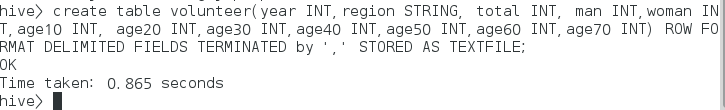
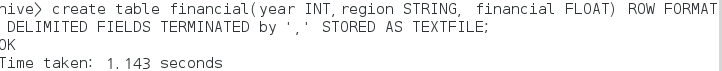
|  |
| --- |
| **과제개요** |
| 1. 공공 데이터 또는 서울시 데이터 선택 2. 데이터를 빅데이터 시스템에 저장 3. 데이터 분석 화면을 구현 한다. |

1. 공공 데이터 또는 서울시 데이터 선택
   1. 서울시 자원봉사자 수와 서울시 재정력 지수와의 상관관계
2. 데이터를 빅데이터 시스템에 저장

* 데이터를 담을 table생성

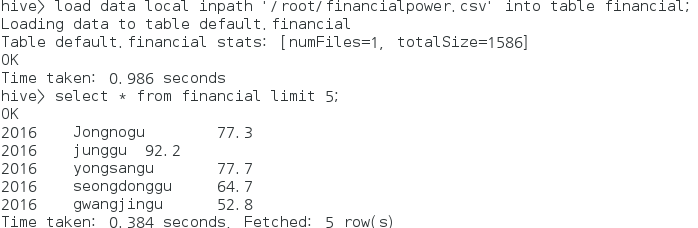
create table volunteer(year INT,region STRING, total INT, man INT,woman INT,age10 INT, age20 INT,age30 INT,age40 INT,age50 INT,age60 INT,age70 INT) ROW FORMAT DELIMITED FIELDS TERMINATED by ',' STORED AS TEXTFILE;





* 받아온 데이터를 table에 삽입





1. 데이터 분석 화면을 Spring MVC로 구현
   1. vo객체 생성
2. **package** com.hw.vo;
3. **public** **class** Volunteer {
4. **int** year;
5. String region;
6. **int** total;
7. **int** man;
8. **int** woman;
9. **int** age10, age20, age30,age40,age50,age60,age70;
10. **float** financial;
11. **public** **int** getYear() {
12. **return** year;
13. }
14. **public** **void** setYear(**int** year) {
15. **this**.year = year;
16. }
17. **public** String getRegion() {
18. **return** region;
19. }
20. **public** **void** setRegion(String region) {
21. **this**.region = region;
22. }
23. **public** **int** getTotal() {
24. **return** total;
25. }
26. **public** **void** setTotal(**int** total) {
27. **this**.total = total;
28. }
29. **public** **int** getMan() {
30. **return** man;
31. }
32. **public** **void** setMan(**int** man) {
33. **this**.man = man;
34. }
35. **public** **int** getWoman() {
36. **return** woman;
37. }
38. **public** **void** setWoman(**int** woman) {
39. **this**.woman = woman;
40. }
41. **public** **int** getAge10() {
42. **return** age10;
43. }
44. **public** **void** setAge10(**int** age10) {
45. **this**.age10 = age10;
46. }
47. **public** **int** getAge20() {
48. **return** age20;
49. }
50. **public** **void** setAge20(**int** age20) {
51. **this**.age20 = age20;
52. }
53. **public** **int** getAge30() {
54. **return** age30;
55. }
56. **public** **void** setAge30(**int** age30) {
57. **this**.age30 = age30;
58. }
59. **public** **int** getAge40() {
60. **return** age40;
61. }
62. **public** **void** setAge40(**int** age40) {
63. **this**.age40 = age40;
64. }
65. **public** **int** getAge50() {
66. **return** age50;
67. }
68. **public** **void** setAge50(**int** age50) {
69. **this**.age50 = age50;
70. }
71. **public** **int** getAge60() {
72. **return** age60;
73. }
74. **public** **void** setAge60(**int** age60) {
75. **this**.age60 = age60;
76. }
77. **public** **int** getAge70() {
78. **return** age70;
79. }
80. **public** **void** setAge70(**int** age70) {
81. **this**.age70 = age70;
82. }
83. **public** **float** getFinancial() {
84. **return** financial;
85. }
86. **public** **void** setFinancial(**float** financial) {
87. **this**.financial = financial;
88. }

91. }
92. biz, 생성

**package** com.hw.volunteer;

**import** java.util.List;

**import** javax.annotation.Resource;

**import** org.springframework.stereotype.Service;

**import** org.springframework.transaction.annotation.Transactional;

**import** com.hw.frame.Biz;

**import** com.hw.frame.Dao;

**import** com.hw.vo.Volunteer;

@Service("volunteerBiz")

**public** **class** VolunteerBiz **implements** Biz<Volunteer, Integer> {

@Resource(name="volunteerDao")

Dao<Volunteer, Integer> dao;

**public** VolunteerBiz() {

dao = **new** VolunteerDao();

}

@Transactional

@Override

**public** **void** register(Volunteer t) {

dao.insert(t);

}

@Override

**public** **void** remove(Integer s) {

dao.delete(s);

}

@Override

**public** **void** modify(Volunteer t) {

// **TODO** Auto-generated method stub

}

@Override

**public** Volunteer get(Integer s) {

// **TODO** Auto-generated method stub

**return** dao.select(s);

}

@Override

**public** List<Volunteer> get() {

// **TODO** Auto-generated method stub

**return** dao.select();

}

}

1. dao생성

package com.hw.volunteer;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Repository;

import com.hw.frame.Dao;

import com.hw.mapper.VolunteerMapper;

import com.hw.vo.Volunteer;

@Repository("volunteerDao")

public class VolunteerDao implements Dao<Volunteer,Integer> {

@Autowired

VolunteerMapper mapper;

@Override

public List<Volunteer> select() {

// TODO Auto-generated method stub

return mapper.selectall();

}

@Override

public void insert(Volunteer t) {

// TODO Auto-generated method stub

}

@Override

public void delete(Integer s) {

// TODO Auto-generated method stub

}

@Override

public void update(Volunteer t) {

// TODO Auto-generated method stub

}

@Override

public Volunteer select(Integer s) {

// TODO Auto-generated method stub

return null;

}

}

1. Mapper.java생성

package com.hw.mapper;

import java.util.List;

import com.hw.vo.Volunteer;

public interface VolunteerMapper {

public List<Volunteer> selectall();

}

1. Mapper.xml생성

<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE mapper

PUBLIC "-//mybatis.org/DTD Mapper 3.0//EN"

"http://mybatis.org/dtd/mybatis-3-mapper.dtd">

<mapper namespace="com.hw.mapper.VolunteerMapper">

<select id="selectall" resultType="volunteer">

select financial.year as year, financial, total,man,woman,age10,age20,age30,age40,age50,age60,age70

from financial join volunteer

on volunteer.region=financial.region where financial.YEAR=2016

</select>

</mapper>

1. Mybatis.xml에 추가

<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE configuration

PUBLIC "-//mybatis.org/DTD Config 3.0//EN"

"http://mybatis.org/dtd/mybatis-3-config.dtd">

<configuration>

<typeAliases>

<typeAlias type="com.hw.vo.User" alias="user"/>

<typeAlias type="com.hw.vo.Product" alias="product"/>

<typeAlias type="com.hw.vo.Movie" alias="movie"/>

**<typeAlias type="com.hw.vo.Volunteer" alias="volunteer"/>**

</typeAliases>

<mappers>

<mapper resource="com/config/usermapper.xml"/>

<mapper resource="com/config/productmapper.xml"/>

<mapper resource="com/config/moviemapper.xml"/>

**<mapper resource="com/config/volunteermapper.xml"/>**

</mappers>

</configuration>

1. controller생성

package com.hw.controller;

import java.io.PrintWriter;

import java.util.List;

import javax.annotation.Resource;

import javax.servlet.http.HttpServletResponse;

import org.json.simple.JSONArray;

import org.json.simple.JSONObject;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.RequestMapping;

import com.hw.frame.Biz;

import com.hw.vo.Volunteer;

@Controller

public class VolunteerController {

@Resource(name="volunteerBiz")

Biz<Volunteer,Integer> biz;

@RequestMapping("/chart5.do")

public String list(Model m) {

// Database에서 데이터를 가지고 온다.

m.addAttribute("center", "chart5");

return "main";

}

@RequestMapping("/chart5impl.do")

public void chart4(HttpServletResponse res) throws Exception{

// Database에서 데이터를 가지고 온다.

res.setCharacterEncoding("UTF-8");

res.setContentType("application/json");

PrintWriter out = res.getWriter();

List<Volunteer> list = null;

list=biz.get();

JSONArray ja=new JSONArray();

JSONObject jo=new JSONObject();

JSONArray vol=new JSONArray();

JSONArray fin=new JSONArray();

for(int i=0;i<list.size();i++) {

vol.add(list.get(i).getTotal());

fin.add(list.get(i).getFinancial());

}

jo.put("name", "volunteer");

jo.put("type", "column");

jo.put("yAxis", 1);

jo.put("data", vol);

ja.add(jo);

JSONObject jo1=new JSONObject();

jo1.put("name","financial");

jo1.put("type", "spline");

jo1.put("data", fin);

ja.add(jo1);

System.out.println(ja.toJSONString());

out.write(ja.toJSONString());

}

}

1. 실행결과

