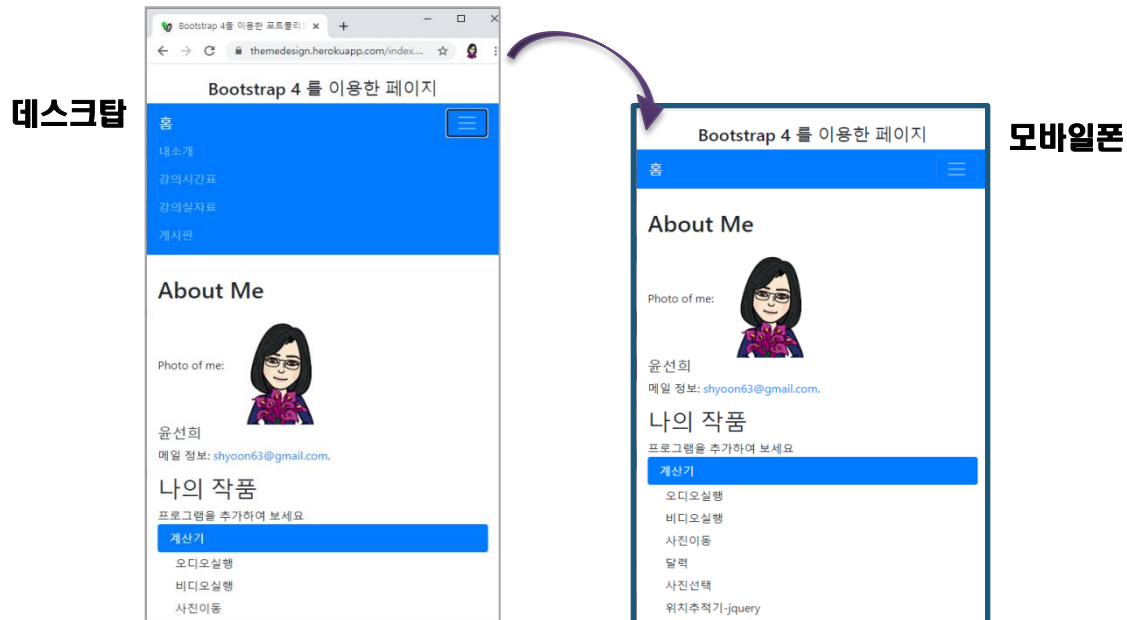
index.html – 주소창을 보이지 않도록 하여 앱으로 보이도록 하기

index.html

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, height=device-height, initial-scale=1">
<link rel="apple-touch-icon" sizes="180x180" href="imgs/logo.png" />
<link rel="icon" type="image/png" href="imgs/logo.png" sizes="192x192" />
<meta name="mobile-web-app-capable" content="yes">
<meta name="apple-mobile-web-app-capable" content="yes">
```

모바일폰에서는 주소창이
나타나지 않도록 만들기

- Pt에서 복사하여 사용하면 보이지 않는 문자가 포함되어 실행이 안되는 경우 발생함!!!



몽고디비 설치

몽고디비설치- www.mongodb.com- software

-community server-오른쪽선택

-os:windowsx64x64 ms용선택-msi 파일 다운되면 설치-complete용으로 설치

환경변수-시스템변수 패스

-C:\Program Files\MongoDB\Server\4.2\bin

nodejs>database>local 디렉토리 만들어 놓기

새창에서 C:\nodejs> mongod --dbpath ./database/local

Git을 이용해서 heroku에 앱올리기 설명 - 빈칸없이 입력 - heroku에 upload됨

```
c:\>(base) heroku login
```

```
c:\>(base) git init
```

=>초기화

```
c:\>(base) heroku git:remote -a sunnyportfolio
```

```
c:\>(base) heroku git:remote -a sunnyboard
```

```
c:\>(base) heroku git:remote -a sunnysession
```

=>히로쿠에 올릴준비(heroku에 app이름 알려주기)

```
c:\>(base) git config --global user.email "shyoon63@gmail.com"
```

```
c:\>(base) git config --global user.name "shyoon63"
```

```
(Application Root $ git config --global user.name "YOUR NAME")
```

=> 입력하라고하면 하기(email의 id = name)

```
c:\>(base) git add .
```

=>root 디렉터리 이하를 모두 git저장소에 추가한다.

```
c:\>(base) git commit -am "first"
```

=>git에 버퍼에 있는것을 stack에 올림-골라서 작업할 수 있도록 처리

```
c:\>(base) git push heroku master
```

=>heroku upload

```
c:\>(base) heroku open
```

=> 브라우저에서 자동실행

Deploying with git push

- step:
 - `c:\>(base) heroku login`
 - `c:\>(base) git init`
 - `c:\>(base) heroku git:remote -a sunnyportfolio`
 - `c:\>(base) git config --global user.email "shyoon63@gmail.com"`
 - `c:\>(base) git config --global user.name "shyoon63"`
 - `c:\>(base) git add .`
 - `c:\>(base) git commit -am "first"`
 - `c:\>(base) git push heroku master`
 - `c:\>(base) heroku open`

Deploying an Upgrade

- 내용 수정 후:

1. `c:\>(base) git add .`
2. `c:\>(base) git commit -am "first"`
3. `c:\>(base) git push heroku master`

`c:\>(base) heroku open`

- 브라우저 자동실행

1. `heroku open`
2. 또는 브라우저에서 <https://sunnyportfolio.herokuapp.com>

문제 발생시 해결 방법

해결사항

1. git폴더 삭제

2. heroku app 삭제후 다시 만들고 처음부터 올리기

1	.git	2020-06-07 오후 3:34	파일 폴더	
	downloads	2020-01-11 오후 4:13	파일 폴더	
	image	2020-03-25 오후 4:32	파일 폴더	
	node_modules	2020-03-25 오후 4:33	파일 폴더	
	public	2020-03-28 오후 3:20	파일 폴더	
	uploads	2020-03-28 오후 3:36	파일 폴더	
	.gitignore	2020-03-27 오후 3:57	텍스트 문서	1KB
	app.js	2020-03-28 오후 3:41	JavaScript 원본 파...	6KB
	output2.txt	2020-04-12 오후 1:51	텍스트 문서	0KB
	package.json	2020-03-27 오후 4:05	JSON 원본 파일	1KB
	package-lock.json	2020-01-11 오후 1:32	JSON 원본 파일	24KB
	Procfile	2020-03-27 오후 3:57	파일	1KB

HEROKU

Jump to Favorites, Apps, Pipelines, Spaces...

Personal > sunnysoft

Overview Resources Deploy Metrics Activity Access **Settings**

Transfer Ownership

Transfer this app to your personal account or a team you are a member of. [Learn more](#)

Choose app owner

Sunhee Yun (shyoon63@gmail.com)

Transfer app...

Maintenance Mode

Maintenance mode is off

If you need to take your app offline you can turn on maintenance mode. [More info](#)

Delete App

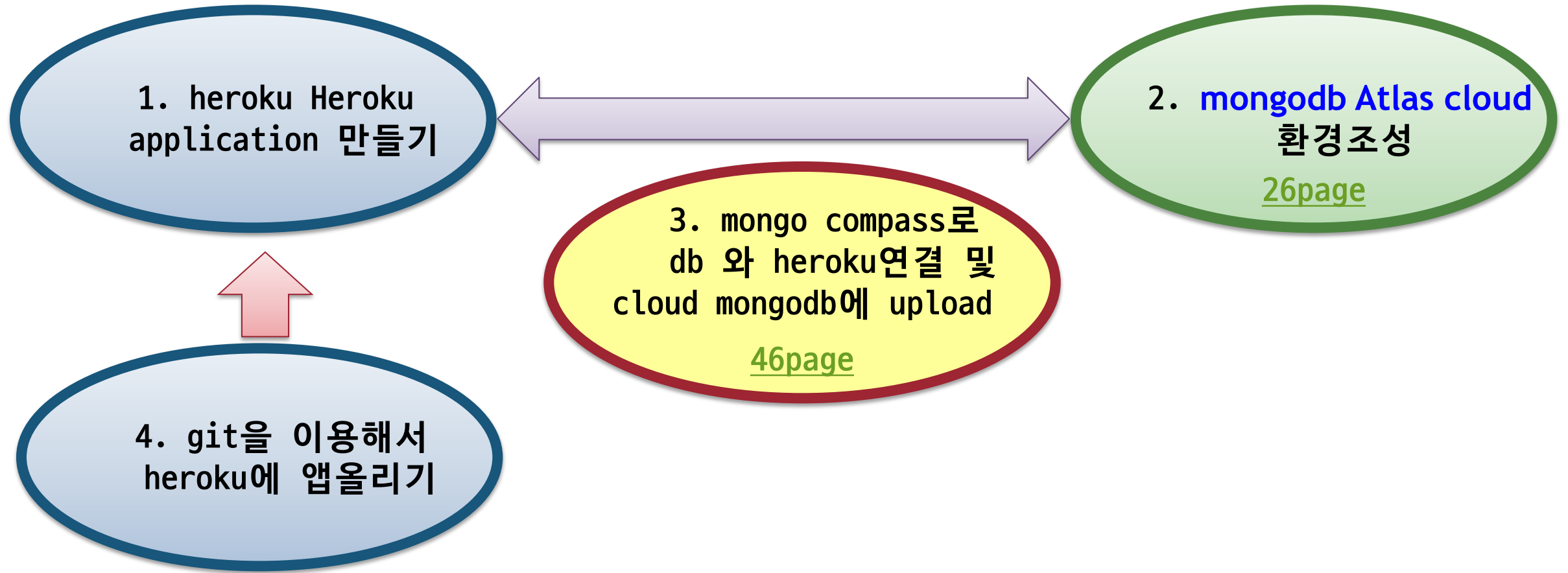
Deleting your app and its add-ons is irreversible.

Delete app...

2

II. mongodb Atlas cloud 를 이용한 application upload

Upload 4단계

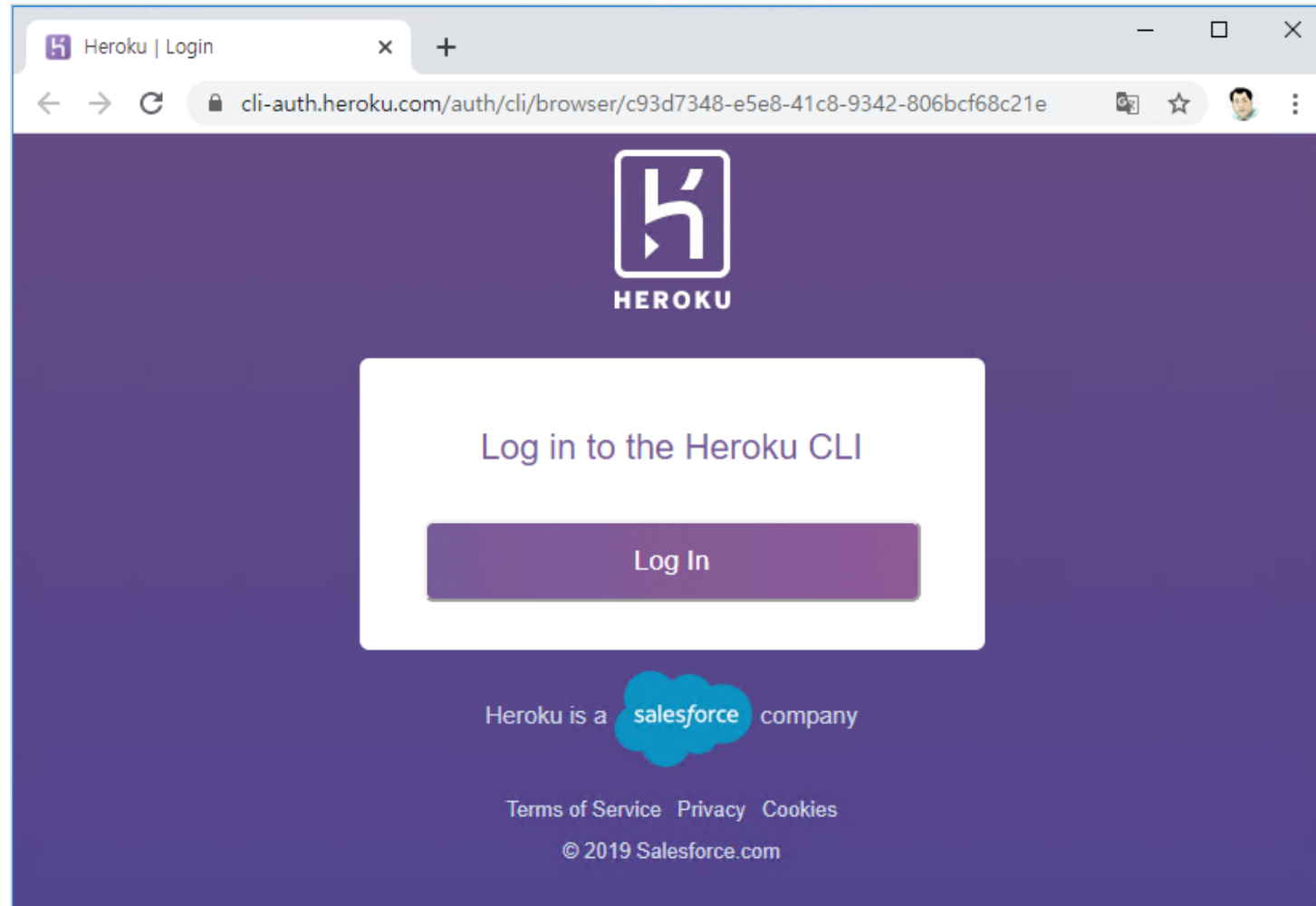


<실습> cloud system에 mongodb atlas를 활용한 application upload

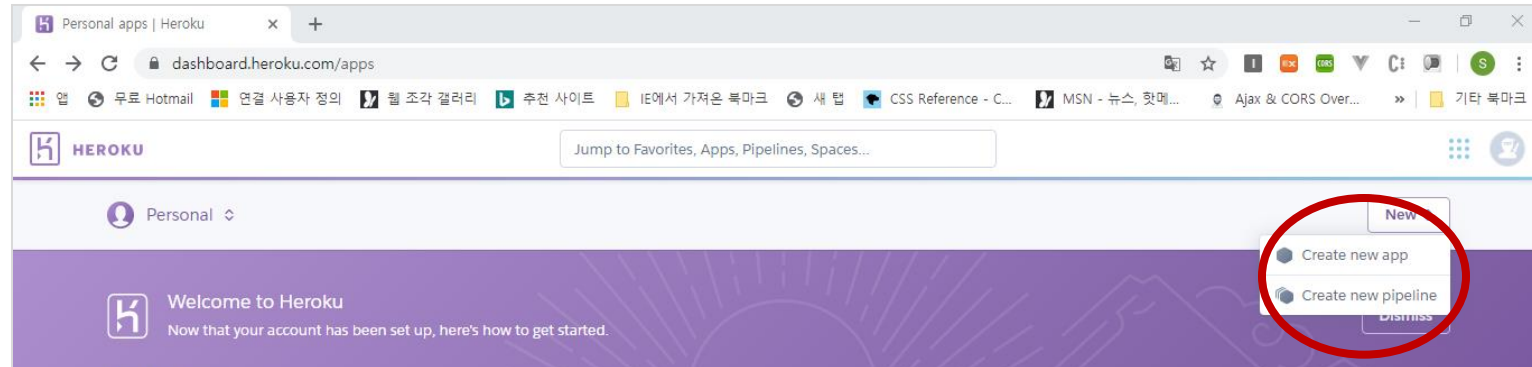
1. heroku Heroku application 만들기(20 slide)
2. mongodb Atlas cloud 환경 조성(26 slide)
3. mongo compass로 db 와 heroku연결 및 mongodb Atlas cloud 에 db upload(46 slide)
4. git을 이용해서 heroku에 앱올리기(69 slide)

1. heroku Heroku application 만들기

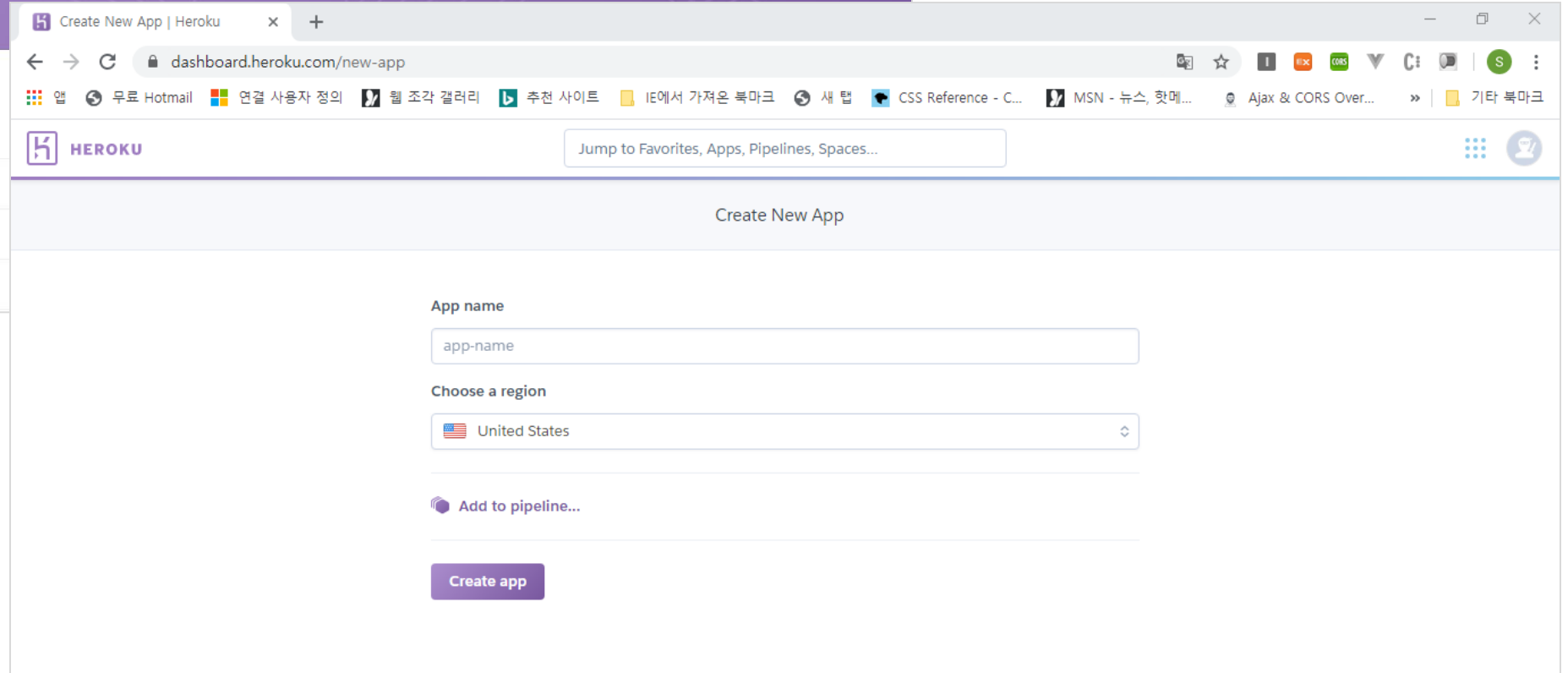
C:\>(base)>heroku login




Creating an application



- <https://dashboard.heroku.com/>
 - personal
 - new app
 - sunnyatlas



heroku app 만들기

 HEROKU

Jump to Favorites, Apps, Pipelines, Spaces...

Create New App


App name

sunnyatlas


✓

sunnyuserapp is available

Choose a region

 United States

⌵

 Add to pipeline...

Create app

delete application – 문제 발생 시 지우고 다시 하기

- 앱을 선택후 settings – 맨아래 - delete application

The screenshot shows the Heroku dashboard for a user named 'sunnysoft'. The 'Settings' tab is selected and circled in red. The settings page is divided into three sections: 'Transfer Ownership', 'Maintenance Mode', and 'Delete App'. The 'Delete App' section is at the bottom and contains a red button labeled 'Delete app...' which is also circled in red. The 'Transfer Ownership' section has a dropdown menu showing 'Sunhee Yun (shyoon63@gmail.com)' and a 'Transfer app...' button. The 'Maintenance Mode' section has a toggle switch that is currently off.

HEROKU

Jump to Favorites, Apps, Pipelines, Spaces...

Personal > sunnysoft

Overview Resources Deploy Metrics Activity Access **Settings**

Transfer Ownership

Transfer this app to your personal account or a team you are a member of. [Learn more](#)

Choose app owner

Sunhee Yun (shyoon63@gmail.com)

Transfer app...

Maintenance Mode

If you need to take your app offline you can turn on maintenance mode. [More info](#)

Delete App

Deleting your app and its add-ons is irreversible.

Delete app...

2. mongodb Atlas cloud 환경조성

2. mongodb Atlas cloud 환경조성 요약

<https://www.mongodb.com/cloud/atlas?jmp=docs>
login (shyoon63@gmail.com /j*****3
구글 로그인후
Cluster=db
collection=table

step1) porject **MyCloudAtlas** 만들기=> project선택후

step2) Build a Cluster-free 선택
usa-virginia 선택-create cluster

step3) clusters-cluster0-connet
add your current ip address
add ip address
close

step4)왼쪽메뉴-network access-add ip address-
Whitelist Entry: 0.0.0.0/0
confirm

step5) db에 접근하기 위한것--dbuser 만들기
왼쪽메뉴-Database Access-Databaseusers
-Add New Database User - password
dbuser name : 폼내용: **sunny5/***0414** - atlas admin 선택 -
AddUser 버튼

(왼쪽메뉴- settings -수정 가능- porject name :
MyCloudAtlas ⋮

step6) db 만들기 - 테이블을 계속 만든다면 step6 진행함
왼쪽메뉴-clusters-collections-add my own data

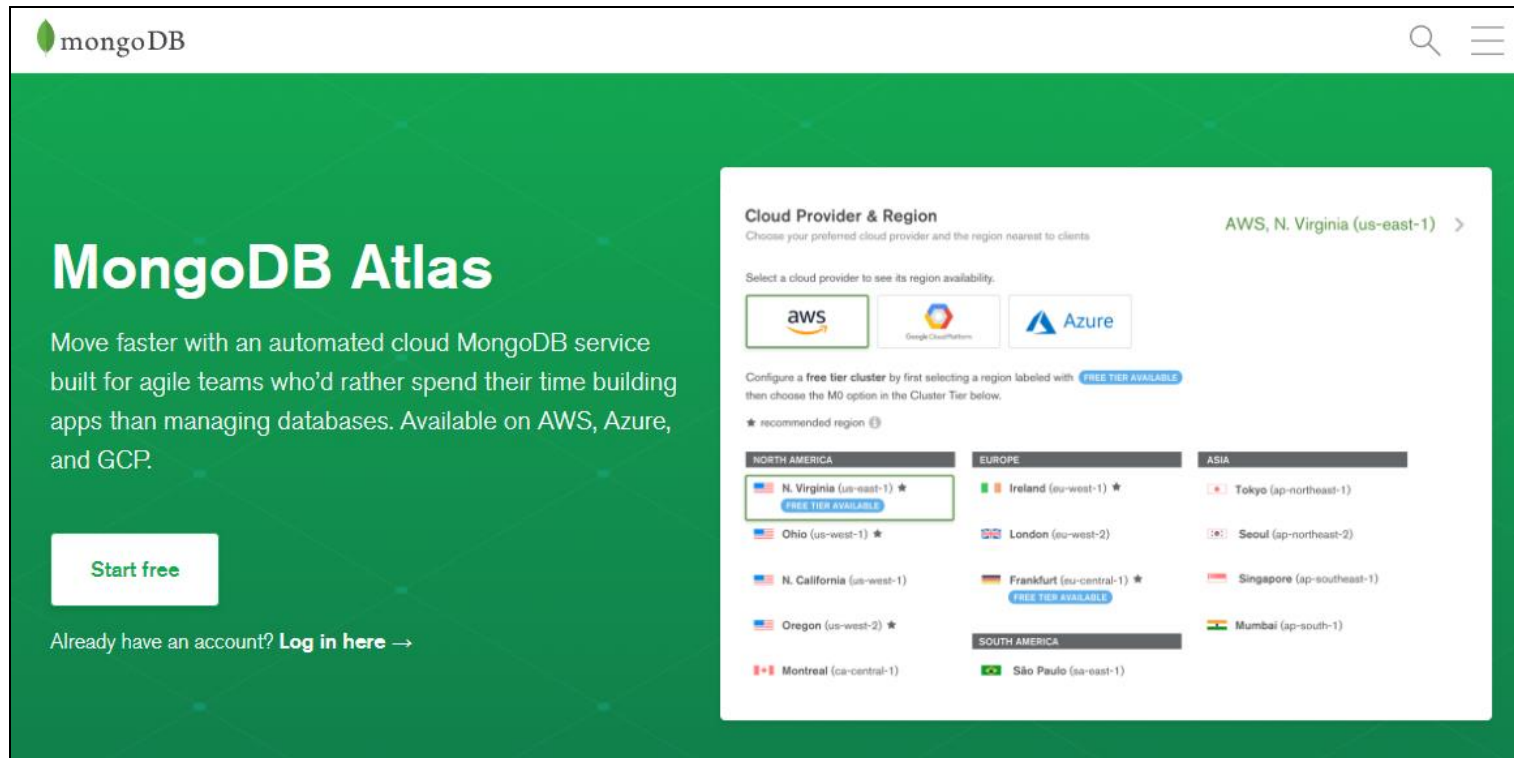
database name : **myuserdb**
collection name : **users3**

- cluster = db
- collection = table

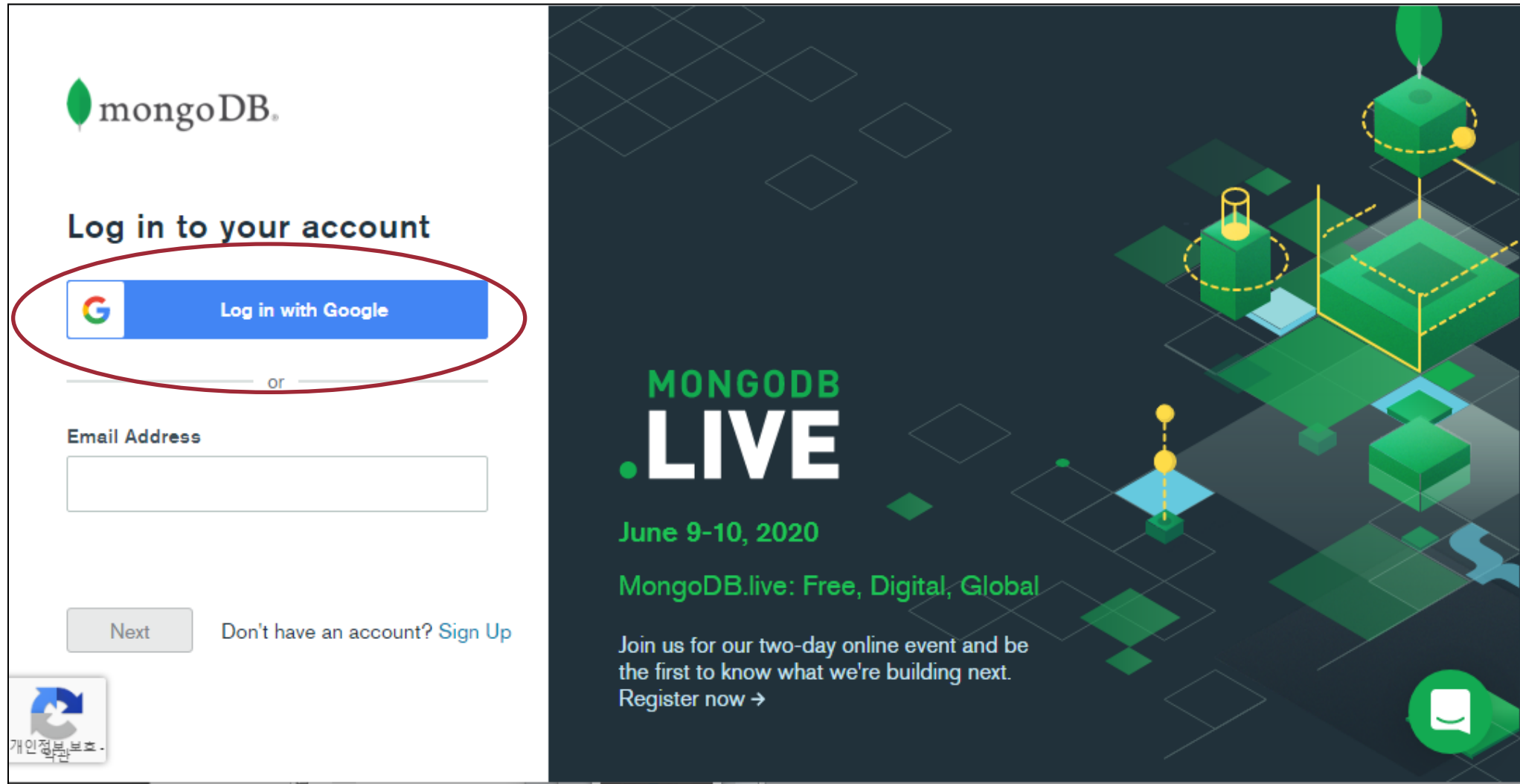
mongodb Atlas cloud : <https://www.mongodb.com/cloud/atlas?jmp=docs>

1. Navigate to Atlas to create your Atlas account.

You can register for an account on the [MongoDB Atlas](#) landing page.




log in to your account



The image shows a screenshot of a web page. On the left is a login form for MongoDB, and on the right is a banner for MongoDB Live.

MongoDB Login Form:

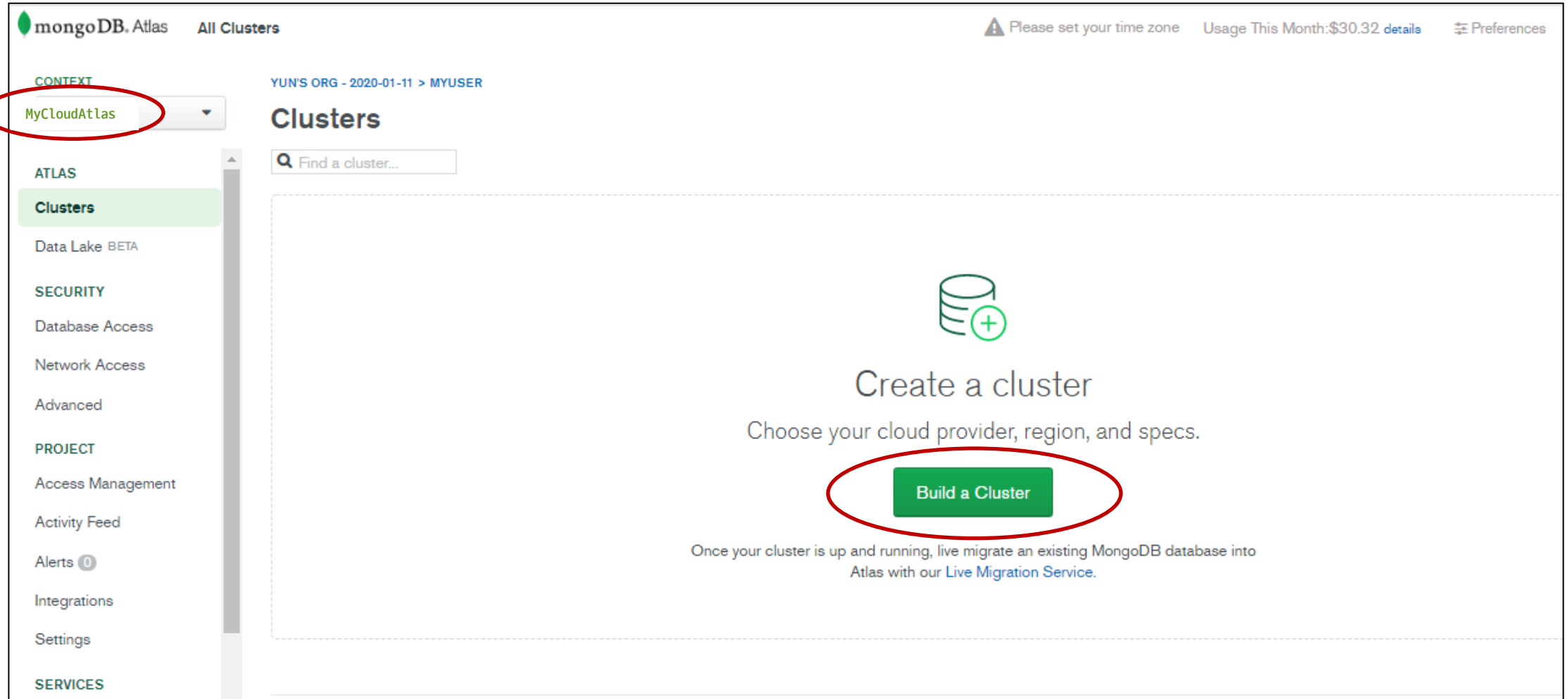
- Logo:  mongoDB.
- Text: **Log in to your account**
- Buttons: A blue button with the Google logo and the text "Log in with Google" is circled in red. Below it is a button with the text "or".
- Form: A text input field labeled "Email Address".
- Buttons: A "Next" button and a "Don't have an account? [Sign Up](#)" link.
- Footer: A small icon with the text "개인정보처리방침" (Privacy Policy).

MongoDB Live Banner:

- Text: **MONGODB LIVE**
- Text: **June 9-10, 2020**
- Text: **MongoDB.live: Free, Digital, Global**
- Text: Join us for our two-day online event and be the first to know what we're building next. Register now →
- Image: A green circular icon with a white speech bubble and a smiley face.

step1. project MyUser 만들기

- Build a New Cluster



step2. Build a New Cluster - free 선택

Choose a Path | Atlas: MongoDB x +

cloud.mongodb.com/v2/60264ce22d797c3de3338944#clusters/pathSelector

Dedicated Multi-Cloud & Multi-Region Clusters

For teams developing world-class applications that require multi-region resiliency or ultra-low latency.

- ✓ Includes all features from Shared and Dedicated Clusters
- ✓ Replicate data across clouds and regions
- ✓ Globally distributed read and write operations
- ✓ Control data residency at the document level

Create a cluster

Starting at
\$0.13/hr*
*estimated cost \$98.55/month

Dedicated Clusters

For teams building applications that need advanced development and production-ready environments.

- ✓ Includes all features from Shared Clusters
- ✓ Auto-scaling
- ✓ Network isolation
- ✓ Realtime performance metrics

Create a cluster

Starting at
\$0.08/hr*
*estimated cost \$56.94/month

Shared Clusters

For teams learning MongoDB or developing small applications.




- ✓ Highly available auto-healing cluster
- ✓ End-to-end encryption
- ✓ Role-based access control

Create a cluster

Starting at
FREE


Dismiss


Advanced Configuration Options




★ Recommended region ⓘ


NORTH AMERICA

 **N. Virginia** (us-east-1) ★


 **Oregon** (us-west-2) ★


EUROPE

 **Ireland** (eu-west-1) ★


 **Frankfurt** (eu-central-1) ★


ASIA

 **Singapore** (ap-southeast-1) ★

 **Mumbai** (ap-south-1)

AUSTRALIA

 **Sydney** (ap-southeast-2) ★




개인정보처리방침

FREE

Free forever! Your M0 cluster is ideal for experimenting in a limited sandbox. You can upgrade to a production cluster anytime.

[Back](#)

Create Cluster



32

step3. clusters-cluster0-connet

mongoDB Atlas All Clusters

Please set your time zone Usage This Month:\$0.00 details Preferences Sunhee Yun

CONTEXT
MyCloudAtlas

ATLAS
Clusters
Data Lake BETA

SECURITY
Database Access
Network Access
Advanced

PROJECT
Access Management
Activity Feed
Alerts 0

We are deploying your changes: 0 of 3 servers complete (current action: provisioning 3 servers)

YUN'S ORG - 2020-01-11 > SUNNYLOGIN

Clusters

Find a cluster...

Build a New Cluster

Build a New Cluster는 한번만 하기
Cluster0만 무료, 새로운 cluster생성시
카드번호 요구하므로 무료로 사용하기

MongoDB Atlas Search makes it easy to build simple, integrated search capabilities on top of your data i

SANDBOX

Cluster0
Version 4.2.3

CONNECT METRICS COLLECTIONS ...

CLUSTER TIER
M0 Sandbox (General)

REGION
AWS / N. Virginia (us-east-1)

Your cluster is being created.
New clusters take between 1-3 minutes to provision.

clusters-cluster0-connet

- add your current ip address
- add ip address
- close

Setup connection security > Choose a connection method > Connect

You need to secure your MongoDB Atlas cluster before you can use it. Set which users and IP addresses can access your cluster now. [Read more](#)

You can't connect yet. Set up your firewall access and user security permission below.

1 Whitelist a connection IP address

Add Your Current IP Address

Add a Different IP Address

2 Create a MongoDB User

This first user will have [atlasAdmin](#) permissions for this project.

Keep your credentials handy, you'll need them for the next step.

Username

ex. dbUser

Password

ex. dbUserPassword

Autogenerate Secure Password

SHOW

Create MongoDB User

add ip address

You need to secure your MongoDB Atlas cluster before you can use it. Set which users and IP addresses can access your cluster now. [Read more](#)

You can't connect yet. Set up your firewall access and user security permission below.

1 Whitelist a connection IP address

IP Address	Description (Optional)
<input type="text" value="121.170.200.122"/>	<input type="text" value="An optional comment describing this entry"/>
<div><input type="button" value="Cancel"/> <input type="button" value="Add IP Address"/></div>	

2 Create a MongoDB User

This first user will have [atlasAdmin](#) permissions for this project.

Keep your credentials handy, you'll need them for the next step.

Username	Password
<input type="text" value="ex. dbUser"/>	<div><input type="text" value="ex. dbUserPassword"/> <input type="button" value="SHOW"/></div>
<div><input type="button" value="Create MongoDB User"/></div>	

step4. 왼쪽메뉴 - network access-add ip address

mongoDB, Atlas All Clusters

CONTEXT

MyCloudAtlas

YUN'S ORG - 2020-01-11 > SUNNYLOGIN

Network Access

IP Whitelist Peering Private Endpoint

+ ADD IP ADDRESS

You will only be able to connect to your cluster from the following list of IP Addresses:

IP Address	Comment	Status	Actions
121.170.200.122/32 (includes your current IP address)		Active	EDIT DELETE

network access-add ip address

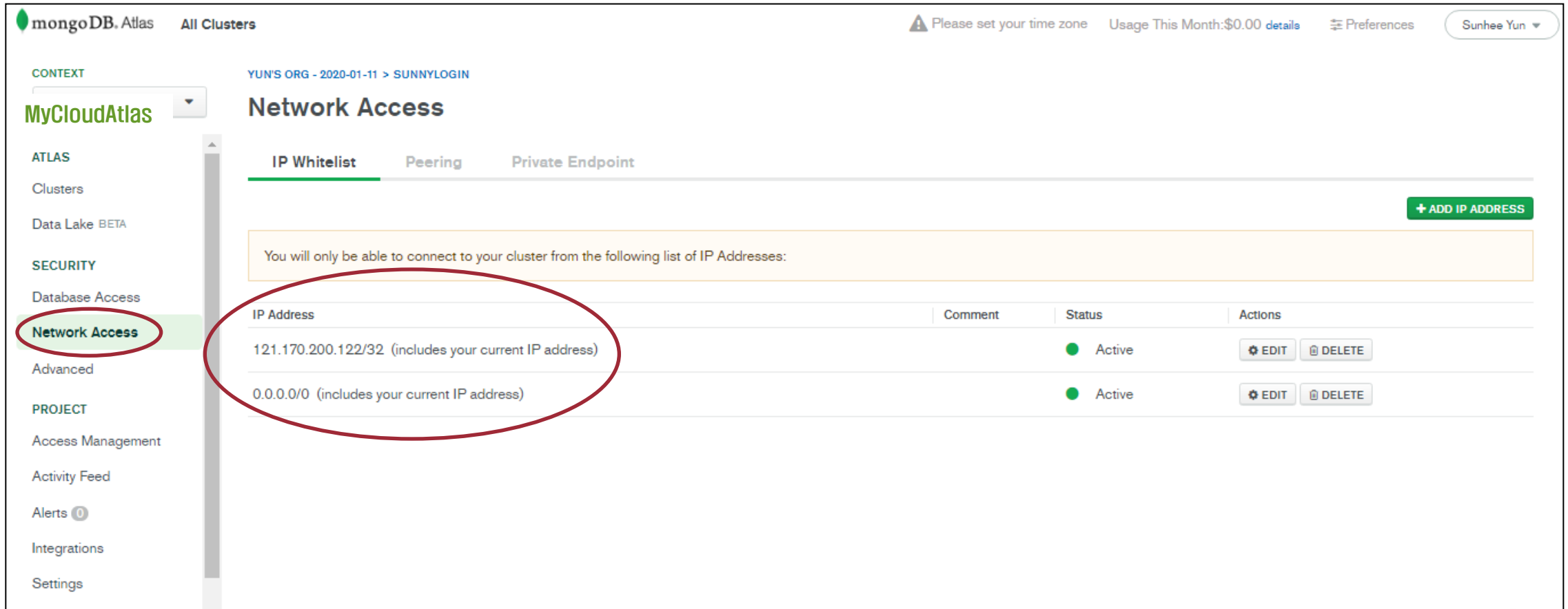
- Whitelist Entry: 0.0.0.0/0
- confirm

The screenshot shows the MongoDB Atlas interface with a modal dialog titled "Add IP Access List Entry". The dialog contains the following elements:

- Header:** "Add IP Access List Entry" with a close button (X).
- Text:** "Atlas only allows client connections to a cluster from entries in the project's IP Access List. Each entry should either be a single IP address or a CIDR-notated range of addresses. [Learn more.](#)"
- Buttons:** A button labeled "ALLOW ACCESS FROM ANYWHERE" is circled in red.
- Form Fields:**
 - Access List Entry:** A text input field with the placeholder "Enter IP Address or CIDR Notation".
 - Comment:** A text input field with the placeholder "Optional comment describing this entry".
- Footer:**
 - A toggle switch labeled "This entry is temporary and will be deleted in" followed by a dropdown menu set to "6 hours".
 - "Cancel" and "Confirm" buttons. The "Confirm" button is circled in red.

The background shows the MongoDB Atlas sidebar with sections for "DATA STORAGE" (Clusters, Triggers, Data Lake) and "SECURITY" (Database Access, Network Access, Advanced). The "Network Access" section is currently selected.

network access-add ip address 확인

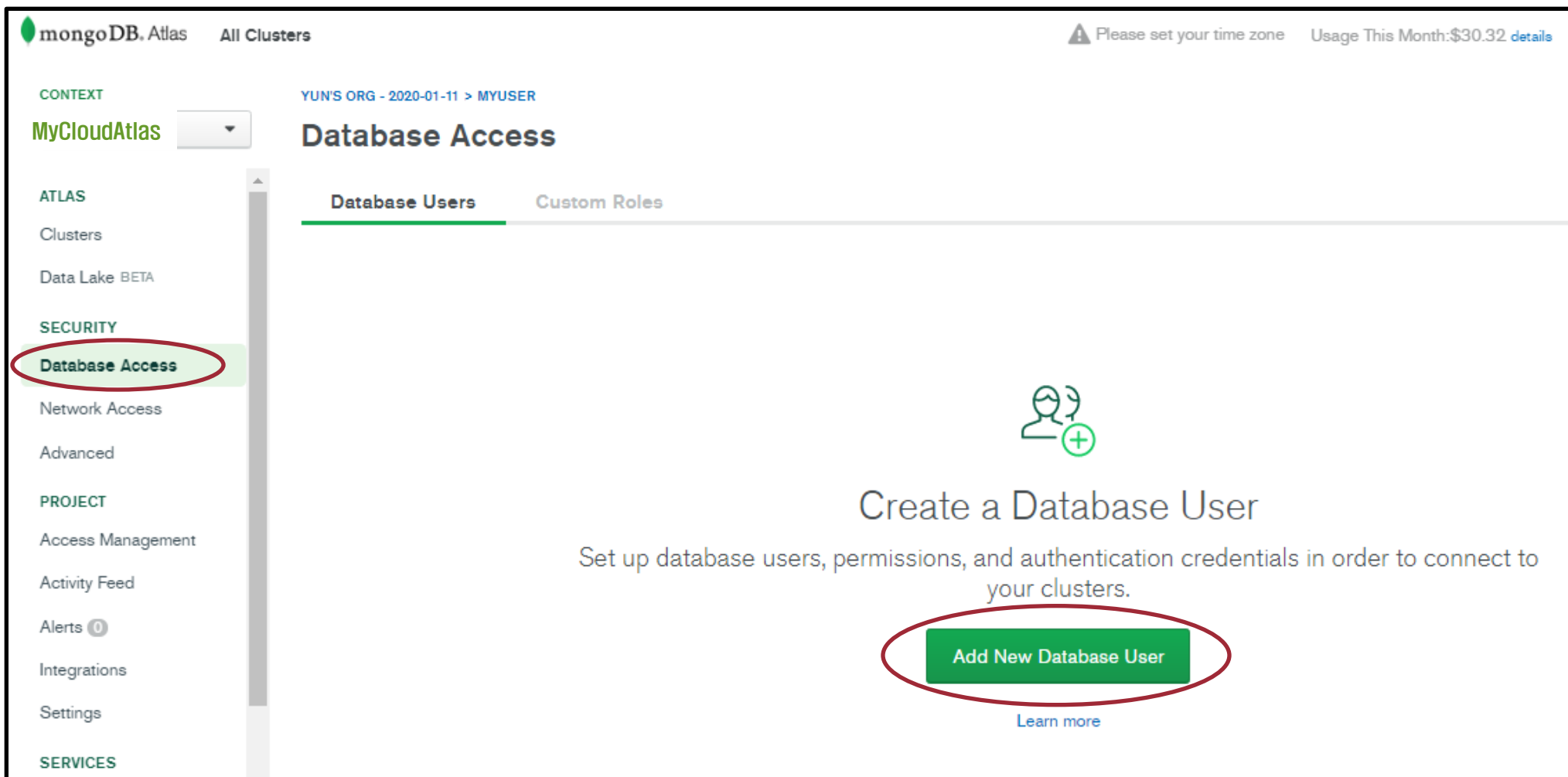


The screenshot shows the MongoDB Atlas interface. In the left sidebar, the 'Network Access' option is highlighted with a red circle. The main content area is titled 'Network Access' and has three tabs: 'IP Whitelist' (selected), 'Peering', and 'Private Endpoint'. A green '+ ADD IP ADDRESS' button is in the top right. A yellow box contains the text: 'You will only be able to connect to your cluster from the following list of IP Addresses:'. Below this is a table with two entries, both circled in red:

IP Address	Comment	Status	Actions
121.170.200.122/32 (includes your current IP address)		● Active	EDIT DELETE
0.0.0.0/0 (includes your current IP address)		● Active	EDIT DELETE

step5. db에 접근하기 위한 것 - dbuser 만들기

- Database Access-Databaseusers-add new database user



Add New Database user

- Add New Database
- username : sunny5/**0414
- Atlas admin - 폼내용 입력 - AddUser버튼
- MyCloudAtlas <= project이름

폼내용:

username: sunny5/**0414

mongoDB Atlas All Clusters

CONTEXT

MyCloudAtlas

Database

Database User

ATLAS

Clusters

Data Lake BETA

SECURITY

Database Access

Network Access

Advanced

PROJECT

Access Management

Activity Feed

Alerts 0

Integrations

Settings

SERVICES

Charts

Stitch

System Status: All G

Add New Database User

Choose Authentication Method

PASSWORD CERTIFICATE

Password Authentication

MongoDB uses SCRAM as it's default authentication method.

sunny5

e.g. new-user_31

should not be blank

SHOW

Autogenerate Secure Password

should not be blank

Database User Privileges

Atlas admin

Read and write to any database

Only read any database


Select Custom Role

Add Default Privileges

This user is temporary and will be deleted in

Cancel Add User

Add New Database user 확인

 **mongoDB Atlas** All Clusters

Please set your time zone Usage This Month:\$30.32 [details](#)

CONTEXT

MyCloudAtlas

ATLAS

Clusters

Data Lake BETA

SECURITY

Database Access

Network Access

Advanced

PROJECT

We are deploying your changes (current action: configuring MongoDB)

YUN'S ORG - 2020-01-11 > MYUSER

Database Access

Database Users Custom Roles

User Name ↕	Authentication Method ▲	MongoDB Roles
🔍 sunny5	SCRAM	atlasAdmin@admin

step6. db 만들기 => users2를 users3으로 수정하자!

- 왼쪽메뉴 clusters-collections-add my own data

mongoDB Atlas All Clusters

CONTEXT
MyUser

ATLAS
Clusters
Data Lake BETA
SECURITY

PROJECT
Access Management
Activity Feed
Alerts 0
Integrations
Settings

SERVICES
Charts
Stitch

YUN'S ORG - 2020-01-11 > MYUSER > CLUSTERS

Cluster0

Overview Real Time Metrics

DATABASES: 0 COLLECTIONS: 0

Usage This Month: \$30.32 details

Command Line Tools

VISU

documents

Learn more in Docs and Tutorials

database name : myuserdb
collection name : users3

Create Database

DATABASE NAME ?
myuserdb

COLLECTION NAME ?
users3

☐ Capped Collection
Before MongoDB can save your new database, a collection name must be specified at the time of creation.

Cancel Create

Load a Sample Dataset Add My Own Data

db 만들기 확인

The screenshot shows the MongoDB Atlas interface for 'Cluster0'. The left sidebar contains a navigation menu with categories: ATLAS (Clusters, Data Lake BETA), SECURITY (Database Access, Network Access, Advanced), PROJECT (Access Management, Activity Feed, Alerts 0, Integrations, Settings), and SERVICES. The 'Clusters' item is highlighted. The main content area shows the 'Cluster0' overview with tabs for Overview, Real Time, Metrics, Collections (selected), Profiler, Performance Advisor, and Command Line Tools. Below the tabs, it indicates 'DATABASES: 1' and 'COLLECTIONS: 1'. A '+ Create Database' button is visible. The 'NAMESPACES' section shows a tree view with 'myuserdb' expanded, revealing 'users2'. A red circle highlights 'myuserdb', and a blue arrow points from it to a text box containing 'users2, users3,...'. The right panel shows details for 'myuserdb.users2', including 'COLLECTION SIZE: 0B', 'TOTAL DOCUMENTS: 0', and 'INDEXES TOTAL SIZE: 4KB'. It also has tabs for Find, Indexes, Aggregation, and Search BETA. A 'FILTER' input field contains '{\"filter\":\"example\"}'. The 'QUERY RESULTS' section shows '0' results.

유료 되지 않도록 조심! - terminate하기, 필요 없는 것은 지우기

- clusters-cluster10이 있는가 확인
- cluster선택 ... 메뉴 아래에서 terminate 하기
- 그리고 해당 project를 setting에 가서 cluster1 이후는 모두 지우기



mongodb Atlas project 삭제

- Cluster terminate 후 setting에서 삭제

Project Settings

Settings 후 delete

Cluster0입력

Terminate

DELETE

3. mongo compass로 db와 heroku연결 및 mongodb Atlas cloud 에 db upload

3. mongo compass로 db와 heroku연결 및 mongodb Atlas cloud 에 db upload (1/3)

- 몽고 dbatlas

clusters-connect-3번째 cennect using mongodb compass-I have MongoDB compass선택

copy 1.12(최신버전) => 1.11 earlier

mongodb://sunny5:<password>@cluster0-shard-00-00.iczci.mongodb.net:27017,cluster0-shard-00-01.iczci.mongodb.net:27017,cluster0-shard-00-02.iczci.mongodb.net:27017/test?replicaSet=atlas-df8m6a-shard-0&ssl=true&authSource=admin

3. mongo compass로 db와 heroku연결 및 mongodb Atlas cloud 에 db upload (2/3)

-app.js

```
//데이터베이스에 연결
function connectDB() {
  // 데이터베이스 연결 정보
  //var databaseUrl = 'mongodb://localhost:27017/local';
  var databaseUrl = 'mongodb://sunny5:*****@cluster0-shard-00-00.iczci.mongodb.net:27017,cluster0-shard-00-01.iczci.mongodb.net:27017,cluster0-shard-00-02.iczci.mongodb.net:27017/myuserdb?replicaSet=atlas-df8m6a-shard-0&ssl=true&authSource=admin';

  // 데이터베이스 연결
  console.log('데이터베이스 연결을 시도합니다. ');
  mongoose.Promise = global.Promise;
  //mongoose.connect(databaseUrl);
  mongoose.connect(databaseUrl, {useMongoClient:true});

  database = mongoose.connection;
```

3. mongo compass로 db와 heroku연결 및 mongodb Atlas cloud에 db upload (3/3)

- <http://localhost:3000/adduser.html>에서 데이터 입력 후 mongo compass에서 확인하여보기

- mongodb compass에서 db 내용 확인

시작 => mongodb compass 확인

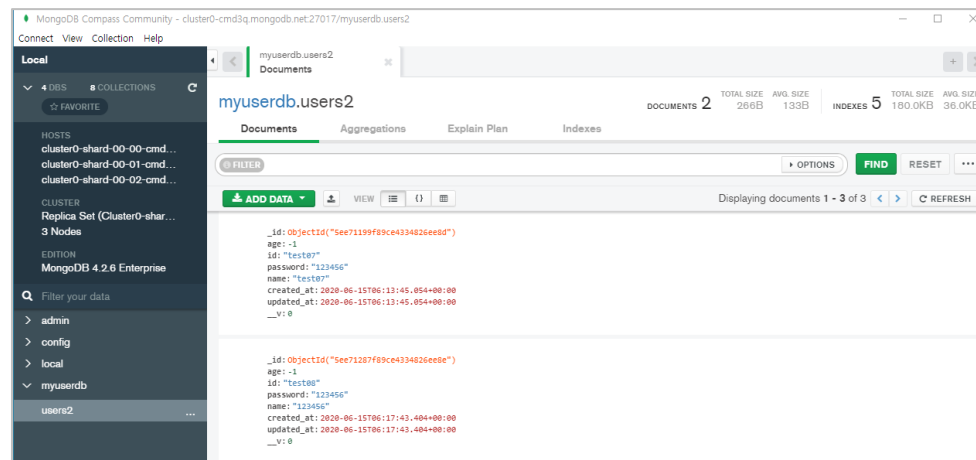
'mongodb://localhost:27017/local';

=> mongodb://sunny5:*****@cluster0-shard-00-00.iczci.mongodb.net:27017,cluster0-shard-00-01.iczci.mongodb.net:27017,cluster0-shard-00-02.iczci.mongodb.net:27017/myuserdb?replicaSet=atlas-df8m6a-shard-0&ssl=true&authSource=admin

- connect 클릭

=> mongodb atlas cloud db내용을 보여줌

=> 현재 프로그램은 로컬을 사용하고 있으니 atlas cloud db를 사용하는것으로 변경함



오류설명 1> 최신버전 사용시 => 구버전으로 대체 - config.js

```
db_url: 'mongodb+srv://sunny5:***0414@cluster0.udznn.mongodb.net/myuserdb',
```

서버가 시작되었습니다. 포트 : 3000

init() 호출됨.

connect() 호출됨.

uncaughtException 발생함 : Error: Invalid mongodb uri "mongodb+srv://sunny5:sol0414@cluster0.udznn.mongodb.net/myuserdb". Must begin with "mongodb://"

서버 프로세스 종료하지 않고 유지함.

Error: Invalid mongodb uri "mongodb+srv://sunny5:sol0414@cluster0.udznn.mongodb.net/myuserdb". Must begin with "mongodb://"

at muri (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\muri\lib\index.js:28:11)

at NativeConnection.Connection.openUri (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\mongoose\lib\connection.js:766:18)

at Mongoose.connect (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\mongoose\lib\index.js:262:17)

at connect (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\database\database.js:27:11)

at Object.database.init (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\database\database.js:16:2)

at Server.<anonymous> (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\app.js:200:11)

at Object.onceWrapper (events.js:427:28)

at Server.emit (events.js:321:20)

at emitListeningNT (net.js:1343:10)

at processTicksAndRejections (internal/process/task_queues.js:83:21)

=>

```
module.exports = {
  server_port: 3000,
  //db_url: 'mongodb://localhost:27017/local',
  db_url: 'mongodb://sunny5:***0414@cluster0-shard-00-00-u6kid.mongodb.net:27017,cluster0-shard-00-01-u6kid.mongodb.net:27017,cluster0-shard-00-02-u6kid.mongodb.net:27017/myuserdb?replicaSet=Cluster0-shard-0&ssl=true&authSource=admin',
```

오류설명 2> mongoose의 버전 4.11.0 이후버전 속성값 바꾸어주어야 함 - database.js

```
// 데이터베이스 연결 : config의 설정 사용
mongoose.Promise = global.Promise; // mongoose의 Promise 객체는 global의 Promise 객체 사용하도록 함

// mongoose.connect(config.db_url, {useMongoClient:true, useNewUrlParser: true, useUnifiedTopology: true});
// mongoose.connect(config.db_url, {useMongoClient:true});
mongoose.connect(databaseUrl,{useNewUrlParser: true, useUnifiedTopology: true});
database.db = mongoose.connection;
```

(node:4312) DeprecationWarning: `openSet()` is deprecated in mongoose >= 4.11.0, use `openUri()` instead, or set the `useMongoClient` option if using `connect()` or `createConnection()`. See <http://mongoosejs.com/docs/4.x/docs/connections.html#use-mongo-client>
connect() 호출됨.

uncaughtException 발생함 : TypeError: Cannot read property 'db_url' of undefined
서버 프로세스 종료하지 않고 유지함.

TypeError: Cannot read property 'db_url' of undefined
at NativeConnection.connect (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\database\database.js:26:26)
at NativeConnection.emit (events.js:321:20)
at NativeConnection.set (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\mongoose\lib\connection.js:120:12)
at C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\mongoose\lib\connection.js:696:24
at C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\mongoose\lib\drivers\node-mongodb-native\connection.js:226:21
at C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\mongodb\lib\db.js:236:14
at ReplSet.<anonymous> (C:\nodejs\ViewExample+uploads+bootstrap(login,listuser)\node_modules\mongodb\lib\replset.js:362:9)
at Object.onceWrapper (events.js:428:26)
at ReplSet.emit (events.js:321:20)

adduser.html 실행시 발생오류

=>

```
// mongoose.connect(config.db_url, {useMongoClient:true, useNewUrlParser: true, useUnifiedTopology: true});
mongoose.connect(config.db_url, {useMongoClient:true});
// mongoose.connect(databaseUrl,{useNewUrlParser: true, useUnifiedTopology: true});
database.db = mongoose.connection;
```

III. 실습 1

local host, mongodb Atlas cloud 사용

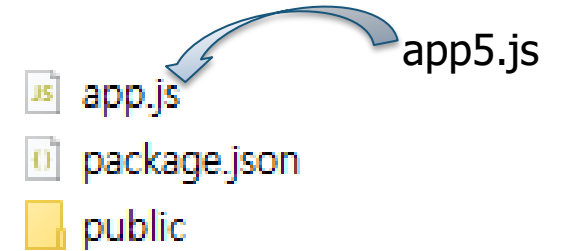
<실습보고서11> app5.js - 사용자 추가 및 로그인- users3, localhost, localdb, bootstrap 적용안됨

<실습보고서12> localhost, mongodb Atlas cloud 사용, 로고 만들기, bootstrap

<실습보고서13> sunnyatlas.herokuapp.com, mongodb Atlas cloud 사용, bootstrap(모바일)

<실습1>localhost - http://localhost:3000

1. DatabaseExample>에서 app5.js, package.json, public을 복사하여 DatabaseExample_sunnyatlas_app5> 붙여넣기
2. > DatabaseExample_sunnyatlas_app5> npm install
3. > DatabaseExample_sunnyatlas_app5> app.js 에서(DatabaseExample>의 app5.js)
 - app.use('/', static(path.join(__dirname, 'public'))); 로 수정
 - app.js 새로 수정하여 경로이동하게 만들기
4. app.js에 맞게 public> *.html 만들기



작업순서

1. localhost test 완료 (localdb 사용)=> localhost, localdb 사용(6.database_example에서 했음)
2. heroku app 만들기
3. 26 slide mongodb atlas환경조성 요약
4. 46 slide mongo compass로 db와 heroku연결 및 db cloud 에 upload
(mongodb://sunny5:***0414@cluster0-shard-~~=admin)
5. mongocompass로 mongodb atlas확인하기(atlas db 사용) => local host, mongodb atlas사용
6. ~~application heroku upload~~
7. ~~https://sunnyatlas.herokuapp.com 확인 => heroku applicaiont, mongodb atlas사용~~

<실습1-1> app.js (1/4)

```
//데이터베이스에 연결
function connectDB() {
  // 데이터베이스 연결 정보
  //var databaseUrl = 'mongodb://localhost:27017/local';
  var databaseUrl = 'mongodb://sunny5:***0414@cluster0-shard-00-00.99rnw.mongodb.net:27017,cluster0-shard-00-01.99rnw.mongodb.net:27017,cluster0-shard-00-02.99rnw.mongodb.net:27017/myuserdb?replicaSet=atlas-napmvz-shard-0&ssl=true&authSource=admin';

  // 데이터베이스 연결
  console.log('데이터베이스 연결을 시도합니다.');
```

mongoose.Promise = global.Promise; // mongoose의 Promise 객체는 global의 Promise 객체 사용하도록 함

```
//mongoose.connect(databaseUrl);
mongoose.connect(databaseUrl, {useMongoClient:true});

database = mongoose.connection;
```

<실습1-2> app.js (2/4)

```
// 조회된 레코드가 있으면 성공 응답 전송
if (docs) {
    console.dir(docs+'last');

    // 조회 결과에서 사용자 이름 확인
    var username = docs[0].name;
    res.redirect('/login_success.html');
    // res.writeHead('200', {'Content-Type':'text/html;charset=utf8'});
    // res.write('<h1>로그인 성공</h1>');
    // res.write('<div><p>사용자 아이디 : ' + paramId + '</p></div>');
    // res.write('<div><p>사용자 이름 : ' + username + '</p></div>');
    // res.write("&<br><br><a href='/public/login.html'>다시 로그인하기</a>");
    // res.end();

} else { // 조회된 레코드가 없는 경우 실패 응답 전송
    res.redirect('/login_fail.html')
    // res.writeHead('200', {'Content-Type':'text/html;charset=utf8'});
    // res.write('<h1>로그인 실패</h1>');
    // res.write('<div><p>아이디와 패스워드를 다시 확인하십시오.</p></div>');
    // res.write("&<br><br><a href='/login.html'>다시 로그인하기</a>");
    // res.end();
}
```

<실습1-3> app.js (3/4)

```
// 결과 객체 있으면 성공 응답 전송
if (addedUser) {
    console.dir(addedUser);
    res.redirect('/adduser_success.html');
    // res.writeHead('200', {'Content-Type': 'text/html; charset=utf8'});
    // res.write('<h2>사용자 추가 성공</h2>');
    // res.end();
} else { // 결과 객체가 없으면 실패 응답 전송
    res.writeHead('200', {'Content-Type': 'text/html; charset=utf8'});
    res.write('<h2>사용자 추가 실패</h2>');
    res.end();
}
```

<실습1-4> app.js (4/4)

```
if (results) { // 결과 객체 있으면 리스트 전송
    console.dir(results);

    res.writeHead('200', {'Content-Type': 'text/html; charset=utf8'});
    res.write('<hr>');
    res.write('<h2>사용자 리스트</h2>');
    res.write('<hr>');
    res.write('<div><ul>');

    for (var i = 0; i < results.length; i++) {
        var curId = results[i]._doc.id;
        var curName = results[i]._doc.name;
        res.write('    <li>#' + i + ' : ' + curId + ', ' + curName + '</li>');
    }

    res.write('</ul></div>');
    res.write("&<br><br><button><a href='/adduser.html'>사용자추가</a>");
    res.write("&<button><a href='/login.html'>로그인</a>");

    res.end();
} else {
```


<실습1-5> login.html, 로그 만들기

```
<!DOCTYPE html><html> <head><meta charset="UTF-8">
<title>로그인 테스트</title>
<meta name="viewport" content="width=device-width, height=device-height, initial-scale=1">
<link rel="apple-touch-icon" sizes="180x180" href="img/cloud.webp" />
<link rel="icon" type="image/png" href="img/cloud.webp" sizes="192x192"/>
<meta name="mobile-web-app-capable" content="yes">
<meta name="apple-mobile-web-app-capable" content="yes">
<!--추가1-->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></script>
<!--추가1-->
</head>
<body>
<hr/>
<h4>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&로그인</h3>
<hr/>
<form method="post" action="/process/login">
  <br>
  &nbsp;&nbsp;&<label class="btn btn-info">아이디</label>
  <input type="text" size="12" name="id" ></input>
  <br>&nbsp;&nbsp;&
  <label class="btn btn-info">비밀번호</label>
  <input type="password" size="12" name="password" ></input>
  <br><br>&nbsp;&nbsp;&&nbsp;&nbsp;&&
  <input type="submit" value="확인" class="btn btn-info"></input>
  &nbsp;&<a href="/index.html" class="btn btn-info">메인페이지</a>
</form></body></html>
```



로고, 주소창 숨기기,
bootstrap 연결부분
동일하게 적용

<실습1-6> login_success.html

```
<!DOCTYPE html><html><head><meta charset="UTF-8">
  <title>로그인 성공</title>
```

로고, 주소창 숨기기,
bootstrap 연결부분
동일하게 적용

```
</head>
<body>
  <hr/>
  <h4>&nbsp;&nbsp;&nbsp;로그인 성공</h3>
  <hr/>
  <br>
  &nbsp;&nbsp;&nbsp;<a href='/adduser.html' class="btn btn-info">사용자추가</a>
  &nbsp;&nbsp;<a href='/listuser.html' class="btn btn-info">사용자리스트</a>
  &nbsp;&nbsp;<a href='/index.html' class="btn btn-info">메인페이지</a>
</body>
</html>
```

<실습1-7> login_fail.html

```
<!DOCTYPE html><html><head><meta charset="UTF-8">  
  <title>로그인 실패</title>
```

로고, 주소창 숨기기,
bootstrap 연결부분
동일하게 적용

```
</head>  
<body>  
  <hr/>  
  <h4>&nbsp;&nbsp; 로그인 실패</h3>  
  <hr/>  
  <br>  
  &nbsp;&nbsp;&nbsp;<a href='/login.html' class="btn btn-info">다시로그인</a>  
  &nbsp;&nbsp;<a href='/index.html' class="btn btn-info">메인페이지</a>  
</body>  
</html>
```

<실습1-8> adduser.html

```
<!DOCTYPE html><html><head><meta charset="UTF-8">
<title>사용자추가</title>
```

로고, 주소창 숨기기,
bootstrap 연결부분
동일하게 적용

[illegible]

<실습1-9> adduser_success.html

```
<!DOCTYPE html><html><head> <meta charset="UTF-8">
<title>사용자추가 성공</title>
```

로고, 주소창 숨기기,
bootstrap 연결부분
동일하게 적용

```
</head>
<body>
  <hr/>
  <h4>&nbsp;&nbsp; 사용자추가 성공</h3>
  <hr/>
  <br>
  &nbsp;&nbsp;&nbsp;<a href='/adduser.html' class="btn btn-info">사용자추가</a>
  &nbsp;&nbsp;&nbsp;<a href='/listuser.html' class="btn btn-info">사용자리스트</a>
  &nbsp;&nbsp;&nbsp;<a href='/index.html' class="btn btn-info">메인페이지</a>
</body>
</html>
```

<실습1-10> listuser.html

```
<!DOCTYPE html><html><head><meta charset="UTF-8">
```

```
<title>사용자 리스트 테스트</title>
```

로고, 주소창 숨기기,
bootstrap 연결부분
동일하게 적용

```
</head>
```

```
<body>
```

```
<hr/>
```

```
<h4>&nbsp;&nbsp; 사용자 리스트</h4>
```

```
<hr/>
```

```
<br>
```

```
<form method="post" action="/process/listuser">
```

```
<table>
```

```
<tr>
```

```
<td><label></label>&nbsp;&nbsp;&nbsp;아래 [리스트] 버튼을 누르세요.</label></td>
```

```
</tr>
```

```
</table>
```

```
&nbsp;&nbsp;&nbsp;<br>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;<input class="btn btn-info" type="submit" value="리스트" name="" />
```

```
&nbsp;&nbsp;<a href="/index.html" class="btn btn-info">메인페이지</a>
```

```
</form>
```

```
</body>
```

```
</html>
```

<실습1-10> http://localhost:3000

DatabaseExample_sunnyatlas_app5>node app.js

http://localhost:3000/

The image displays a web application interface and its underlying MongoDB database state. The web application is running on `http://localhost:3000`. The interface includes a home page, a login page, a user addition page, and a user list page. The MongoDB Compass window shows the `myuserdb.users3` collection with three documents. Red circles and an arrow highlight the connection between the user list in the UI and the database documents.

Web Application UI Screenshots:

- Home Page:** Sunny logo, navigation menu, About Me section with a photo of a flower, and a "My portfolio" section with a "계산기" button.
- Login Page:** "로그인" button, "아이디" (test01), "비밀번호", and "확인" button.
- User Addition Page:** "사용자추가" button, "아이디", "비밀번호", "사용자명", and "전송" button.
- User List Page:** "사용자 리스트" title, a list of users, and a "리스트" button.

MongoDB Compass Screenshot:

Collection: `myuserdb.users3`

Documents:

- `{ "id": "test01", "hashed_password": "cceb67d7351b5b9a2f9fb8424f2824068588b87", "name": "윤선희", "age": -1, "salt": "371520883085", "created_at": 2021-02-13T08:53:32.259+00:00, "updated_at": 2021-02-13T08:53:32.259+00:00, "_v": 0 }`
- `{ "_id": ObjectId("6027939e49aae01f60f84362"), "id": "test02", "hashed_password": "6a4fe01feacc56ef77c976fd0694982405afc3eb", "name": "아이유", "age": -1, "salt": "1559359512798", "created_at": 2021-02-13T08:53:50.944+00:00, "updated_at": 2021-02-13T08:53:50.944+00:00, "_v": 0 }`
- `{ "_id": ObjectId("602793b449aae01f60f84363"), "id": "test03", "hashed_password": "2a55b62ec4b3aff4d89ad7e748e5278e08a2500f", "name": "송가인", "age": -1, "salt": "63876995268", "created_at": 2021-02-13T08:54:12.127+00:00, "updated_at": 2021-02-13T08:54:12.127+00:00, "_v": 0 }`

User List UI Detail:

- #0 : test01, 윤선희
- #1 : test02, 아이유
- #2 : test03, 송가인

<실습보고서12> http://localhost:3000 - atlas cloud mongodb 사용, 로고 만들기

DatabaseExample_sunnyatlas_app5>node app.js
http://localhost:3000/

The screenshots show the following components:

- Login Page:** A form with fields for '아이디' (ID) and '비밀번호' (Password), and buttons for '로그인' (Login) and '메인페이지' (Main Page).
- User List Page:** A page titled '사용자 리스트' (User List) with a '리스트' (List) button and a '메인페이지' (Main Page) button.
- User Addition Success Page:** A message '사용자추가 성공' (User Addition Success) with buttons for '사용자추가' (Add User), '사용자리스트' (User List), and '메인페이지' (Main Page).
- MongoDB Compass:** A screenshot of the MongoDB Compass interface showing the 'myuserdb.users3' collection. The documents are listed with fields like '_id', 'id', 'hashed_password', 'name', 'age', 'salt', 'created_at', 'updated_at', and '__v'.

Red circles and arrows highlight the following elements:

- The '로그인' button on the login page.
- The '사용자 리스트' button on the user list page.
- The 'users3' collection in the MongoDB Compass interface.
- The '로그인 성공' (Login Success) message on the login page.
- The '사용자 추가 성공' (User Addition Success) message on the user addition page.
- The '사용자 리스트' button on the user list page.
- The '사용자 추가' (Add User) button on the user addition page.
- The '로그인' button on the user list page.

Below the screenshots, there is a list of items:

- 페이지마다 메인과 연결 페이지 붙이기
- 로고, atlasdb data입력을 학생에 맞게 수정

Below the list, there is a red circle containing the text:

- #0 : test01, 윤선희
- #1 : test02, 아이유
- #2 : test03, 송가인

Below the red circle, there are two buttons: '사용자추가' and '로그인'.

Below the MongoDB Compass screenshot, there is a red circle containing the text:

- atlasdb와 연결 후 사용자 리스트와 동일

4. git을 이용해서 heroku에 앱올리기

III. 실습2

sunnyatlas.herokuapp.com, mongodb Atlas cloud 사용

- <실습보고서11> app5.js - 사용자 추가 및 로그인- users3, localhost, localdb, bootstrap 적용안됨
- <실습보고서12> localhost, mongodb Atlas cloud 사용, 로고 만들기, bootstrap
- <실습보고서13> sunnyatlas.herokuapp.com, mongodb Atlas cloud 사용, bootstrap(모바일)

git으로 올리기 사전 작업

1. package.json의 node 항목 지우기

2. Procfile 파일 만들기 <= 확장자 없이 대소문자 구분해서 만들기, 자동실행

c:□(base) Procfile

web: npm start

3. .gitignore 파일 만들기 <= heroku 에 모두 있으므로 무시하라는 의미

c:□(base) .gitignore

Dependency directory

node_modules

npm-debug.log

4. package.json내용 수정

```
"scripts": {  
  "start": "node app.js",  
  "test": "echo □"Error: no test specified□" && exit 1"  
},
```

5. logo 만들기

logo icon만들기 와 주소창 숨기기 => 모바일 바탕화면에 바로가기 만들기

index.html

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, height=device-height, initial-scale=1">
<link rel="apple-touch-icon" sizes="180x180" href="../public/images/logo.png" />
<link rel="icon" type="image/png" href="../public/images/logo.png" sizes="192x192"/>
<meta name="mobile-web-app-capable" content="yes">
<meta name="apple-mobile-web-app-capable" content="yes">
```

```
// for Node.js
// layout.pug:
link(rel="shortcut icon", href="/images/logo.png")
link(rel="apple-touch-icon" href="/images/logo.png")
```

버튼 확대 참고

로그인 테스트

로그인 성공

사용자추가

사용자 리스트 테스트

사용자추가 성공

사용자 리스트

- #0 : test01, 윤선희
- #1 : test02, 아이유
- #2 : test03, 송가인
- #3 : test4, 장윤정
- #4 : test5, 김하나
- #5 : test6, 김두리
- #6 : sunny, 김하나

아래 [리스트] 버튼을 누르세요.

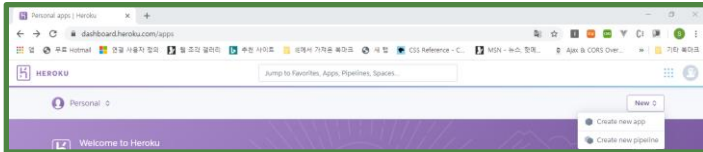
페이지마다
버튼 모양

<실습2>cloud system - <http://sunnyatlas.herokuapp.com>

■ 작업순서

1. ~~localhost test 완료 (localdb 사용) => localhost, localdb 사용~~
2. ~~heroku app 만들기~~
3. ~~26 slide mongodb atlas환경조성 요약~~
4. ~~46 slide mongo compass로 db와 heroku연결 및 db cloud 에 upload~~
~~(mongodb://sunny5:***0414@cluster0-shard-00-01=admin)~~
5. ~~mongocompass로 mongodb atlas 확인하기(atlas db 사용) => local host, atlas db사용~~
6. ~~application heroku upload~~
7. <https://sunnyatlas.herokuapp.com> 확인 => heroku application, mongodb atlas사용

■ heroku app 만들기



■ 준비파일들

Procfile

.gitignore

```
"scripts": {  
  "start": "node app.js",  
  "test": "echo \"Error: no t  
  },
```

■ heroku upload step

```
$ heroku login  
$ cd my-project/  
  
$ git init  
$ heroku git:remote -a sunnyatlas  
  
$ git add .  
$ git commit -am "make it better"  
$ git push heroku master
```

\$ heroku open
또는 브라우저에서
<https://sunnyatlas.herokuapp.com>

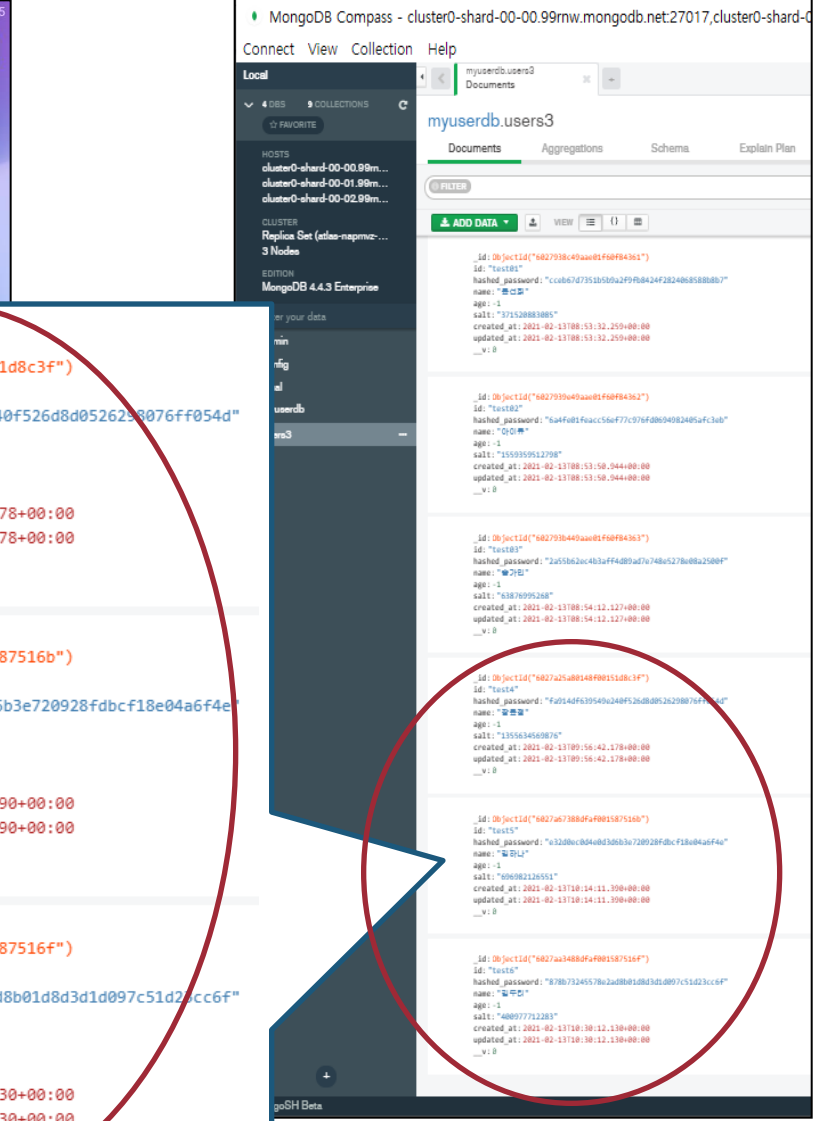
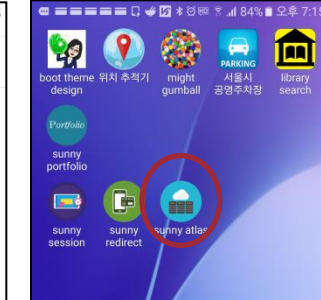
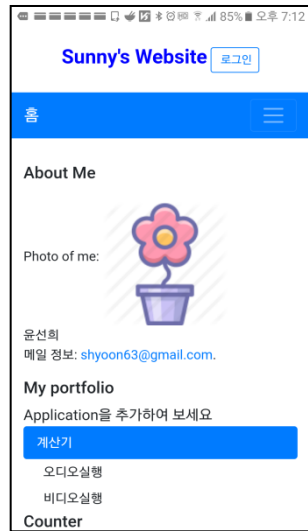
■ 내용 수정 후:

```
$ git add .  
$ git commit -am "make it better"  
$ git push heroku master
```

■ 오류 해결사항

1. git폴더 삭제
2. heroku app 삭제후 처음부터 올리기
 - 페이지마다 메인과 연결 페이지 붙이기

<실습보고서13> http://sunnyatlas.herokuapp.com - heroku - atlas mongodb 사용, mobile용



```

_id: ObjectId("6027a25a80148f00151d8c3f")
id: "test4"
hashed_password: "fa914df639549e240f526d8d0526238076ff054d"
name: "장윤정"
age: -1
salt: "1355634569876"
created_at: 2021-02-13T09:56:42.178+00:00
updated_at: 2021-02-13T09:56:42.178+00:00
__v: 0

_id: ObjectId("6027a67388dfa001587516b")
id: "test5"
hashed_password: "e32d0ec0d4e0d3d6b3e720928fdbcf18e04a6f4e"
name: "김하나"
age: -1
salt: "696982126551"
created_at: 2021-02-13T10:14:11.390+00:00
updated_at: 2021-02-13T10:14:11.390+00:00
__v: 0

_id: ObjectId("6027aa3488dfa001587516f")
id: "test6"
hashed_password: "878b73245578e2ad8b01d8d3d1d097c51d2acc6f"
name: "김두리"
age: -1
salt: "400977712283"
created_at: 2021-02-13T10:30:12.130+00:00
updated_at: 2021-02-13T10:30:12.130+00:00
__v: 0
    
```

■ <실습보고서> 형식 참조

Q & A

