

# Tutor . 김민정

## 멋쟁이 사자처럼 at 이화여대

### CSV import

7 / 24 (화)



LIKE LION



# Rails DB

[gemfile] gem 'rails\_db'

[bash] bundle install

[Url] 주소/rails/db

EngClass.csv - Excel

|    | A        | B       | C            | D                    | E          | F      | G    | H |
|----|----------|---------|--------------|----------------------|------------|--------|------|---|
| 1  | courseno | classno | title        | classification       | instructor | credit | hour |   |
| 2  | 10023    | 16      | Christianity | Liberal Art          | Myung Sa   | 3      | 3    |   |
| 3  | 11095    | 2       | Share Lead   | Liberal Art          | Kim Midu   | 2      | 3    |   |
| 4  | 11203    | 1       | Global Bus   | Liberal Art          | Seon Ju O  | 3      | 3    |   |
| 5  | 11203    | 2       | Global Bus   | Liberal Art          | Seon Ju O  | 3      | 3    |   |
| 6  | 11203    | 3       | Global Bus   | Liberal Arts Courses |            | 3      | 3    |   |
| 7  | 11203    | 4       | Global Bus   | Liberal Arts Courses |            | 3      | 3    |   |
| 8  | 10098    | 1       | College En   | Liberal Art          | Yu Kyung   | 3      | 3    |   |
| 9  | 10098    | 2       | College En   | Liberal Art          | Min Ji Cha | 3      | 3    |   |
| 10 | 10098    | 3       | College En   | Liberal Art          | Jean Paque | 3      | 3    |   |
| 11 | 10098    | 4       | College En   | Liberal Art          | H. J. Hodg | 3      | 3    |   |
| 12 | 10098    | 5       | College En   | Liberal Art          | Shu Che    | 3      | 3    |   |
| 13 | 10098    | 6       | College En   | Liberal Art          | Soo Kyung  | 3      | 3    |   |
| 14 | 10098    | 7       | College En   | Liberal Art          | Young Yee  | 3      | 3    |   |



# LIKE LION

## Tables

[ewhaclasses](#)

## Table: ewhaclasses

[+ ADD](#)

| <a href="#">Expand</a> <a href="#">Records</a> <a href="#">Schema</a> <a href="#">SQL Query</a> <a href="#">Export</a> <a href="#">Functions</a> <a href="#">Search</a> <a href="#">Settings</a> |    |          |         |                               |                      |                |        |      |                         |  |
|--|----|----------|---------|-------------------------------|----------------------|----------------|--------|------|-------------------------|--|
| Actions  | Id | Courseno | Classno | Title                         | Classification       | Instructor     | Credit | Hour | Created at              |  |
| <a href="#">-</a> <a href="#">+</a>  | 1  | 10023    | 16      | Christianity and the World    | Liberal Arts Courses | Myung Sahm Suh | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 2  | 11095    | 2       | Share Leadership              | Liberal Arts Courses | Kim Miduk      | 2      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 3  | 11203    | 1       | Global Business Communication | Liberal Arts Courses | Seon Ju Oh     | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 4  | 11203    | 2       | Global Business Communication | Liberal Arts Courses | Seon Ju Oh     | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 5  | 11203    | 3       | Global Business Communication | Liberal Arts Courses |                | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 6  | 11203    | 4       | Global Business Communication | Liberal Arts Courses |                | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 7  | 10098    | 1       | College English               | Liberal Arts Courses | Yu Kyung Han   | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 8  | 10098    | 2       | College English               | Liberal Arts Courses | Min Ji Chae    | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 9  | 10098    | 3       | College English               | Liberal Arts Courses | Jean Paquette  | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 10 | 10098    | 4       | College English               | Liberal Arts Courses | H. J. Hodges   | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 11 | 10098    | 5       | College English               | Liberal Arts Courses | Shu Che        | 3      | 3    | 2018-07-24 04:47:42 UTC |  |
| <a href="#">-</a> <a href="#">+</a>  | 12 | 10098    | 6       | College English               | Liberal Arts Courses | Soo Kyung Lee  | 3      | 3    | 2018-07-24 04:47:42 UTC |  |



# LIKE LION

# controller / model 만들기!

## rails g controller home csvsave

Home 컨트롤러에 csvsave란 액션을 실행하면 db가 저장되게 만드는 행동 수행  
Router -> controller -> view(html)

## Rails g model ewhaclass

Ewhaclass란 모델을 생성하자! 엑셀파일안 정보의 저장소!



LIKE LION

# Excel 파일을 CSV 파일로 바꿔주기

The screenshot shows an Excel spreadsheet titled 'EngClass.csv' with a table of Liberal Arts Courses. The table has columns for course number, class number, title, classification, instructor, credit, and hour. A 'Save As' dialog box is open, showing the file name 'EngClass.csv' and the file format 'CSV UTF-8(실표로 분리)(\*.csv)'. The dialog box also shows the author '김민정' and a '저장(S)' button.

|    | A        | B       | C            | D              | E          | F      | G    | H |
|----|----------|---------|--------------|----------------|------------|--------|------|---|
| 1  | courseno | classno | title        | classification | instructor | credit | hour |   |
| 2  | 10023    | 16      | Christianity | Liberal Art    | Myung Sa   | 3      | 3    |   |
| 3  | 11095    | 2       | Share Leac   | Liberal Art    | Kim Midu   | 2      | 3    |   |
| 4  | 11203    | 1       | Global Bus   | Liberal Art    | Seon Ju O  | 3      |      |   |
| 5  | 11203    | 2       | Global Bus   | Liberal Art    | Seon Ju O  | 3      |      |   |
| 6  | 11203    | 3       | Global Bus   | Liberal Arts   | Courses    | 3      |      |   |
| 7  | 11203    | 4       | Global Bus   | Liberal Arts   | Courses    | 3      |      |   |
| 8  | 10098    | 1       | College En   | Liberal Art    | Yu Kyung   | 3      |      |   |
| 9  | 10098    | 2       | College En   | Liberal Art    | Min Ji Cha | 3      |      |   |
| 10 | 10098    | 3       | College En   | Liberal Art    | Jean Paque | 3      |      |   |
| 11 | 10098    | 4       | College En   | Liberal Art    | H. J. Hodg | 3      |      |   |
| 12 | 10098    | 5       | College En   | Liberal Art    | Shu Che    | 3      |      |   |
| 13 | 10098    | 6       | College En   | Liberal Art    | Soo Kyung  | 3      |      |   |
| 14 | 10098    | 7       | College En   | Liberal Art    | Young Yea  | 3      |      |   |



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# 모델에 들어갈 column 이름 설정

Dashboard | SQL Editor | Import | Data Table | Command Line

Table: ewhaclasses + ADD

Expand Records Schema SQL Query Export Functions Search Settings

| Actions | Id | Courseno | Classno | Title | Classification | Instructor | Credit | Hour | Created at |
|---------|----|----------|---------|-------|----------------|------------|--------|------|------------|
|---------|----|----------|---------|-------|----------------|------------|--------|------|------------|

EngClass.csv - Excel

파일 홈 삽입 페이지 레 수식 데이터 검토 보기 추가 기능 도움말 팀 입력하서 공유

붙여넣기 | 마크다운 | 11 | % | 조건부 서식 | 표 서식 | 셀 스타일 | 스타일

클립보드 | 글꼴 | 맞춤 | 표시 형식 | 셀 | 편집

D8 | Liberal Arts Courses

|   | A        | B       | C            | D              | E          | F      | G    | H |
|---|----------|---------|--------------|----------------|------------|--------|------|---|
| 1 | courseno | classno | title        | classification | instructor | credit | hour |   |
| 2 | 10023    | 16      | Christianity | Liberal Art    | Myung Sa   | 3      | 3    |   |
| 3 | 11095    | 2       | Share Leac   | Liberal Art    | Kim Midu   | 2      | 3    |   |
| 4 | 11203    | 1       | Global Bus   | Liberal Art    | Seon Ju O  | 3      | 3    |   |

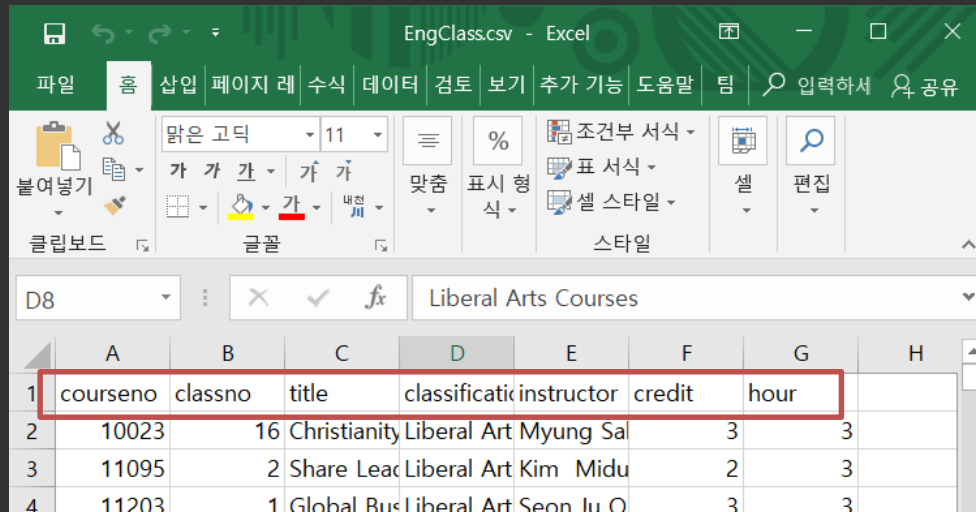


LIKE LION

# 모델에 들어갈 column 이름 설정

Column이름과 일치하는 model 요소 넣어주고!

rake db:migrate



EngClass.csv - Excel

|   | A        | B       | C            | D              | E          | F      | G    | H |
|---|----------|---------|--------------|----------------|------------|--------|------|---|
| 1 | courseno | classno | title        | classification | instructor | credit | hour |   |
| 2 | 10023    | 16      | Christianity | Liberal Art    | Myung Sa   | 3      | 3    |   |
| 3 | 11095    | 2       | Share Leac   | Liberal Art    | Kim Midu   | 2      | 3    |   |
| 4 | 11203    | 1       | Global Bus   | Liberal Art    | Seon Ju O  | 3      | 3    |   |

```
class CreateEwhaClasses < ActiveRecord::Migration
  def change
    create_table :ewhaClasses do |t|
      t.string :courseno
      t.string :classno
      t.string :title
      t.string :classification
      t.string :instructor
      t.string :credit
      t.string :hour

      t.timestamps null: false
    end
  end
end
```



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## 기초 작업 끝!

이제 home 컨트롤러의 csvsave라는 액션을 하면 db가 저장되게!

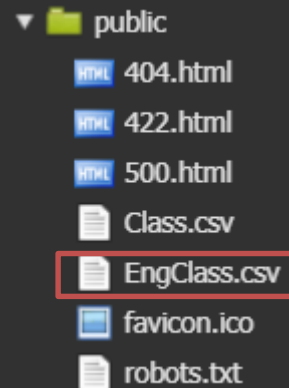
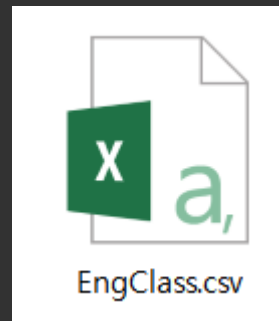
1. csv 파일을 가져온다
2. csv 파일의 column과 내용을 대응시킨다
3. model에 저장한다



LIKE LION



# Public 폴더에 EngClass.csv 파일 저장



LIKE LION

```
class HomeController < ApplicationController

  require 'csv'

  def csvsave
    csv_text = File.read('public/Class.csv', :headers => true)
    keys = ['courseno', 'classno', 'title', 'classification', 'instructor', 'credit', 'hour']
    @save = CSV.parse(csv_text).map {|a| Hash[keys.zip(a)]}
    i=1
    while i < @save.length-1
      @class = Ewhaclass.new
      @class.courseno = @save[i].to_a[0][1]
      @class.classno = @save[i].to_a[1][1]
      @class.title = @save[i].to_a[2][1]
      @class.classification = @save[i].to_a[3][1]
      @class.instructor = @save[i].to_a[4][1]
      @class.credit = @save[i].to_a[5][1]
      @class.hour = @save[i].to_a[6][1]
      @class.save
      i = i + 1
    end
  end
end
```



LIKE LION

## 1. csv 파일을 가져온다

```
class HomeController < ApplicationController  
  require 'csv'  
  
  def csvsave  
    csv_text = File.read('public/EngClass.csv', :headers => true)  
    keys = ['courseno', 'classno', 'title', 'classification', 'instructor', 'credit', 'hour']
```

Rails안에 내장 되어있는 csv기능을 사용하겠다.

csv\_text라는 변수 안에 public/engclass.csv 파일을 불러오겠다.

이때 제일 위에 있는 header도 가져온다

```
2.3.4 :005 > csv_text = File.read('public/EngClass.csv', :headers => true)  
=> "courseno,classno,title,classification,instructor,credit,hour\r\n10023,16,Christianity and the World,L  
iberal Arts Courses,Myung Sahm Suh,3.0,3.0\r\n11095,02,Share Leadership,Liberal Arts Courses,Kim Miduk,2.  
0,3.0\r\n11203,01,Global Business Communication,Liberal Arts Courses,Seon Ju Oh,3.0,3.0\r\n11203,02,Global  
Business Communication,Liberal Arts Courses,Seon Ju Oh,3.0,3.0\r\n11203,03,Global Business Communication,  
Liberal Arts Courses,,3.0,3.0\r\n11203,04,Global Business Communication,Liberal Arts Courses,,3.0,3.0\r\n1  
0098,01,College English,Liberal Arts Courses,Yu Kyung Han,3.0,3.0\r\n10098,02,College English,Liberal Arts
```

String 형태 + ,로 구분된 파일



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## 2. csv 파일의 column과 내용을 대응시킨다

```
keys = ['courseno', 'classno', 'title', 'classification', 'instructor', 'credit', 'hour']
```

key에 column의 이름을 배열로 담고!

```
@save = CSV.parse(csv_text).map {|a| Hash[keys.zip(a)]}
```

@save라는 변수에 CSV 형식의 csv\_text의 내용을 대응시킨다.

대응방법은 Hash로! 이때 keys 배열들 요소에 접근해서!

```
2.3.4 :007 > @save = CSV.parse(csv_text).map {|a| Hash[keys.zip(a)]}
=> [{"courseno"=>"courseno", "classno"=>"classno", "title"=>"title", "classification"=>"classification",
"instructor"=>"instructor", "credit"=>"credit", "hour"=>"hour"}, {"courseno"=>"10023", "classno"=>"16", "t
itle"=>"Christianity and the World", "classification"=>"Liberal Arts Courses", "instructor"=>"Myung Sahm S
uh", "credit"=>"3.0", "hour"=>"3.0"}, {"courseno"=>"11095", "classno"=>"02", "title"=>"Share Leadership",
"classification"=>"Liberal Arts Courses", "instructor"=>"Kim Miduk", "credit"=>"2.0", "hour"=>"3.0"}, {"c
ourseno"=>"11203", "classno"=>"01", "title"=>"Global Business Communication", "classification"=>"Liberal A
rts Courses", "instructor"=>"Seon Ju Oh", "credit"=>"3.0", "hour"=>"3.0"}, {"courseno"=>"11203", "classno"
=>"02", "title"=>"Global Business Communication", "classification"=>"Liberal Arts Courses", "instructor"=>
"Seon Ju Oh", "credit"=>"3.0", "hour"=>"3.0"}, {"courseno"=>"11203", "classno"=>"03", "title"=>"Global Bus
iness Communication", "classification"=>"Liberal Arts Courses", "instructor"=>nil, "credit"=>"3.0", "hour"
```



LIKE LION

## 2. csv 파일의 column과 내용을 대응시킨다

```
2.3.4 :007 > @save = CSV.parse(csv_text).map {|a| Hash[keys.zip(a)]}  
=> [{"courseno"=>"courseno", "classno"=>"classno", "title"=>"title", "classification"=>"classification",  
"instructor"=>"instructor", "credit"=>"credit", "hour"=>"hour"}, {"courseno"=>"10023", "classno"=>"16", "t  
itle"=>"Christianity and the World", "classification"=>"Liberal Arts Courses", "instructor"=>"Myung Sahm S  
uh", "credit"=>"3.0", "hour"=>"3.0"}, {"courseno"=>"11095", "classno"=>"02", "title"=>"Share Leadership",  
"classification"=>"Liberal Arts Courses", "instructor"=>"Kim Miduk", "credit"=>"2.0", "hour"=>"3.0"}, {"c  
ourseno"=>"11203", "classno"=>"01", "title"=>"Global Business Communication", "classification"=>"Liberal A  
rts Courses", "instructor"=>"Seon Ju Oh", "credit"=>"3.0", "hour"=>"3.0"}, {"courseno"=>"11203", "classno"  
=>"02", "title"=>"Global Business Communication", "classification"=>"Liberal Arts Courses", "instructor"=>  
"Seon Ju Oh", "credit"=>"3.0", "hour"=>"3.0"}, {"courseno"=>"11203", "classno"=>"03", "title"=>"Global Bus  
iness Communication", "classification"=>"Liberal Arts Courses", "instructor"=>nil, "credit"=>"3.0", "hour"
```

이중 배열안에 해시가 들어있는 모습!

```
[ { column1 => 내용1, column2 => 내용2 , column3 => 내용3 } , {           } , {           } ]
```



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## CSV import

| 제목        | 상영관 | 자리  |
|-----------|-----|-----|
| 마녀        | 4   | A12 |
| 독전        | 3   | F3  |
| 미드나잇<br>선 | 6   | G10 |

Excel 형식

“제목, 상영관, 자리, 마녀, 4, A12, 독전, 3, F3, 미드나잇선, 6, G10”

CSV 형식

```
[ { 제목 =>마녀, 상영관 =>4 , 자리=>A12 } ,  
  { 제목 =>독전, 상영관 =>3 , 자리=>F3 } ,  
  { 제목 =>미드나잇선, 상영관 =>6 , 자리=>G10 } ]
```

Header에 맞게 parsing(대응)



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### 3. model에 저장한다

```
i=1
while i < @save.length-1
  @class = Ewhaclass.new
  @class.courseno = @save[i].to_a[0][1]
  @class.classno = @save[i].to_a[1][1]
  @class.title = @save[i].to_a[2][1]
  @class.classification = @save[i].to_a[3][1]
  @class.instructor = @save[i].to_a[4][1]
  @class.credit = @save[i].to_a[5][1]
  @class.hour = @save[i].to_a[6][1]
  @class.save
  i = i + 1
end
```

@save에 들어가있는 형식을 바탕으로 반복문을 짠다!

rails c 해보기!



LIKE LION

### 3. model에 저장한다

```
2.3.4 :012 > @save[0]
=> {"courseno"=>"courseno", "classno"=>"classno", "title"=>"title", "classification"=
>"classification", "instructor"=>"instructor", "credit"=>"credit", "hour"=>"hour"}
2.3.4 :013 > @save[1]
=> {"courseno"=>"10023", "classno"=>"16", "title"=>"Christianity and the World", "cla
ssification"=>"Liberal Arts Courses", "instructor"=>"Myung Sahm Suh", "credit"=>"3.0",
"hour"=>"3.0"}
2.3.4 :014 > @save[1].to_a
=> [{"courseno", "10023"}, {"classno", "16"}, {"title", "Christianity and the World"},
{"classification", "Liberal Arts Courses"}, {"instructor", "Myung Sahm Suh"}, {"cred
it", "3.0"}, {"hour", "3.0"}]
2.3.4 :015 > @save[1].to_a[0]
=> ["courseno", "10023"]
2.3.4 :016 > @save[1].to_a[1]

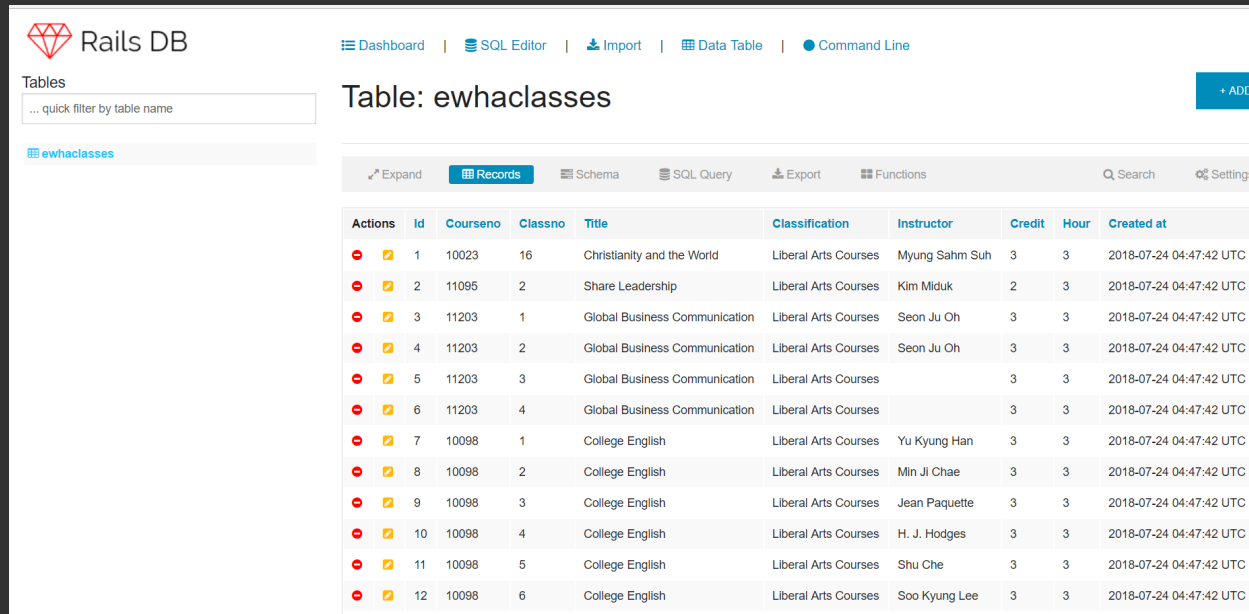
=> ["classno", "16"]
2.3.4 :017 > @save[1].to_a[0][1]
=> "10023"
```





결국 csv파일을 ewhaclass라는 모델에 저장하는 액션 코딩 끝!  
이 액션을 실행하면 해당 csv파일을 db에 추가한다!

[Url] 주소/home/csvsave



The screenshot shows the Rails DB web interface. On the left, there's a sidebar with the Rails DB logo and a 'Tables' section containing a search bar and a list of tables, with 'ewhaclasses' selected. The main area is titled 'Table: ewhaclasses' and features a '+ ADD' button. Below the title is a toolbar with options: Expand, Records (selected), Schema, SQL Query, Export, Functions, Search, and Settings. The table itself has columns: Actions, Id, Courseno, Classno, Title, Classification, Instructor, Credit, Hour, and Created at. It contains 12 rows of data, each with a delete icon (red circle with X) and an edit icon (yellow square with pencil) in the Actions column.

| Actions | Id | Courseno | Classno | Title                         | Classification       | Instructor     | Credit | Hour | Created at              |
|---------|----|----------|---------|-------------------------------|----------------------|----------------|--------|------|-------------------------|
|         | 1  | 10023    | 16      | Christianity and the World    | Liberal Arts Courses | Myung Sahm Suh | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 2  | 11095    | 2       | Share Leadership              | Liberal Arts Courses | Kim Miduk      | 2      | 3    | 2018-07-24 04:47:42 UTC |
|         | 3  | 11203    | 1       | Global Business Communication | Liberal Arts Courses | Seon Ju Oh     | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 4  | 11203    | 2       | Global Business Communication | Liberal Arts Courses | Seon Ju Oh     | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 5  | 11203    | 3       | Global Business Communication | Liberal Arts Courses |                | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 6  | 11203    | 4       | Global Business Communication | Liberal Arts Courses |                | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 7  | 10098    | 1       | College English               | Liberal Arts Courses | Yu Kyung Han   | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 8  | 10098    | 2       | College English               | Liberal Arts Courses | Min Ji Chae    | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 9  | 10098    | 3       | College English               | Liberal Arts Courses | Jean Paquette  | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 10 | 10098    | 4       | College English               | Liberal Arts Courses | H. J. Hodges   | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 11 | 10098    | 5       | College English               | Liberal Arts Courses | Shu Che        | 3      | 3    | 2018-07-24 04:47:42 UTC |
|         | 12 | 10098    | 6       | College English               | Liberal Arts Courses | Soo Kyung Lee  | 3      | 3    | 2018-07-24 04:47:42 UTC |

방대한 양의 db를 저장할 때 csv import가 유용하다.



# 주의점

|                |
|----------------|
| Yoshida, Reiko |
|----------------|

찾기 및 바꾸기

찾기(F) 바꾸기(B)

찾을 내용(N): ,

바꿀 내용(E):

옵션(O) >>

모두 바꾸기(A) 바꾸기(B) 모두 찾기(F) 다음 찾기(N) 닫기

엑셀에서 ctrl + f 누르고 바꾸기!  
,을 찾아서 ' '로 바꾼다

Csv 파일은 ,로 분리된 파일이기 때문에 셀에 , 가 들어가면  
Csv에서 나중에 hash로 바꿀 때 ,를 기준으로 2개의 셀로 인식



LIKE LION

# 실습

`$rake db:drop` 하고나서 새로운 엑셀파일 db에 넣기!



LIKE LION

구글링 하면 나오는 다른 방법! Rake명령어를 이용해서 저장한다!

>> 필요할 때 스스로 하기!

검색어 : rails csv import



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