Language (Java) — Compiler and Interpretter (Syntax)

JEE (Java Enterprise Edition) — Servlet/JDBC/JSP/JSTL

Frameworks

JDBC
ORM
Spring
(hibernate**.jar)

Servlet/JSP
1.Struts
2.EJB
3.Spring

WebServices/RestApi's
1.RMI
2.EJB
3.Spring

SpringFramework(Overview)

Persistence

Data Access/Integration
JDBC	ORM
OXM	JMS
Transactions	

SpringMVC(webapps)

Web
| WebSocket | Servlet |
| Web | Portlet |

MiddleWareServices
| AOP | Aspects | Instrumentation | Messaging |

SpringCore

Core Container
| Beans | Core | Context | SpEL |

JUnit → Test

Container(IOC)

HAS-A

HAS-A

Job done by Container
1.Create and manage the object
2.Perform dependancyInjection

Spring supplied container

Application Context
BeanFactory

IOC-Container

client

Flipkart(Target)   (Dependent) Courier
courier
flipkart

Configuring IOC-Container
1. XML
2. Annotation
3. PureJava(No XML)
4. SpringBoot[RAD]

Building application using Technology

index.jsp
SID
SNAME
SAGE
SADDR
SUBMIT

1. XML
2. Annotation

(Servlet)
process.java
sid =
sname =
sage =
saddr =
request

request
response

student

(JDBC)
DAO → DBE → Database STUDENT

```
String sid   = request.getParameter("sid");
String sname = request.getParameter("sname");
String sage  = request.getParameter("sage");
String saddr = request.getParameter("saddr");

Student student = new Student();
    student.setSid(Integer.parseInt(sid));
    student.setSname(sname);
    student.setSage(Integer.parseInt(sage));
    student.setSaddr(saddr);
```

```
String insertQuery = "insert into student values(?,?,?)";
    pstmt.setString(student.getSname());
    pstmt.setInt(student.getSage());
    pstmt.setString(student.getSaddr());
    int rowCount = pstmt.executeUpdate();
```

Building application using Framework
(3rdparty tag library should be used to prepare a form)

index.jsp
(student)
SID
SNAME
SAGE
SADDR
SUBMIT

1. XML
2. Annotation
Spring MVC

(Servlet)
process.java
sid =
sname =
sage =
saddr =
request

request
response

student

(SpringORM)
(SpringDataJPA)
Framework

ORM (hibernate)
1.configuration
2.mapping

(JDBC)
JDBC → Database STUDENT
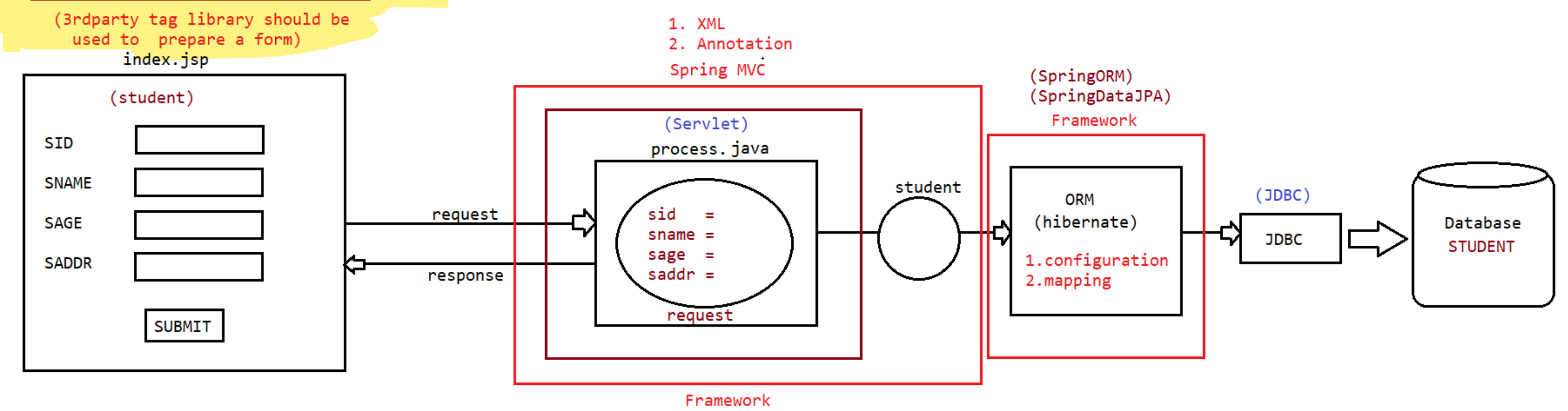
Framework

Application Framework

SpringCore

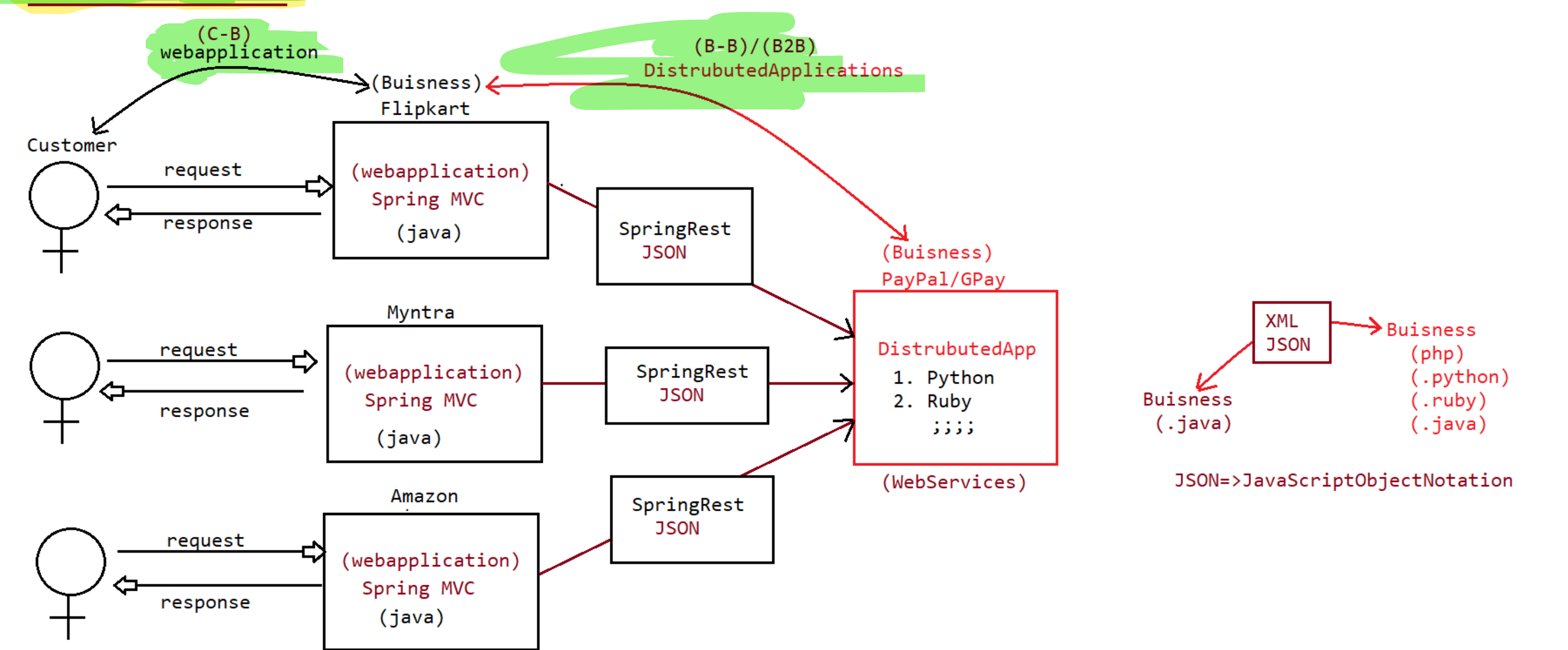| UILayer	Controller	Service	DAO	
SpringTag library Thymleaf JSP JSTL HTML	SpringMVC	Spring Security Spring Transcation Spring AOP Spring Mail ;;;;; ;;;;;	Spring JDBC Spring ORM Spring DataJPA SpringMongoDB	Database
	SpringBoot	SpringBoot	SpringBoot	
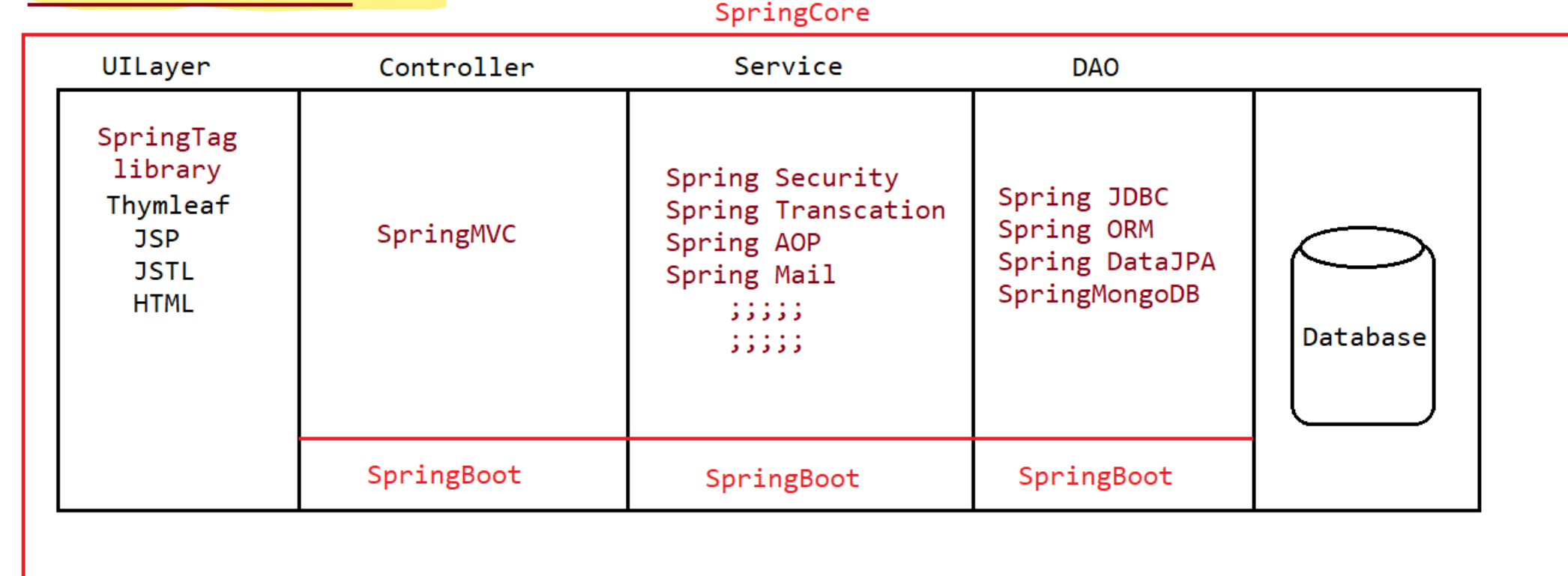
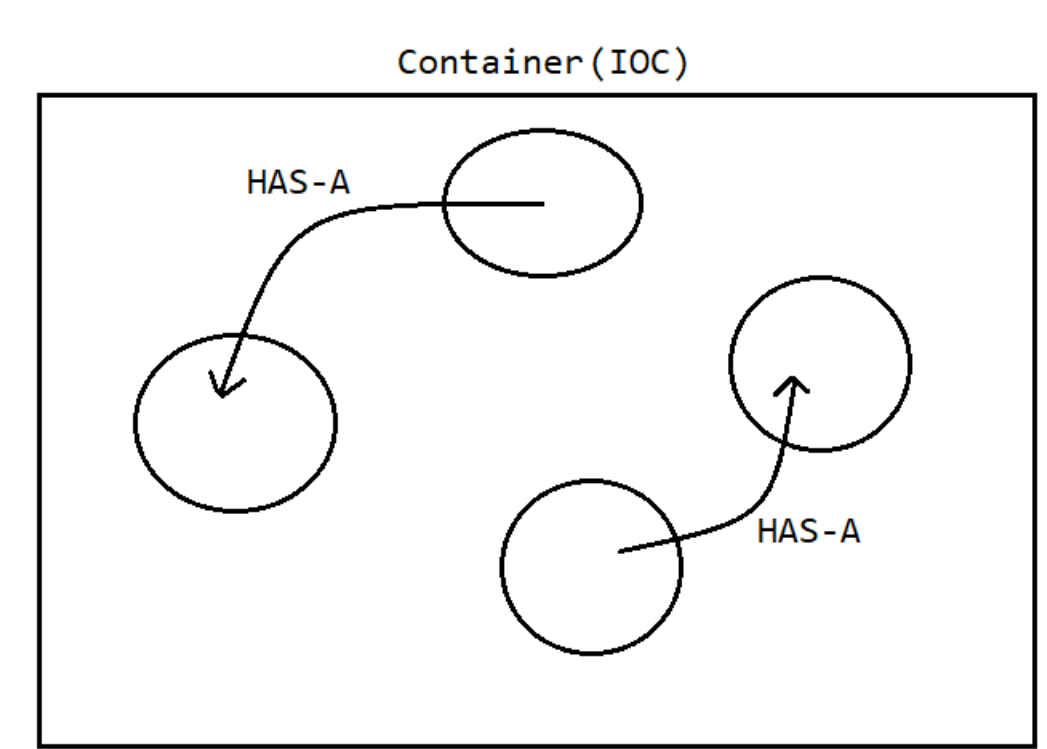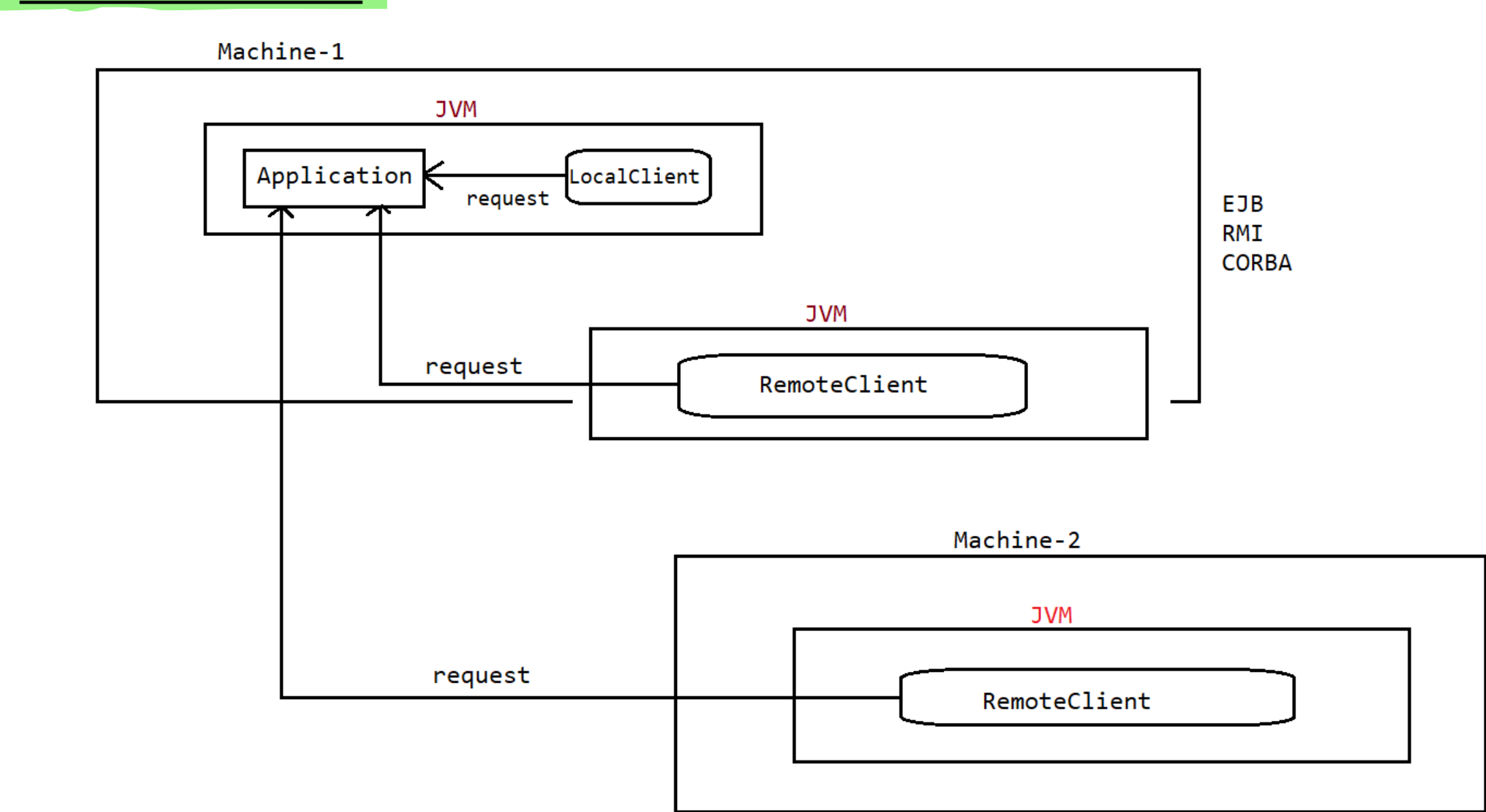SpringContainer can be configured in 4 ways
  a. XML driven configuration
  b. Annotation driven configuration(XML + Annotation)
  c. Purejava configuration(No XML)
  d. SpringBoot AutoDriven Configuration[RAD-> Rapid Application Development]
SpringBoot is an approach/setup to make the configuration autoamtic for the container.
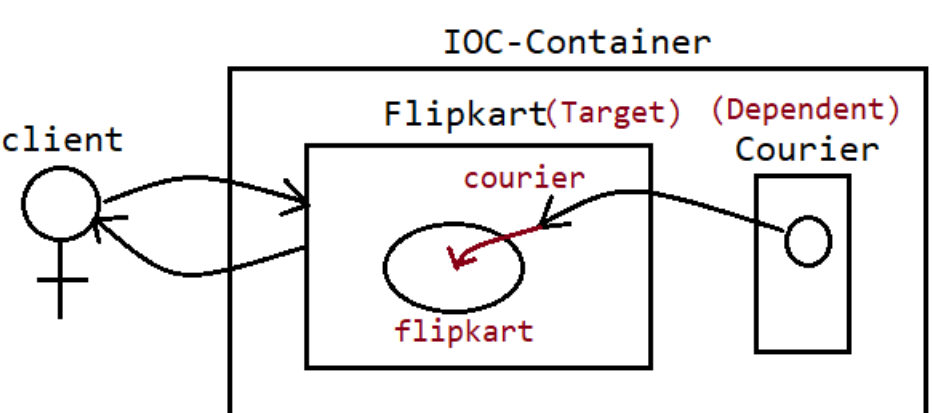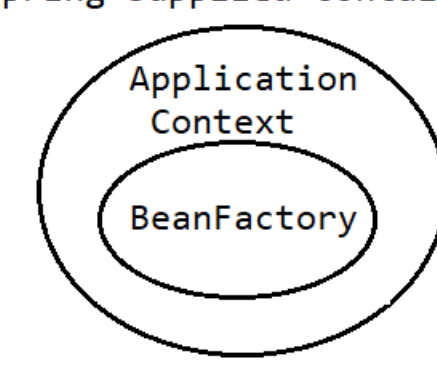
Distrubuted Application

(C-B) webapplication
(Buisness) Flipkart

(B-B)/(B2B)
DistrubutedApplications

Customer
request
response

(webapplication)
Spring MVC
(java)

SpringRest
JSON

(Buisness)
PayPal/GPay

Myntra
request
response

(webapplication)
Spring MVC
(java)

SpringRest
JSON

DistributedApp
1. Python
2. Ruby
;;;;

(WebServices)

Amazon
request
response

(webapplication)
Spring MVC
(java)

SpringRest
JSON

XML
JSON

Buisness
(.java)

Buisness
(php)
(.python)
(.ruby)
(.java)

JSON=>JavaScriptObjectNotation

LocalClient/RemoteClient

Machine-1
JVM
Application ← LocalClient
request

EJB
RMI
CORBA

JVM
RemoteClient
request

Machine-2
JVM
RemoteClient
request