

Today



January 2020



Month



G Suite

SUN 29	MON 30	TUE 31	WED Jan 1	THU 2	FRI 3	SAT 4
5	6	7	8	9 ● 6:15am Flight to Den' ● 10am Flight to Colum	10	11
12	13 Tech Start Begins	14	15	16 V&D	17 Expressions	18
19	20 MLK Day	21 Loops	22 Command Line	23 Objects & Strings	24 Collections 1	25
26	27 Collections 2	28 Intro Classes	29 Encapsulation	30	31 Polymorphism ● 3:30pm Meet Matt &	Feb 1



Today



February 2020



Month ▾



G Suite



SUN 26	MON 27	TUE 28	WED 29	THU 30	FRI 31	SAT Feb 1
	Collections 2	Intro Classes	Encapsulation		Polymorphism ● 3:30pm Meet Matt &	
2 Super Bowl	3	4 Unit Testing	5	6	7 Exception Handling	8
9	10 File I/O 2	11	12	13 Intro to DB	14 Aggregate Functions	15
16	17 Presidents Day	18 SQL Joins	19 Insert/Update/Delete	20 DB Design	21	22
23	24	25	26	27	28 CSS Selectors	29

Today

< >

March 2020

🔍

?

⚙️

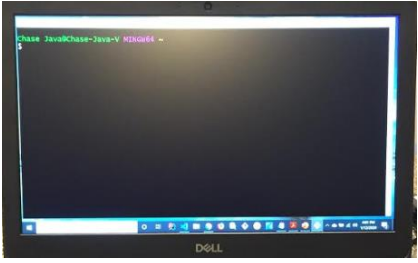
Month ▾

⋮

G Suite

D

SUN Mar 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
	CSS Flexbox	MVC Part 1	MVC Part 2	MVC Part 3	HTTP GET ● 12:30pm Meredith:D	
8	HTTP POST	10	11	12	13	14
15	16	17	18	19	Tech Start Ends	21
22	23	24	25	26	27	28
29	30	31	Apr 1	2	3	4



Cohort Laptop



JPMC Tech Start

Repositories

Filter by:

All

Public

Repository



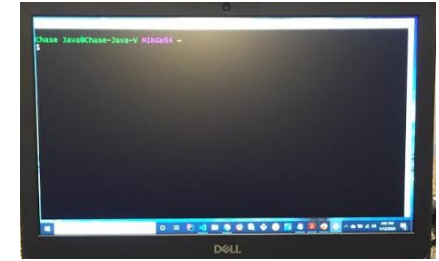
java-main



victoria-hinkle-moore

fork

Cohort Repo: first-lastname



Instructor Laptop



java-main

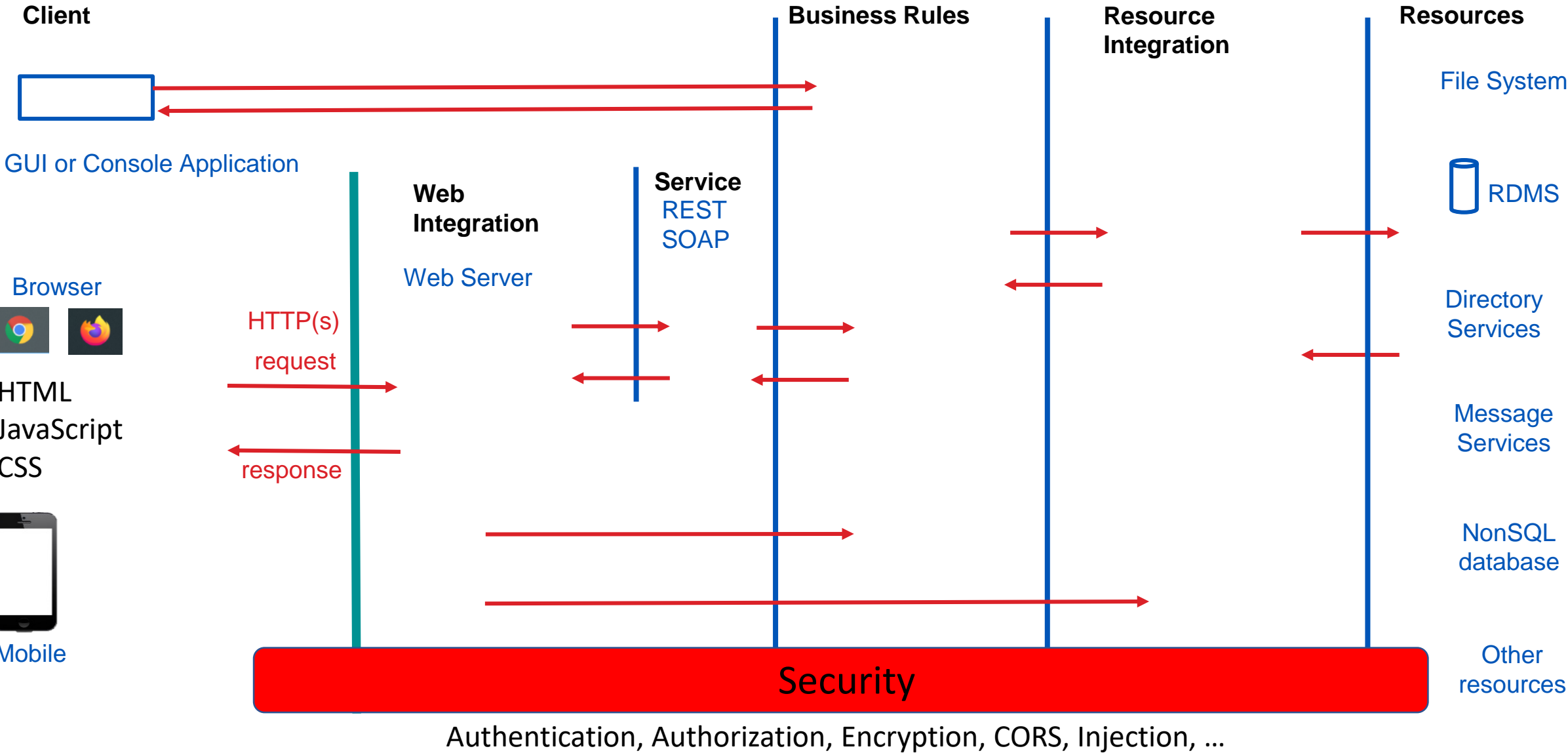
push origin master

pull upstream master

push origin master

- Submit your exercise work

Application Architecture



Type	Size in Bytes	Range
byte	1 byte	-128 to 127
short	2 bytes	-32,768 to 32,767
int	4 bytes	-2,147,483,648 to 2,147,483, 647
long	8 bytes	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807
float	4 bytes	approximately $\pm 3.40282347\text{E}+38\text{F}$ (6-7 significant decimal digits) <i>Java implements IEEE 754 standard</i>
double	8 bytes	approximately $\pm 1.79769313486231570\text{E}+308$ (15 significant decimal digits)
char	2 byte	0 to 65,536 (unsigned)
boolean	not precisely defined*	true or false

Precedence	Operator	Type	Associativity
15	() [] .	Parentheses Array subscript Member selection	Left to Right
14	++ --	Unary post-increment Unary post-decrement	Right to left
13	++ -- + - ! ~ (type)	Unary pre-increment Unary pre-decrement Unary plus Unary minus Unary logical negation Unary bitwise complement Unary type cast	Right to left
12	* / %	Multiplication Division Modulus	Left to right
11	+ -	Addition Subtraction	Left to right
10	<< >> >>>	Bitwise left shift Bitwise right shift with sign extension Bitwise right shift with zero extension	Left to right
9	< <= > >= instanceof	Relational less than Relational less than or equal Relational greater than Relational greater than or equal Type comparison (objects only)	Left to right
8	== !=	Relational is equal to Relational is not equal to	Left to right
7	&	Bitwise AND	Left to right
6	^	Bitwise exclusive OR	Left to right
5		Bitwise inclusive OR	Left to right
4	&&	Logical AND	Left to right
3		Logical OR	Left to right
2	? :	Ternary conditional	Right to left
1	= += -= *= /= % =	Assignment Addition assignment Subtraction assignment Multiplication assignment Division assignment Modulus assignment	Right to left

Stack

main

args

@1

customer1

@4

Heap

0

@2

1

@3

@1

Customer

name

@5

age

35

@4

String

One

@2

String

Two

@3

String

Adam

@5

Static Allocations for Classes

return datatype

- primitive
- reference (Classname, ...)
- void

Anatomy of a Method

method name

```
public int returnNotOne(int number, Customer customer)
```

```
{
```

```
// statements – end with a semi colon
```

```
// blocks – conditional and looping
```

```
return number + 1;
```

```
}
```

block for concrete method

method arguments

datatype argName

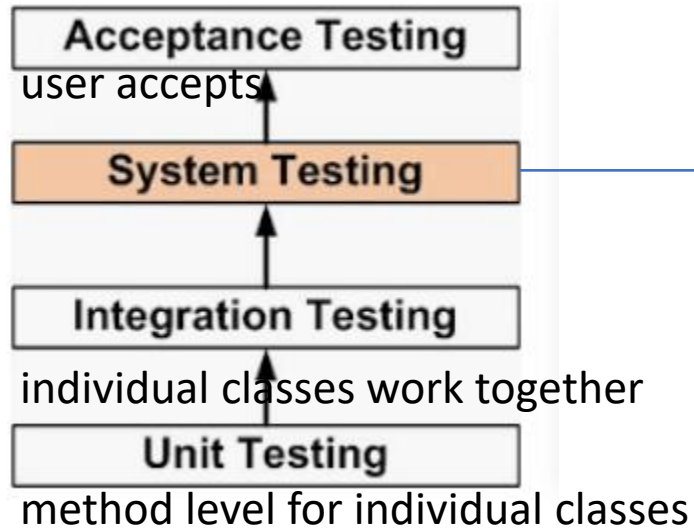
modifiers (others include static and final)

scope

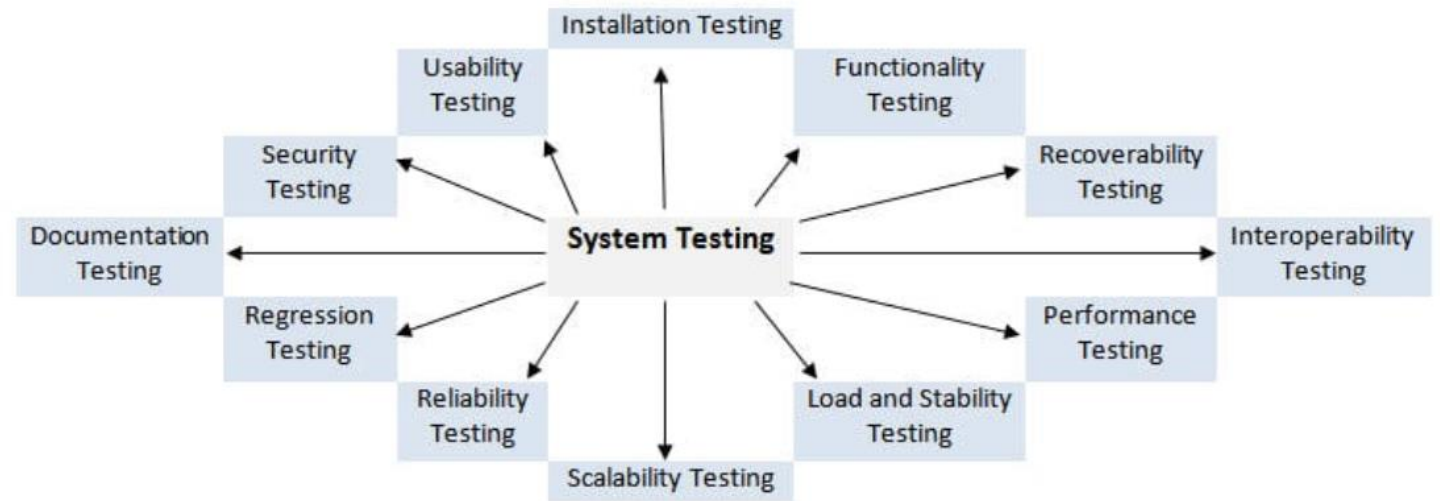
- private – class itself
- default (no modifier) – plus other classes in same package
- protected – plus subclasses in another package
- public – plus all other classes

1. Default – No keyword required
2. Private
3. Protected
4. Public

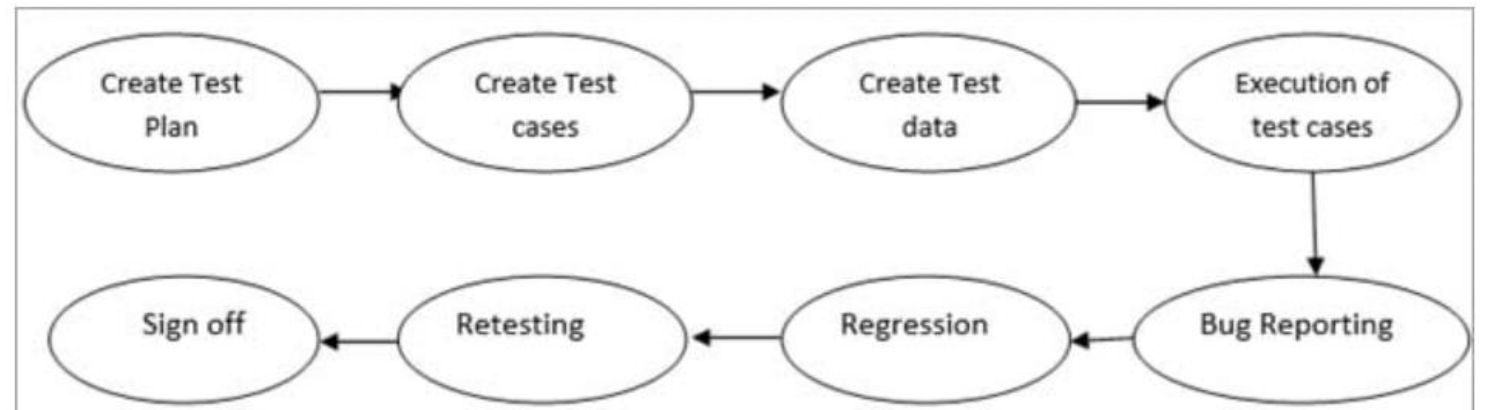
	default	private	protected	public
Same Class	Yes	Yes	Yes	Yes
Same package subclass	Yes	No	Yes	Yes
Same package non-subclass	Yes	No	Yes	Yes
Different package subclass	No	No	Yes	Yes
Different package non-subclass	No	No	No	Yes



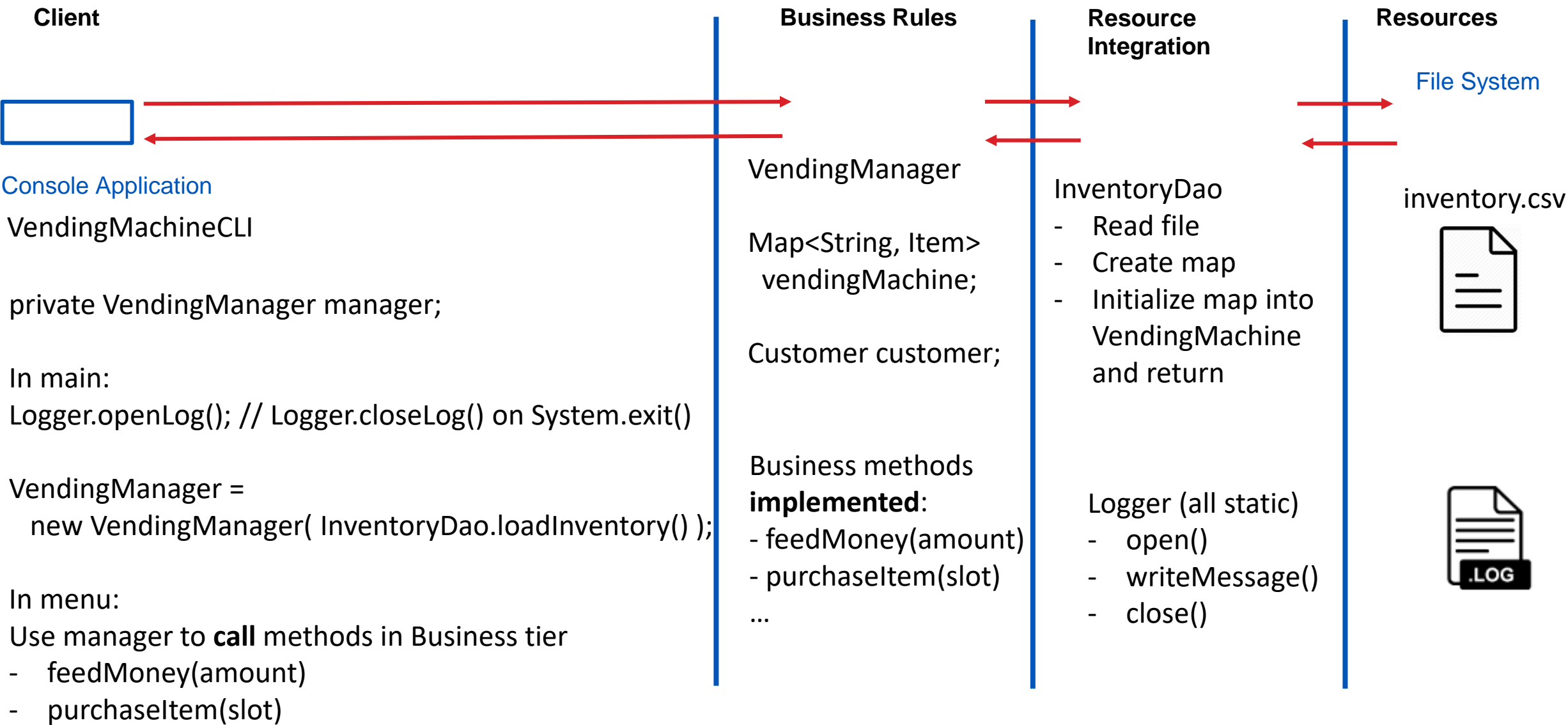
Types



Process



Application Architecture



Columns

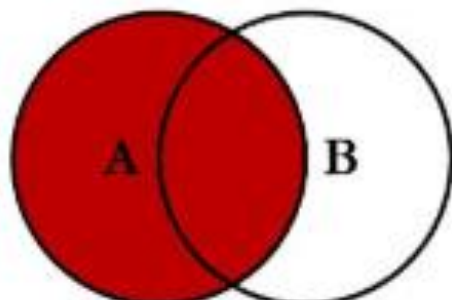
**Primary
Key
Column**

Rows

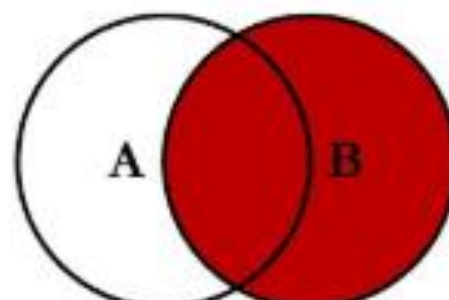
Code	Name	Continent	Region
CYM	Cayman Islands	North America	Caribbean
CHL	Chile	South America	South America
COK	Cook Islands	Oceania	Polynesia
CRI	Costa Rica	North America	Central America
DJI	Djibouti	Africa	Eastern Africa
DMA	Dominica	North America	Caribbean
DOM	Dominican Republic	North America	Caribbean
ECU	Ecuador	South America	South America
EGY	Egypt	Africa	Northern Africa
SLV	El Salvador	North America	Central America
ERI	Eritrea	Africa	Eastern Africa
ESP	Spain	Europe	Southern Europe
ZAF	South Africa	Africa	Southern Africa
ETH	Ethiopia	Africa	Eastern Africa
FLK	Falkland Islands	South America	South America
FJI	Fiji Islands	Oceania	Melanesia
PHL	Philippines	Asia	Southeast Asia
FRO	Faroe Islands	Europe	Nordic Countries
GAB	Gabon	Africa	Central Africa

**Country
Table**

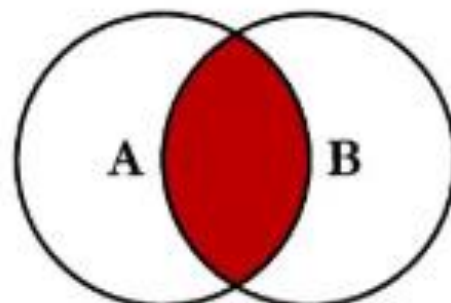
SQL JOINS



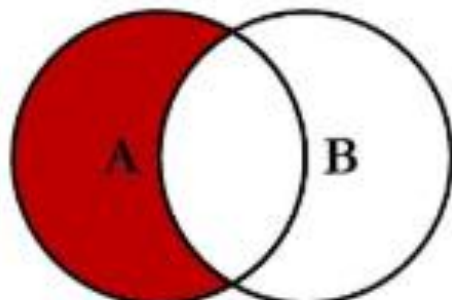
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key



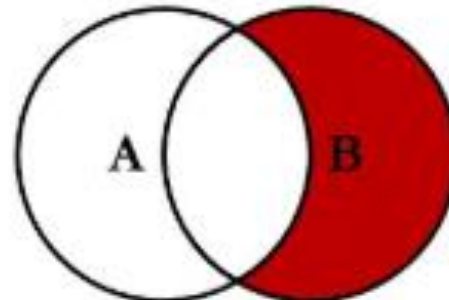
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key



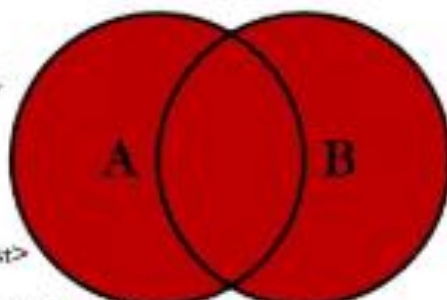
SELECT <select_list>
FROM TableA A
INNER JOIN TableB B
ON A.Key = B.Key



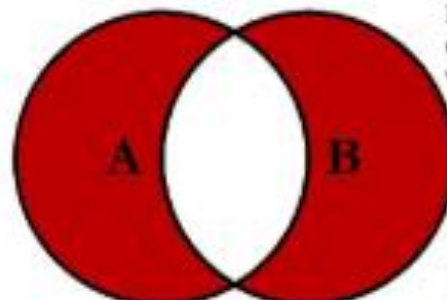
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key
WHERE B.Key IS NULL



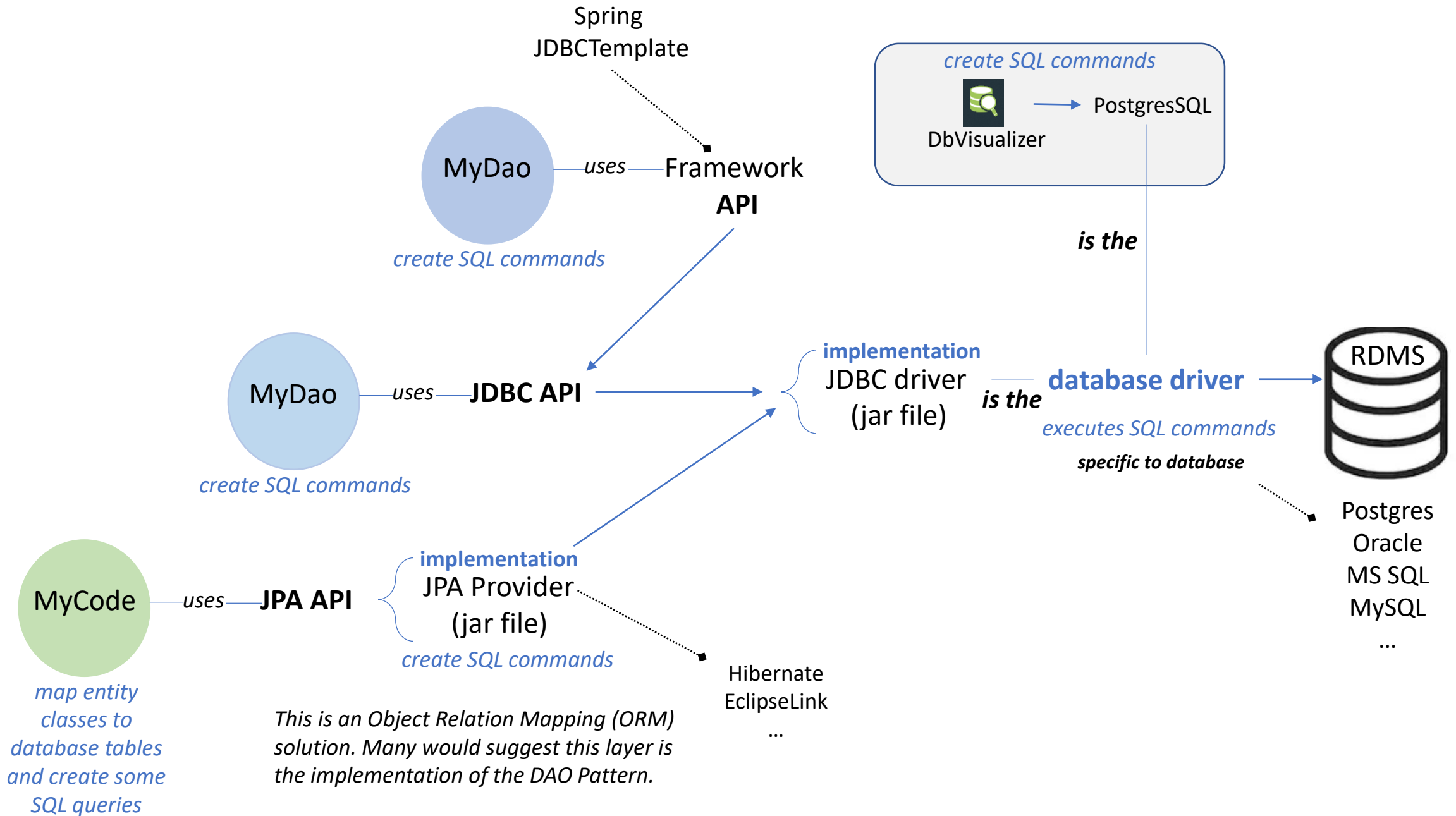
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key
WHERE A.Key IS NULL



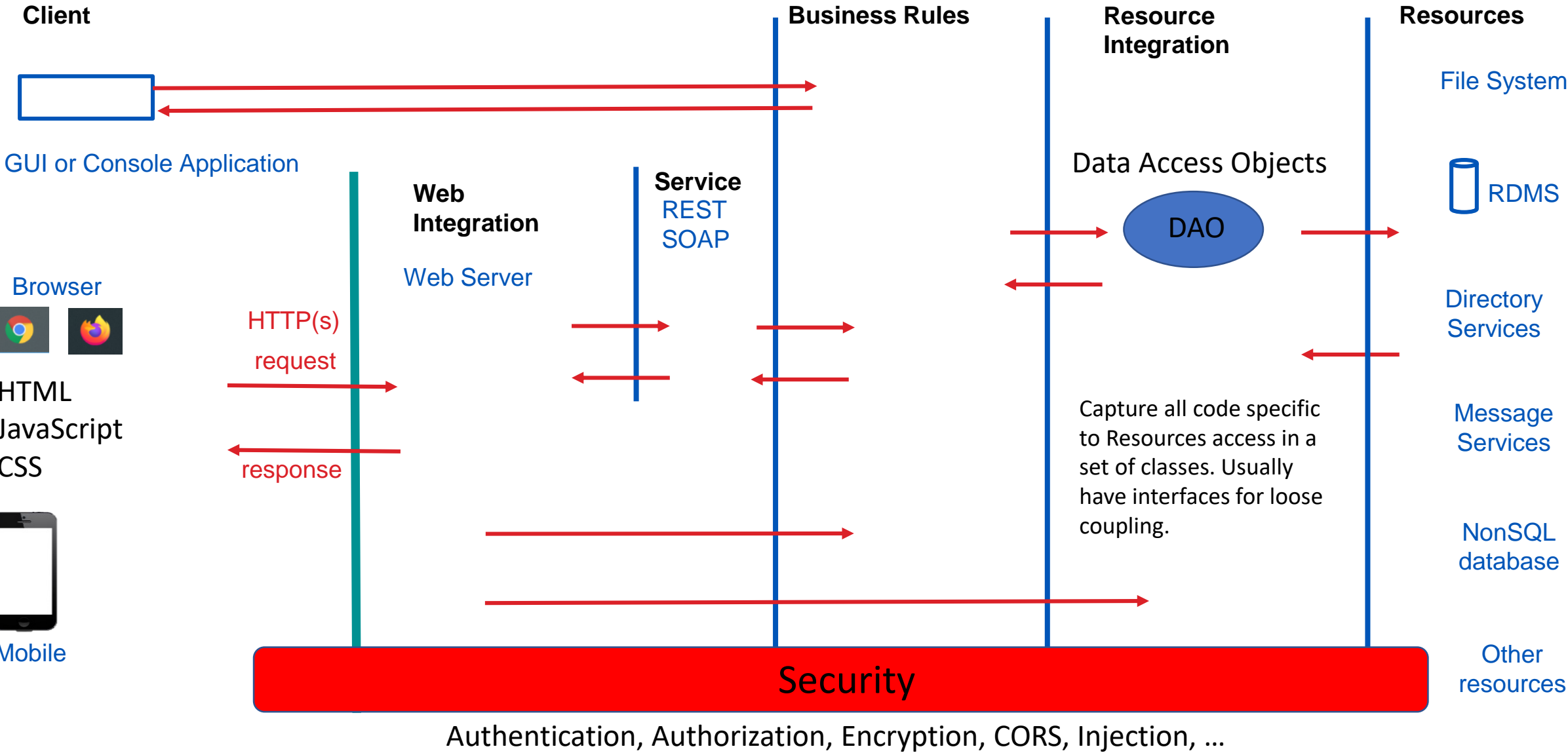
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
ON A.Key = B.Key



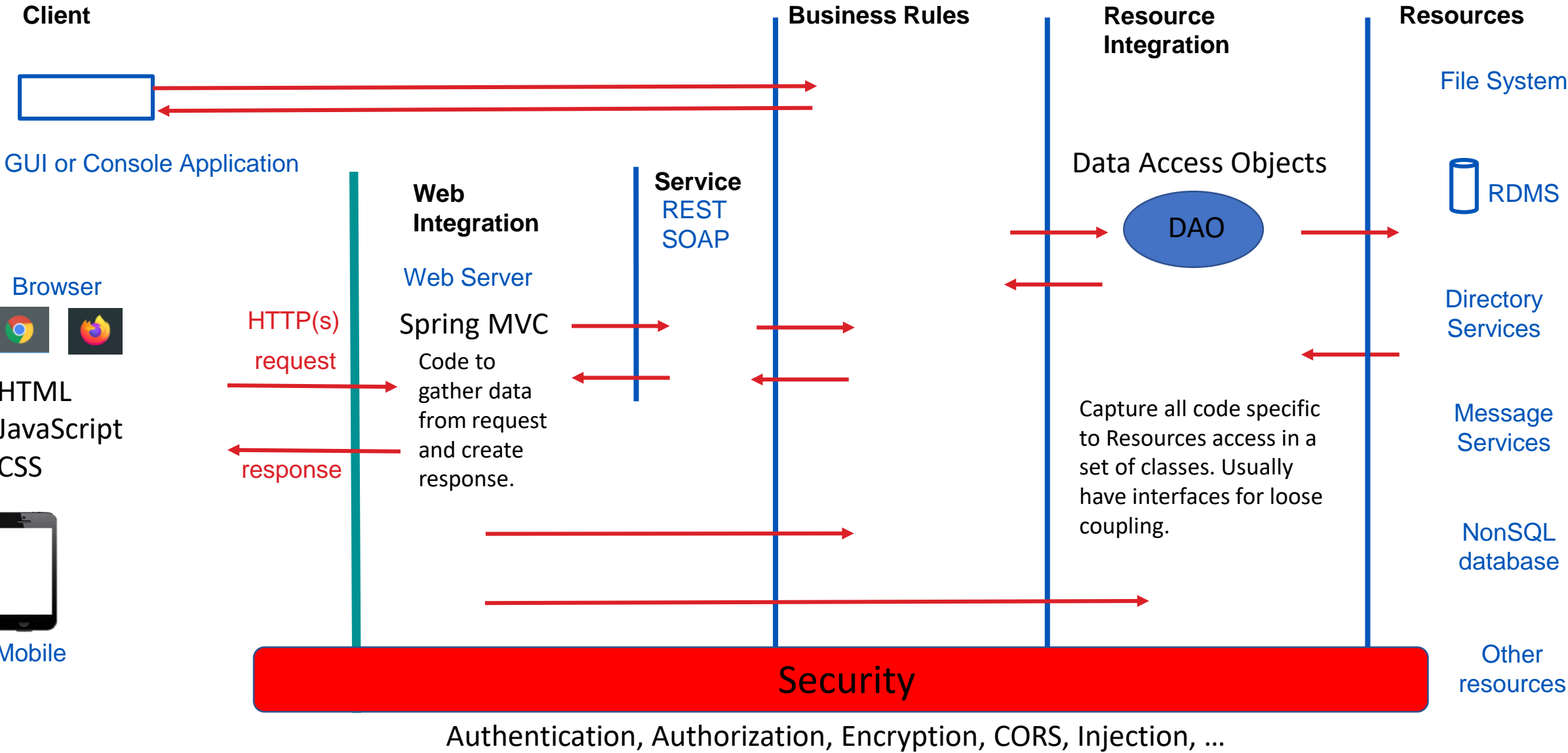
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
ON A.Key = B.Key
WHERE A.Key IS NULL
OR B.Key IS NULL



Application Architecture



Application Architecture



URL identifies resource

<http://localhost:8080/myapp/css/site.css>



domain

port

application path

context

resource

Application Server



CSS

 site.css

images



logo.PNG

js

- files for JavaScript code

profile

- files and directories for profile features

WEB-INF

classes

- Java packages


jsp

common

- jsp files common to pages like headers and footers

lib

- jar files needed for the application

 index.html

jar utility

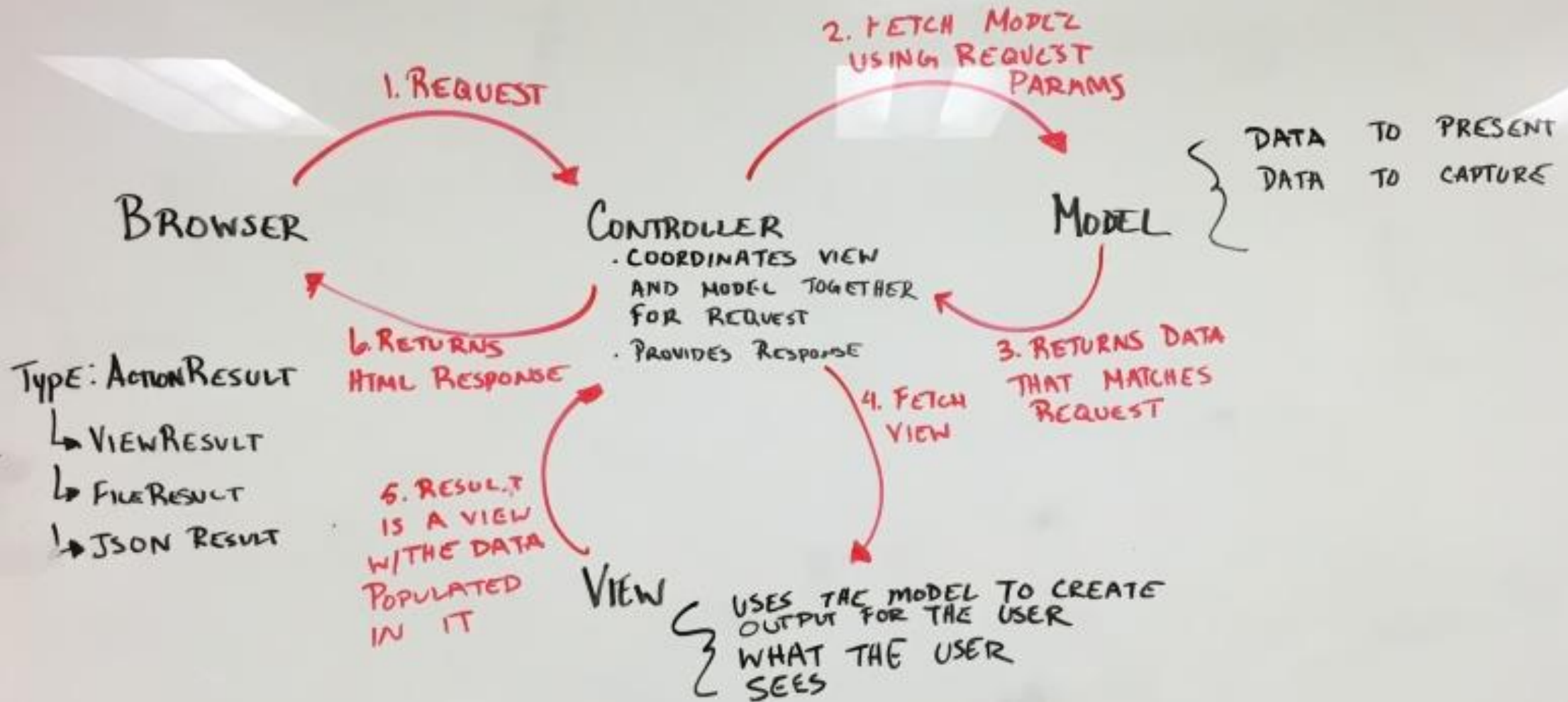
myapp.war

deploy

root.war

myapp.war

teller.war

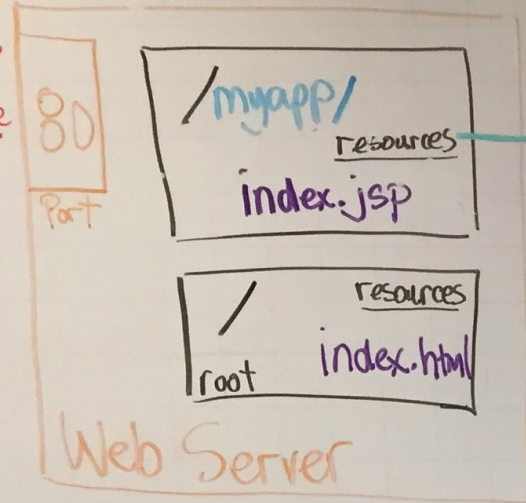


GET, POST
HTTP

request URL.
response

Web Integration

www.myco.com:80

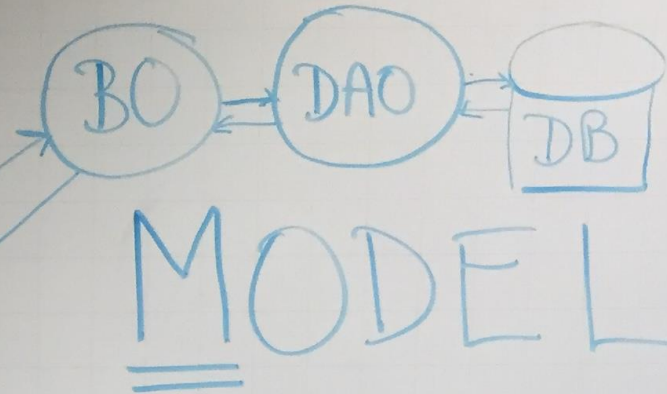


- Tomcat
- Weblogic
- WebSphere
- JBoss

JAVA CLASS HttpServlet

- Gather data from request
- Use BO/DAO to process data
- Dispatch to JSP to create response view

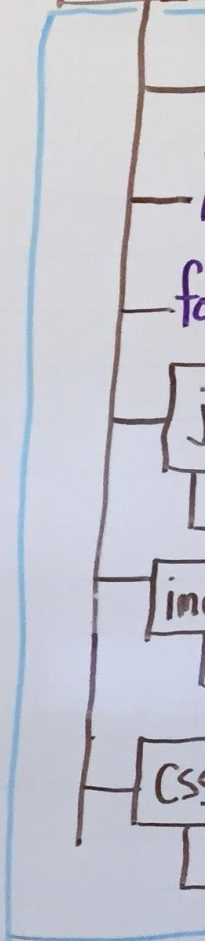
CONTROLLER



→ dailySpecials.jsp

VIEW

root folder → Web



Application Architecture

