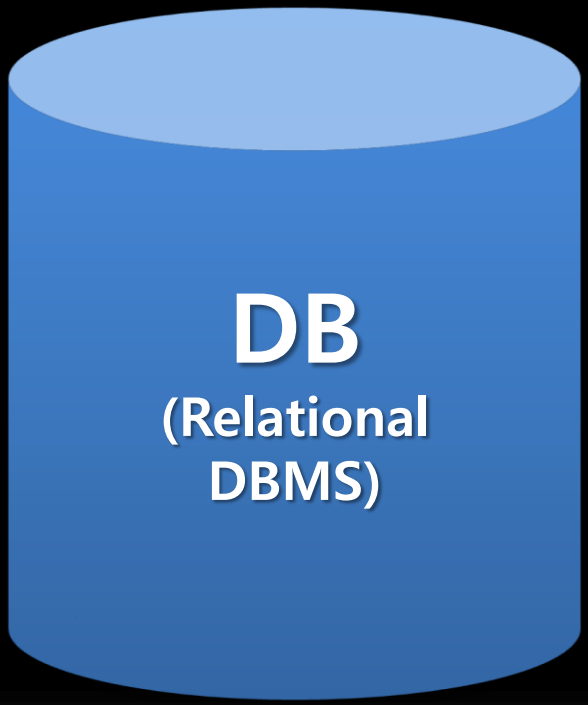
`09 Summer SPARCS Seminar

Introduction to Django #3

SPARCS `08
서우석(pipoket)

You know Database

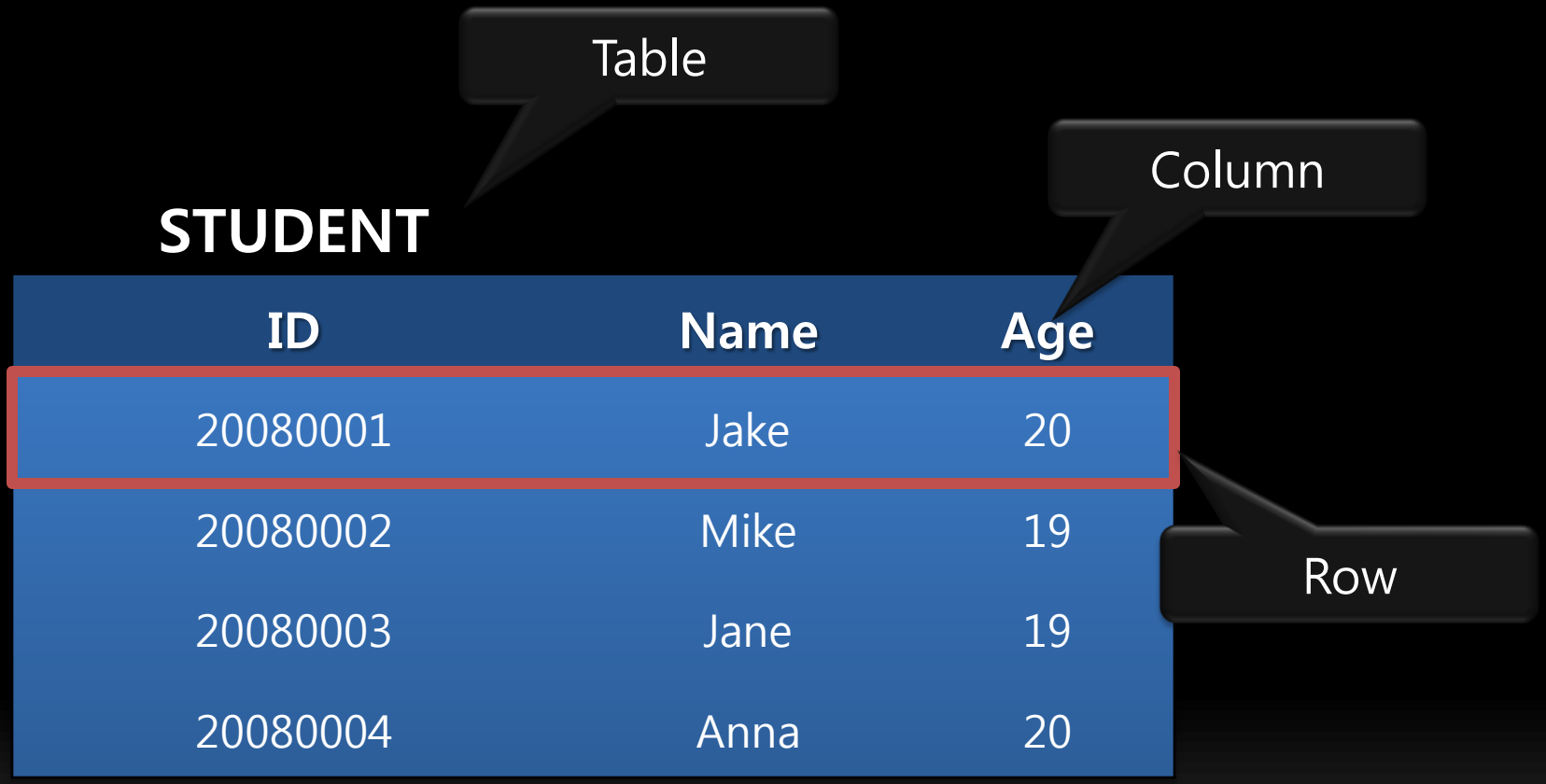


Table

Row Record

Column Attribute

Relational DB Format



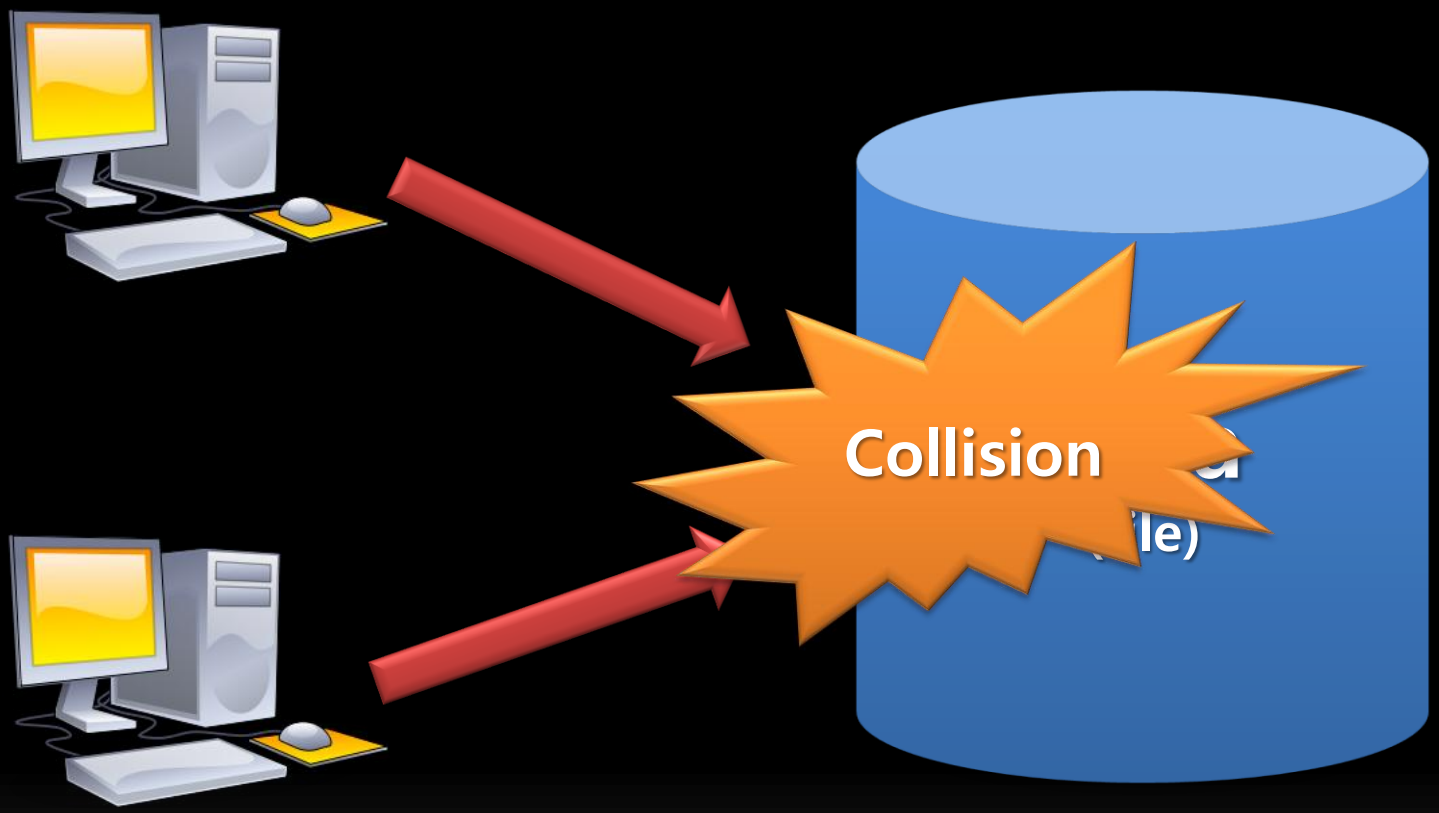
You already have it!

```python
# -*- coding: utf-8 -*-
from django.http import HttpResponse
from django.template.loader import render_to_string

def input(request):
    if request.method
        name = reques
        studentid = request.P                udentid", None)
        talks = request.PO                ( "talks", None)

        f = open("data", "w")
        f.write("%s %s %s" % (name.encode("utf8"),
            studentid.encode("utf8"), talks.encode("utf8")))
        f.close()

        return HttpResponse
    else:
        response = render_to_string("form.html")
        return HttpResponse(response)

def show(request):
    f = open("data", "r")
    content = f.read()
    f.close()
    return HttpResponse(content)
```

Your own “Database”!

Your own “Format”

What if?



So we use...

```
[01:35:18] pipoket@pipoket:~/project/spseminar/studentinfo$ ls -al
total 24
drwxr-xr-x 2 pipoket pipoket 4096 2009-07-22 01:35 .
drwxr-xr-x 5 pipoket pipoket 4096 2009-07-15 23:46 ..
-rw-r--r-- 1 pipoket pipoket    0 2009-07-10 02:25 __init__.py
-rw-r--r-- 1 pipoket pipoket  155 2009-07-10 21:08 __init__.pyc
-rw-r--r-- 1 pipoket pipoket   57 2009-07-10 02:25 models.py
-rw-r--r-- 1 pipoket pipoket  762 2009-07-22 01:30 views.py
-rw-r--r-- 1 pipoket pipoket 1174 2009-07-15 23:53 views.pyc
```

models.py

Django = OODB

STUDENT

ID	Name	Age
20080001	Jake	20
20[illegible]	Mike	19
20080003	Jane	1[illegible]
20080004	Anna	20

Student.id

Student

```
class Student(object):
    def __init__(self, id, name, age):
        self.id = id
        self.name = name
        self.age = age
```

What`s the difference?

Originally…

STUDENT

ID	Name	Age
20080001	Jake	20
20080002	Mike	19
20080003	Jane	19
20080004	Anna	20

```
SELECT id, name, age
FROM student
WHERE id=20080003
```

What`s the difference?

In Django...

STUDENT

ID	Name	Age
20080001	Jake	20
20080002	Mike	19
20080003	Jane	19
20080004	Anna	20

```
from model import student
res = student.get(id="20080003")
print res.name
```

Difference!

You don`t know SQL

You don`t know DBMS

You only know **Python**

You know python! **OK!**

Creating Table

models.py

```python
from django.db import models

class Poll(models.Model):
    question = models.CharField(max_length=200)
    pub_date = models.DateTimeField('date published')

class Choice(models.Model):
    poll = models.ForeignKey(Poll)
    choice = models.CharField(max_length=200)
    votes = models.IntegerField()
```

Table is also Object!

Making Class == Making Table

Creating Table – Field Types

Data Type	Field Name
integer	IntegerField()
string (length fixed)	CharField(max_length=100)
string (long length)	TextField()
datetime	DateTimeField()
boolean	BooleanField()

Notify Django about Table

settings.py

```
69 PROJECT_PATH = os.path.dirname(__file__)
70 TEMPLATE_DIRS = (
71     #os.path.join(PROJECT_PATH, "templates"),
72     "/home/pipoket/project/spseminar/templates",
73     # Put strings here, like "/home/html/django_templates" or "C:/www/
74     # Always use forward slashes, even on Windows.
75     # Don't forget to use absolute paths, not relative paths.
76 )
77
78 INSTALLED_APPS = (
79     'django.contrib.auth',
80     'django.contrib.contenttypes',
81     'django.contrib.sessions',
82     'django.contrib.sites',
83     'spseminar_studentinfo',
84 )
```

Add your application with models.py

Adding Data

```python
from django.db import models

class Poll(models.Model):
    question = models.CharField(max_length=200)
    pub_date = models.DateTimeField('date published')
```

```python
import datetime

def add_data(request):
    question = request.POST.get("question")
    pub_date = datetime.datetime.now()

    new_poll = Poll()
    new_poll.question = question
    new_poll.pub_date = pub_date
    new_poll.save()  # IMPORTANT!!!
```

Row is also Object!

YOU NEED THIS TO SAVE

Retrieving data

```python
from django.db import models

class Poll(models.Model):
    question = models.CharField(max_length=200)
    pub_date = models.DateTimeField('date published')
```

```python
from spseminar.studentinfo.models import *
def get_question(request):
    query_id = request.GET.get("query_id")

    try:
        result = Poll.objects.get(id=query_id)
    except Poll.DoesNotExist:
        result = None

    if result:
        return HttpResponse("Result is %s" % result.question)
    else:
        return HttpResponse("%s does not exist!" % qu
```

When not found

Getting row object

Row == Object !!

Modifying data

```python
from django.db import models

class Poll(models.Model):
    question = models.CharField(max_length=200)
    pub_date = models.DateTimeField('date published')
```

```python
from spseminar.studentinfo.models import *
from django.http import Http404
def update_question(request):
    query_id = request.POST.get("query_id")
    question = request.POST.get("question")

    try:
        result = Poll.objects.get(id=query_id)
    except Poll.DoesNotExist:
        raise Http404

    result.question = question  # Modify
    result.save()               # Save
```

Get object to modify

Modify and Save!

Deleting data

```
1  from django.db import models
2
3  class Poll(models.Model):
4      question = models.CharField(max_length=200)
5      pub_date = models.DateTimeField('date published')
```

```
51 from spseminar.studentinfo.models import *
52 from django.http import Http404
53 def delete_question(request):
54     query_id = request.POST.get("query_id")
55
56     try:
57         result = Poll.objects.get(id=query_id)
58     except Poll.DoesNotExist:
59         raise Http404
60
61     result.delete()  # Delete
```

Get object to delete

Delete!

Summary

Table	Define class in models
Column	Define Fields in class of models
Row	
Create	Object with class in models
Get	Function in class of models
Modify	Get object, Modify and Save
Delete	Get object, Call delete function

Practice

Change homework of 2 weeks ago.
Make it work with database.

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Okay, Let`s do it together