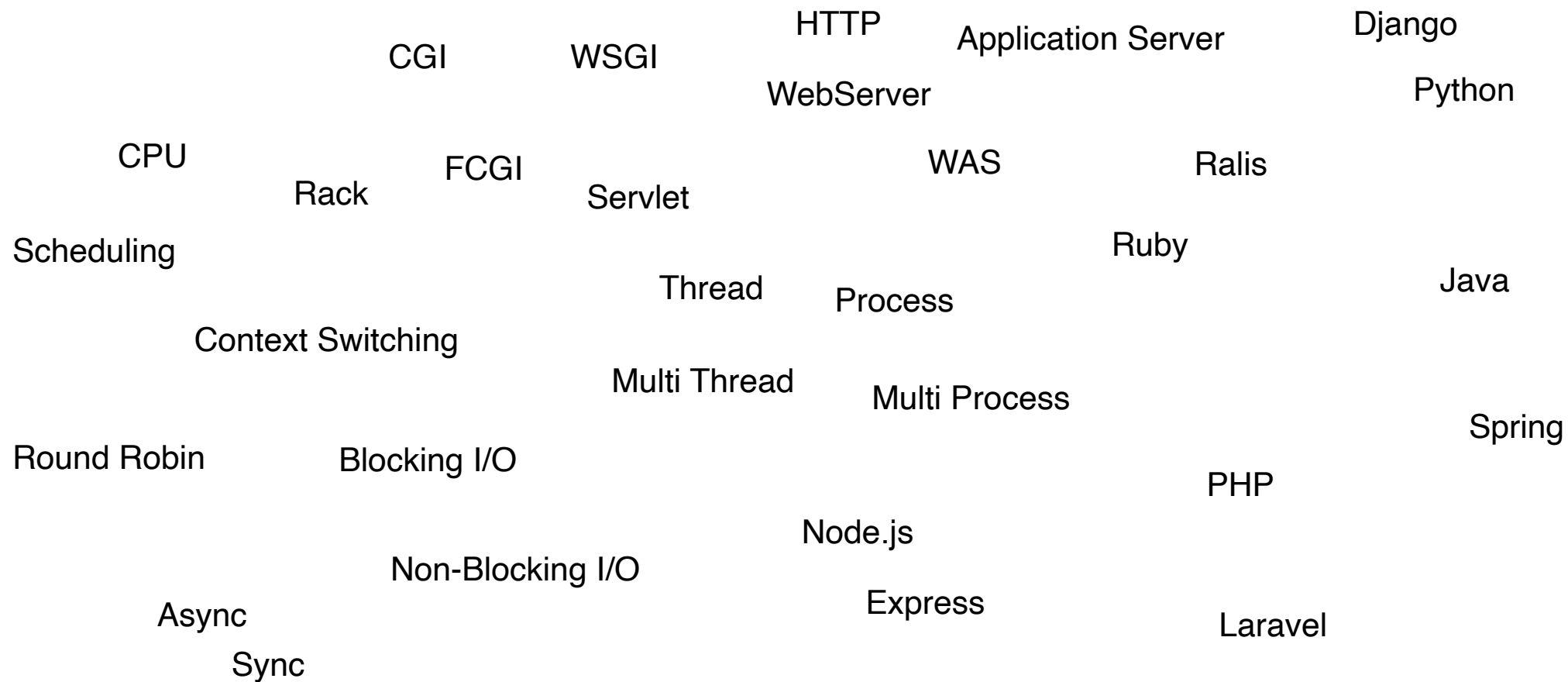


Back-End STUDY

스프링, 장고, 익스프레스(노드)의 차이점 - HTTP와 OS를 이용한 접근

2020. 04. 25

이동준



언어/프레임워크

네트워크

운영체제

CONTENTS

01 OS

02 HTTP

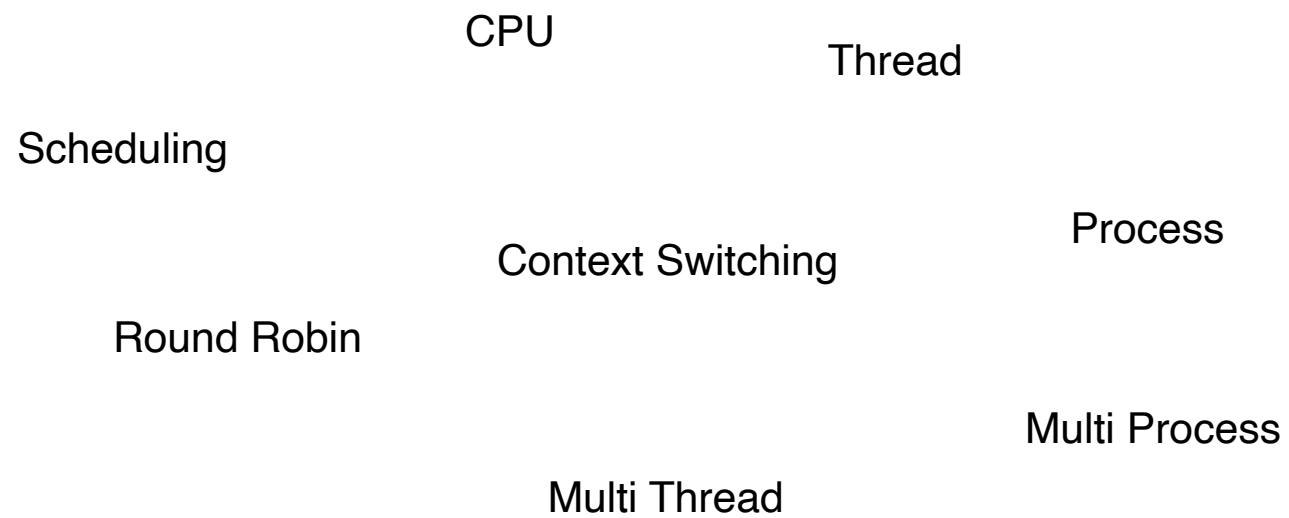
03 합쳐보자

A white diamond shape is centered on a solid red background. Inside the diamond, the text '01' is written in blue, and 'OS' is written in black below it.

01

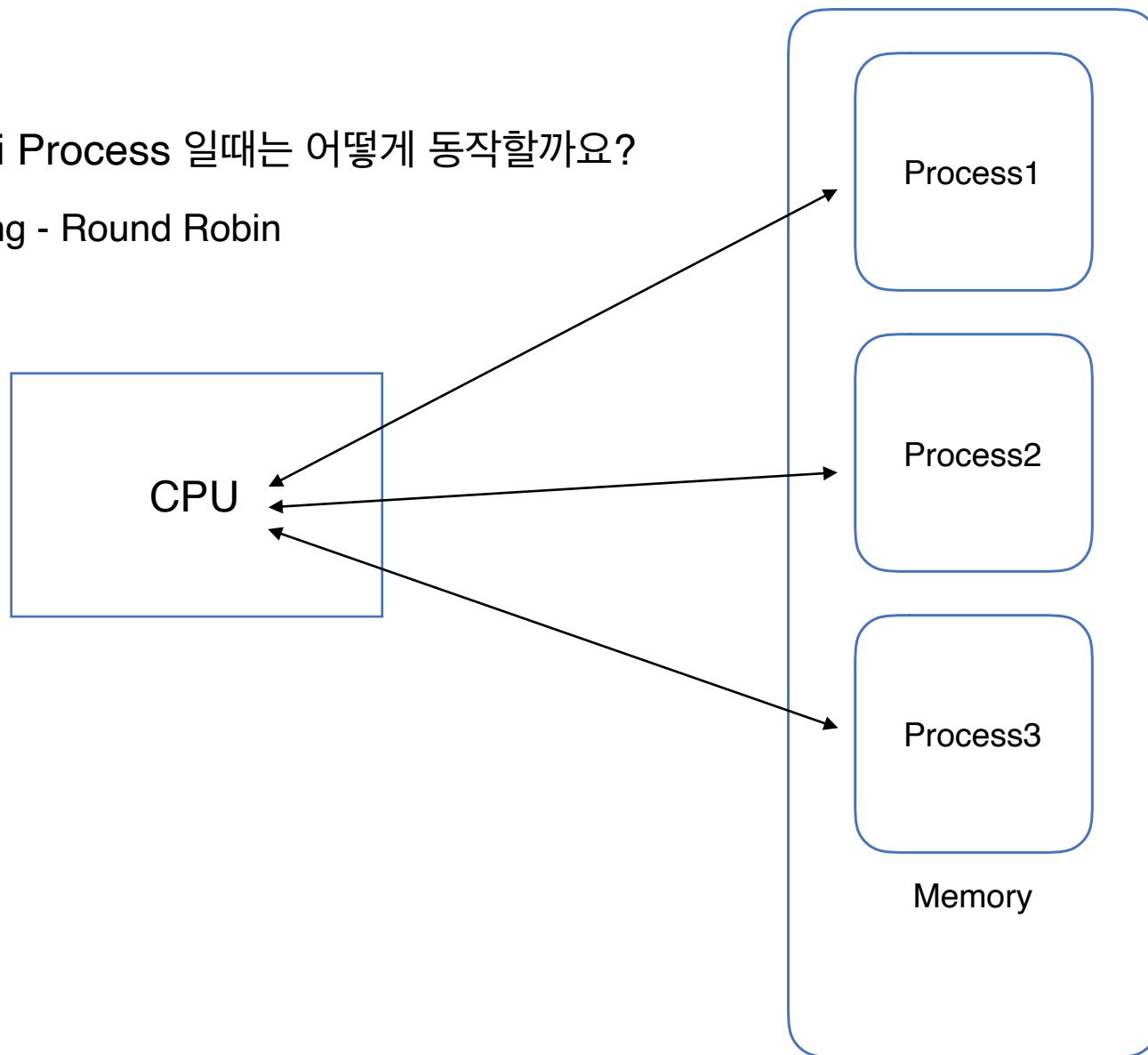
OS

1. OS



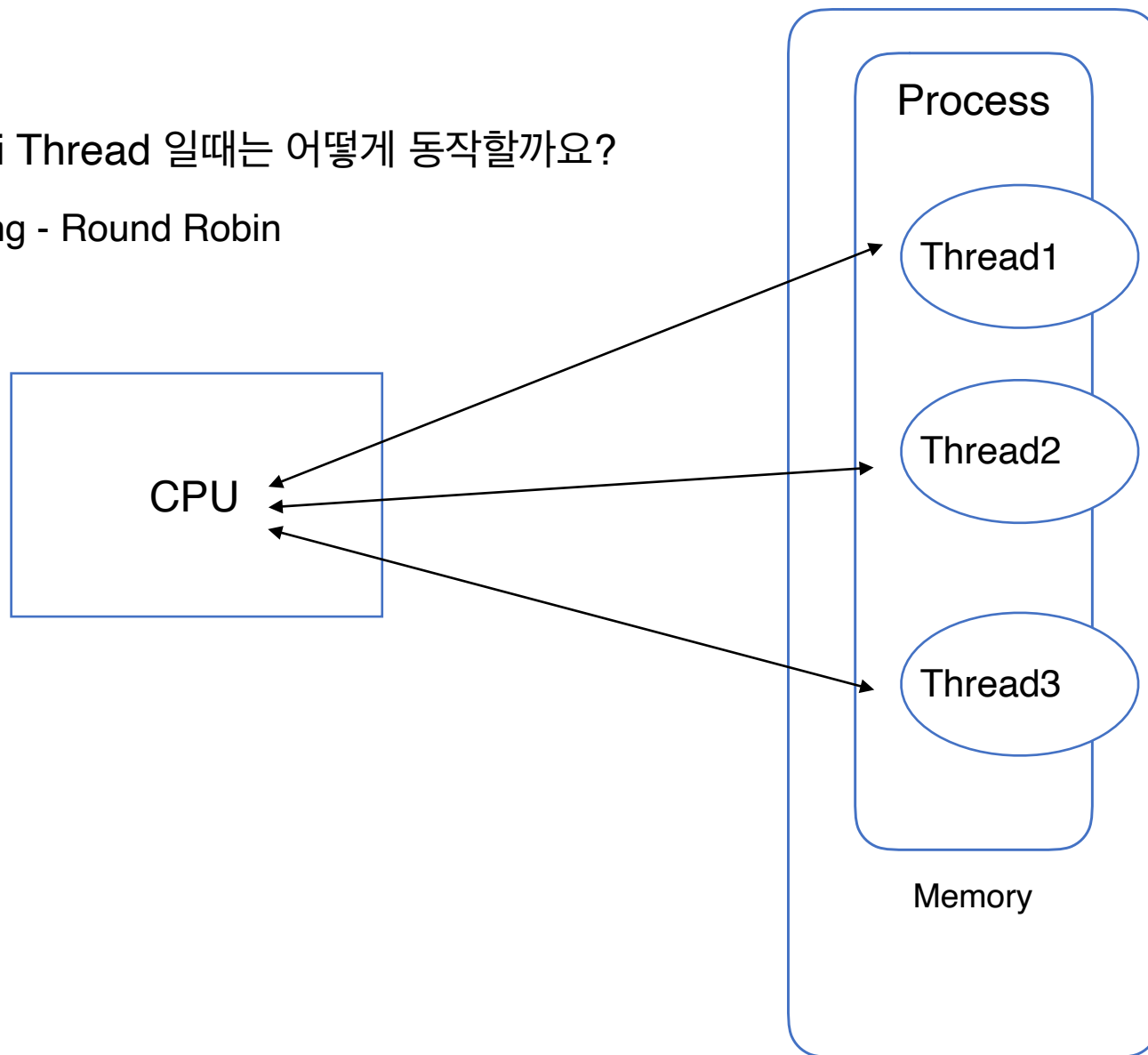
단일 CPU - Multi Process 일때는 어떻게 동작할까요?

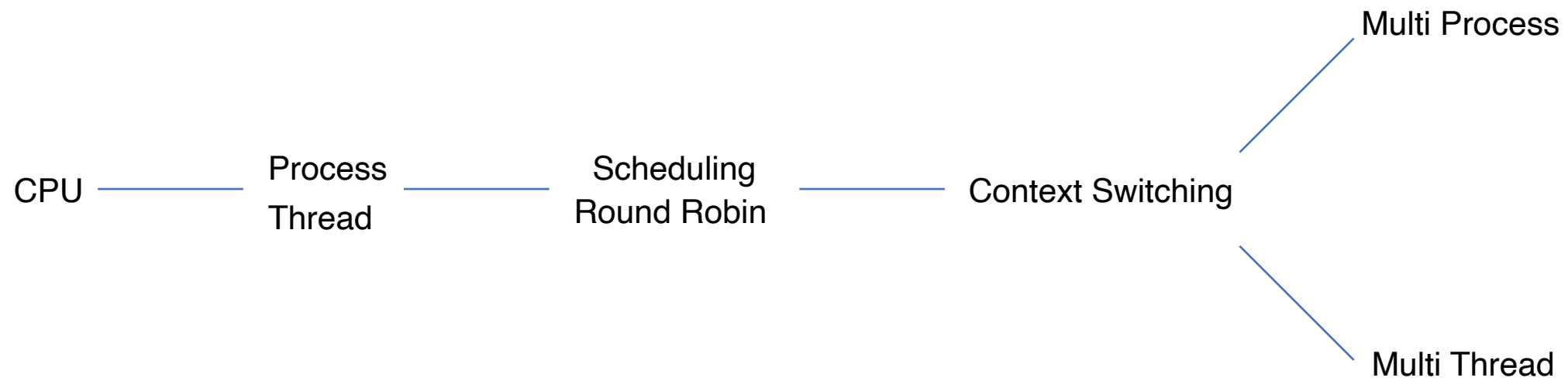
Scheduling - Round Robin



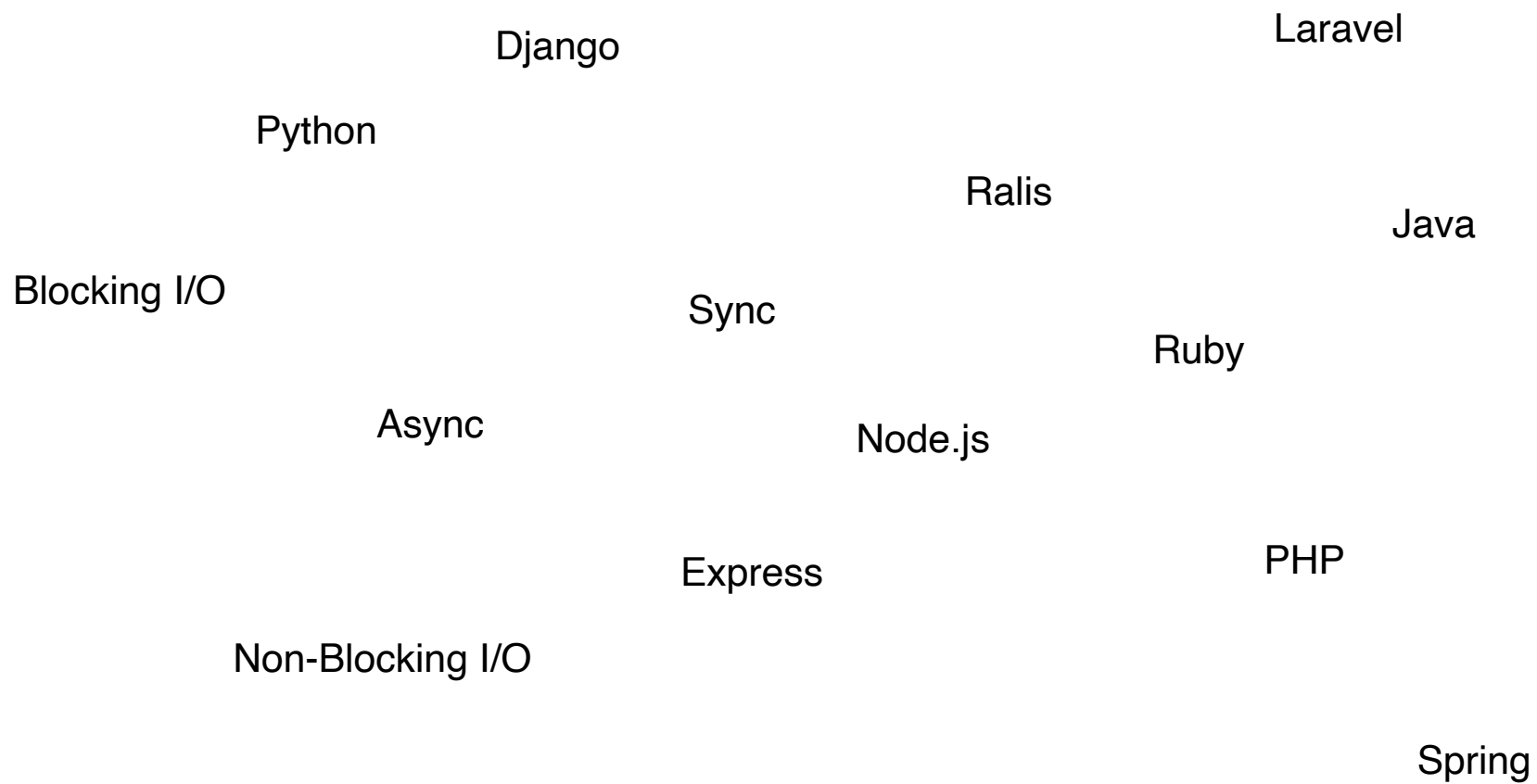
단일 CPU - Multi Thread 일때는 어떻게 동작할까요?

Scheduling - Round Robin





1. OS



여러 Thread를 가지고 노는 언어(가지고 놀아봐)

Java

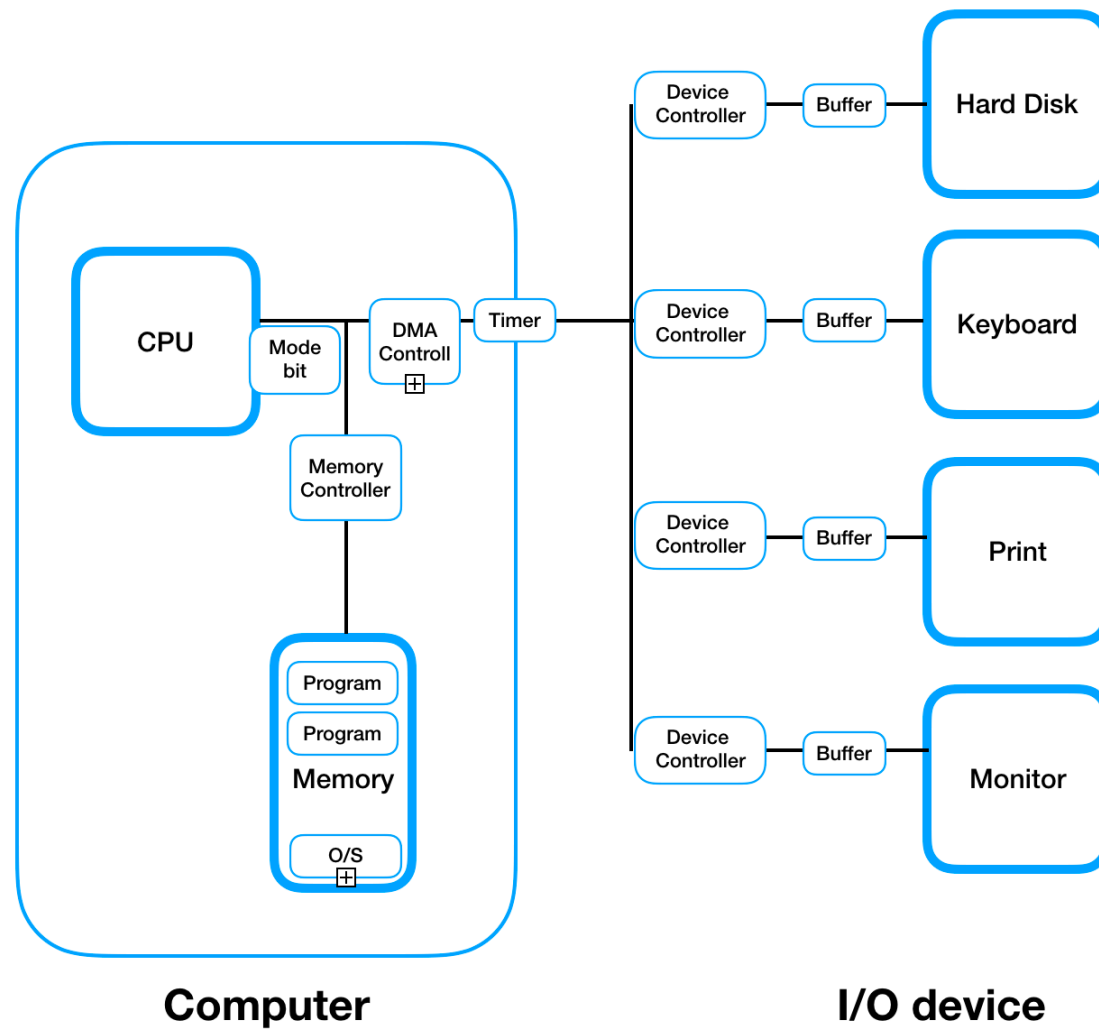
GIL을 이용해서 여러 Thread의 한계가 존재하는 언어

Ruby Python

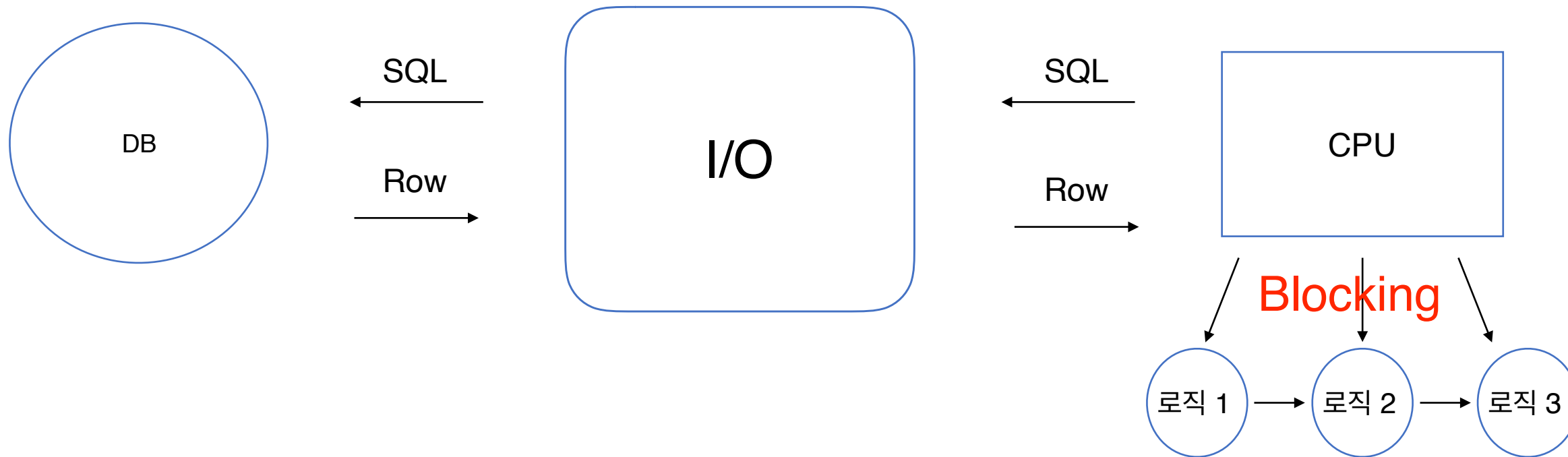
하나의 Thread지만 효율적으로 처리할 수 있는 언어

Node.js

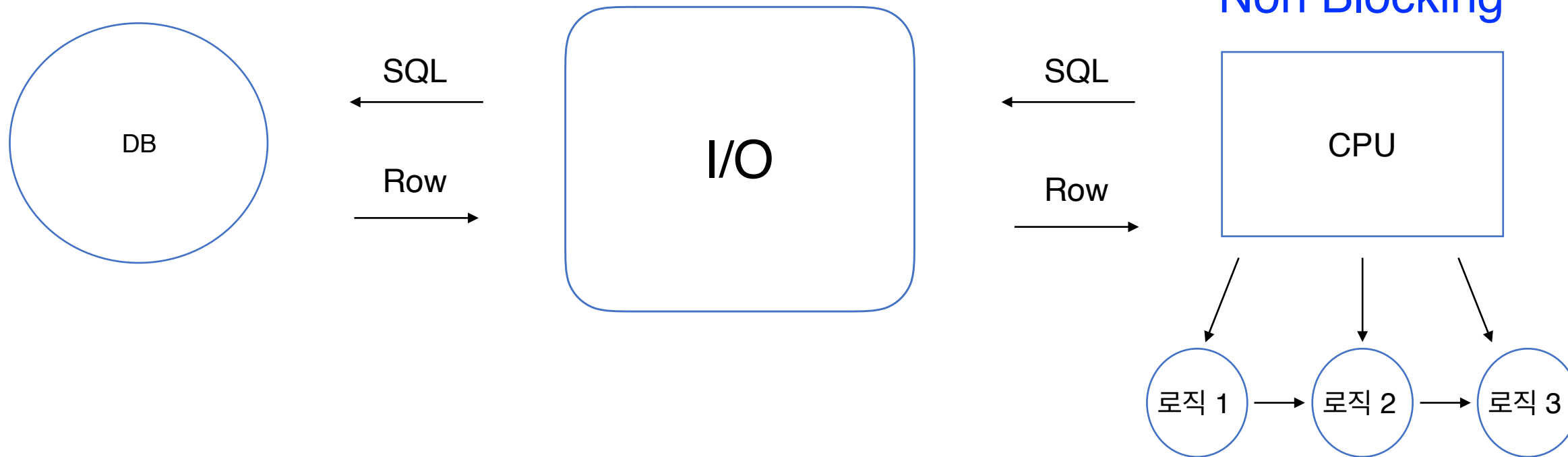
컴퓨터 시스템 구조



Blocking I/O - Sync



Non Blocking I/O - Async



Blocking I/O - Sync

JAVA - Spring

Python - Django

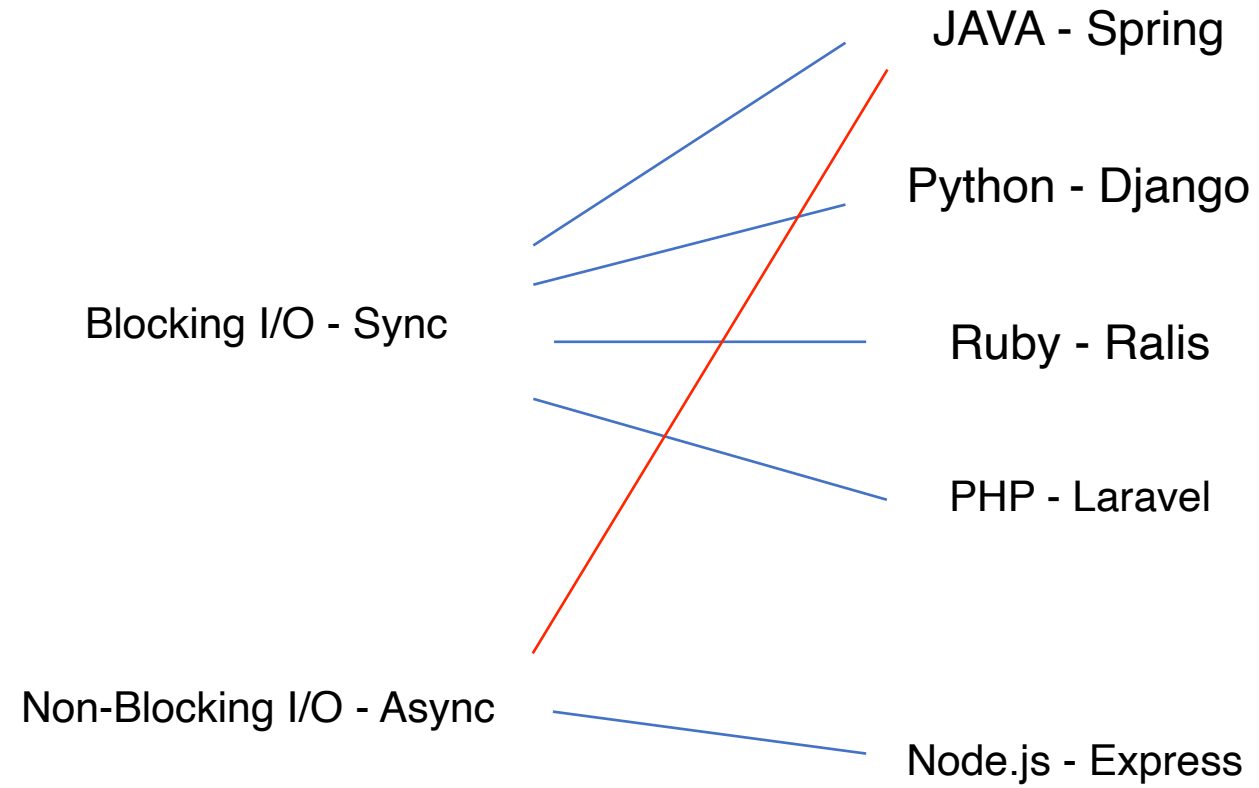
Ruby - Rails

PHP - Laravel

Non Blocking I/O - Async

Non Blocking I/O - Async

Node.js - Express

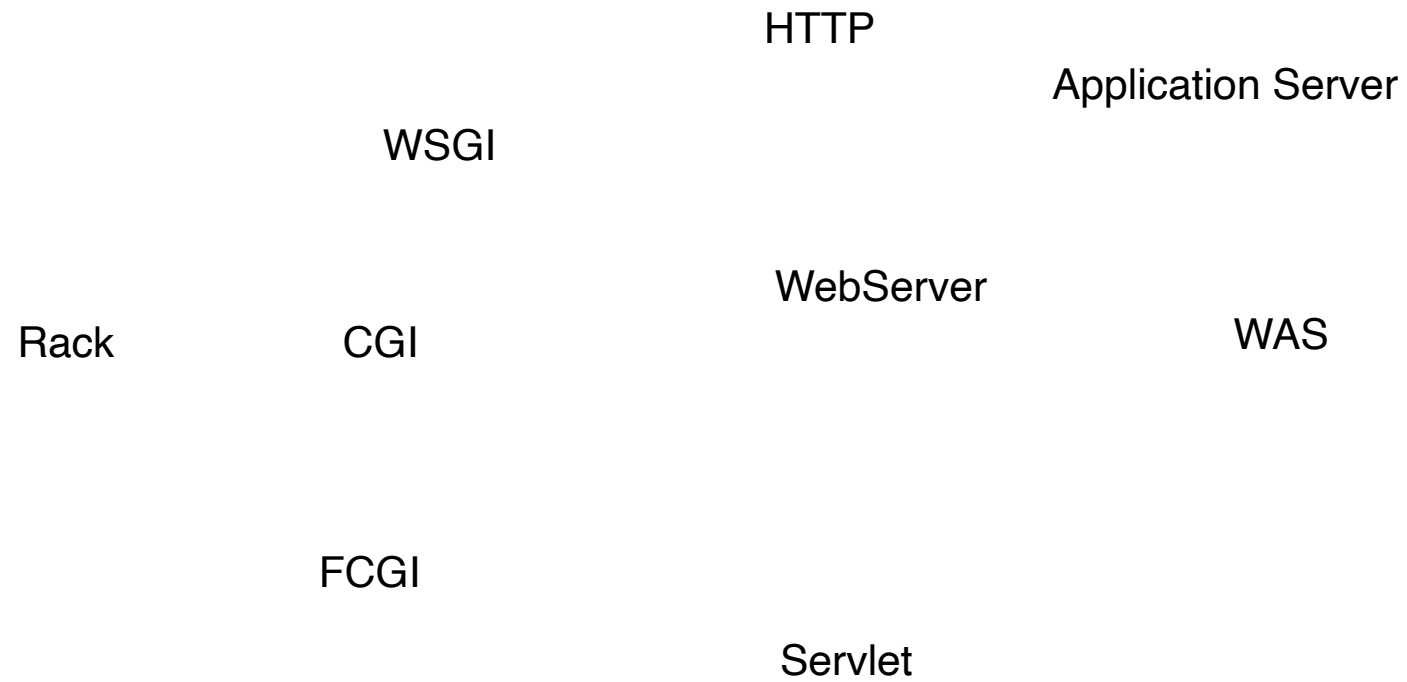


A white diamond shape is centered on a solid red background. Inside the diamond, the text '02' is written in blue, and 'HTTP' is written in black below it.

02

HTTP

2. HTTP



HTTP

HyperText Transfer Protocol

WebServer

HTTP 요청을 처리하고 응답을 제공한다.

정적

WAS

Web Container(Servlet Container) + WebServer

동적 + 정적

Application Server

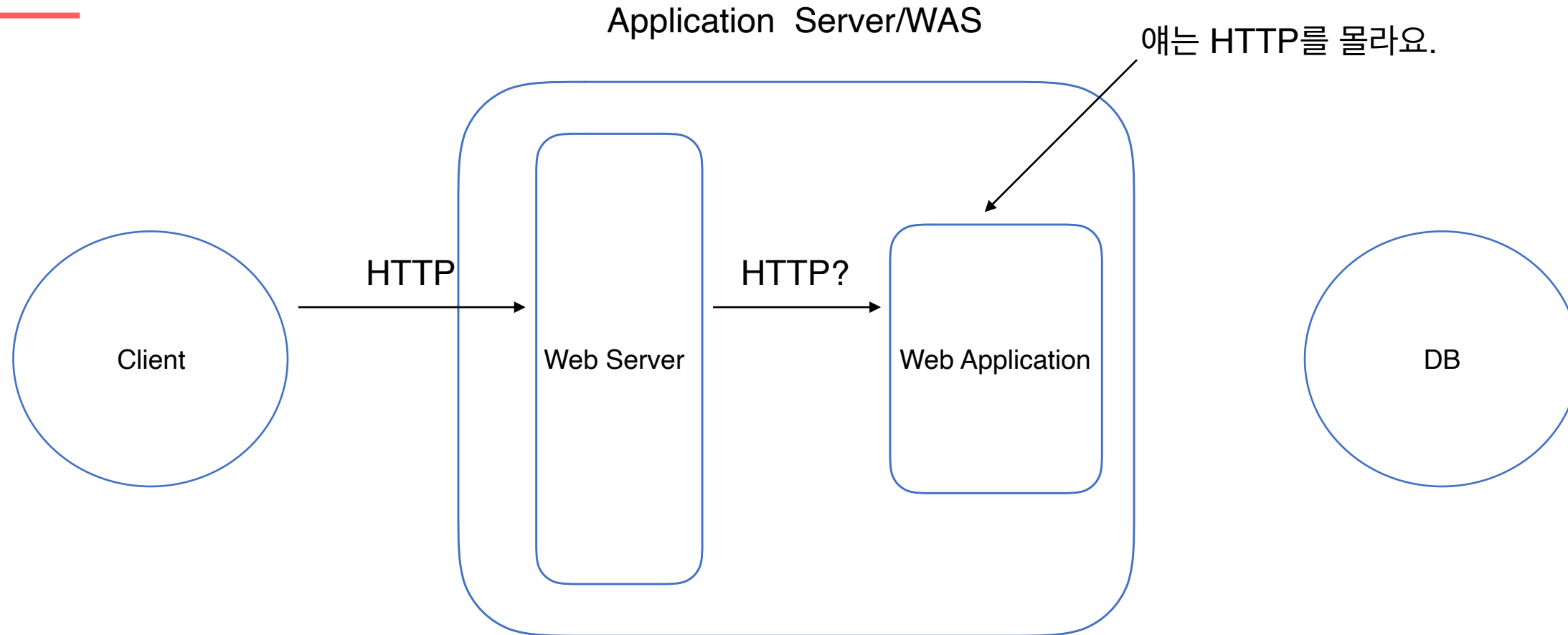
CGI + WebServer

동적 + 정적

Spring, Django, Express, Rails, Laravel

서버가 아닌 Web Application을 개발하는 프레임워크다

2. HTTP

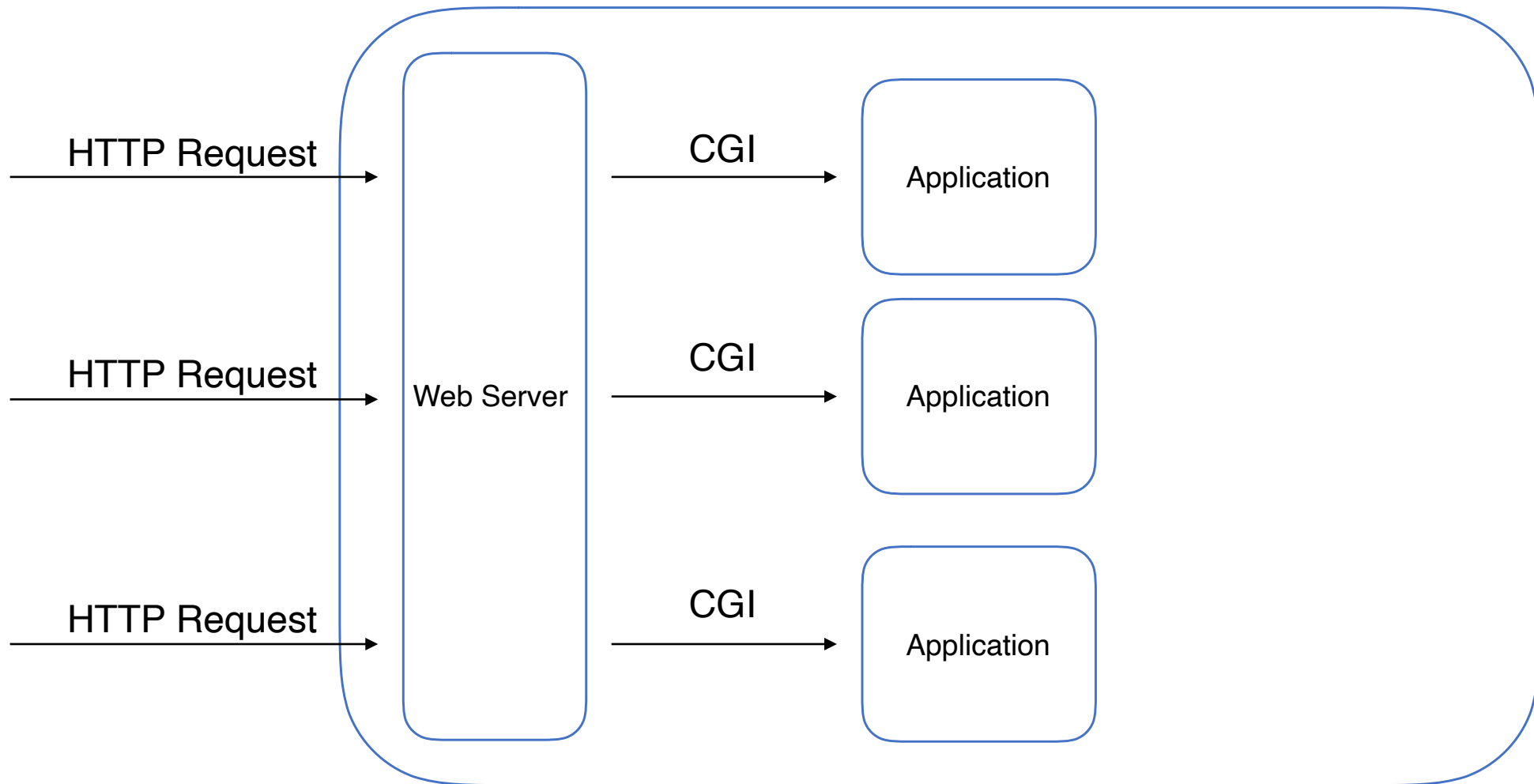


저희는 CGI를 씁니다.

HTTP 요청 별로 프로세스를 할당하여 애플리케이션을 구동 시켜요.

2. HTTP

Application Server



근데 언어/프레임워크마다 CGI가 다달라요.....

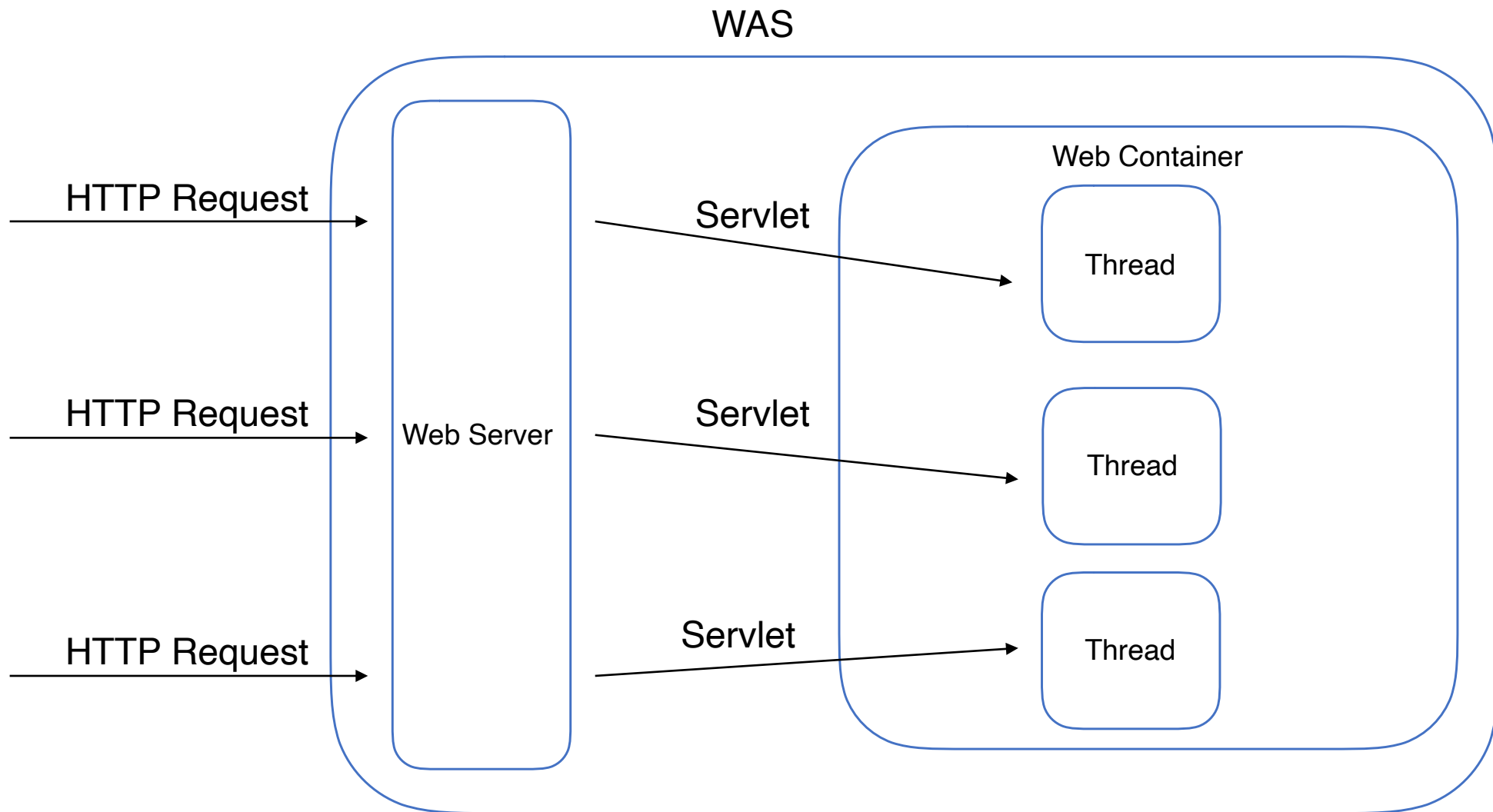
WSGI - Python/Django

FCGI - PHP/Laravel

저는 Servlet을 씁니다.

Servlet(Java로 구현) - Java/Spring

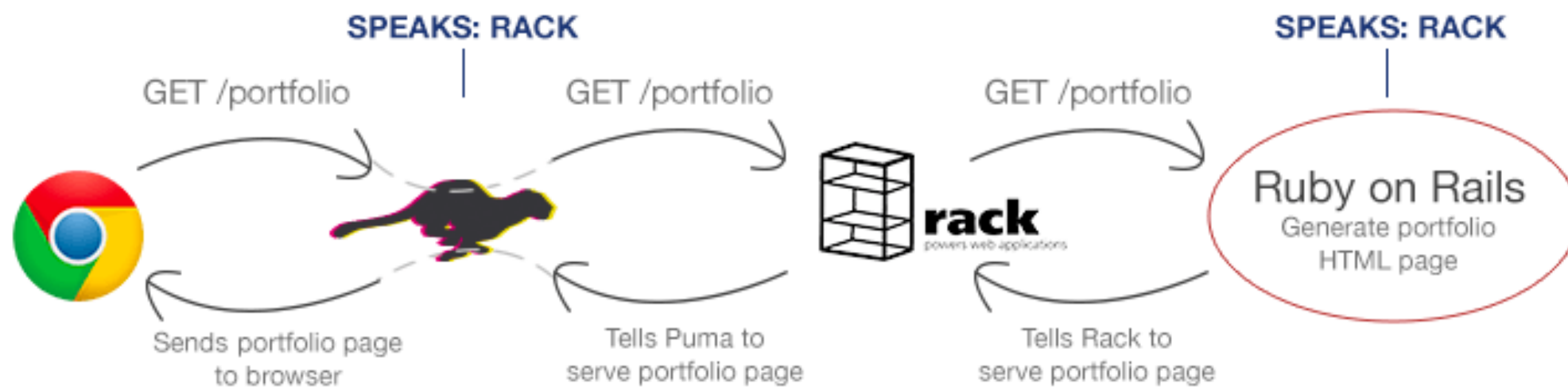
2. HTTP



근데 아예 다른 방법을 사용하는 애가 있어요...

RACK - Ruby/Rails

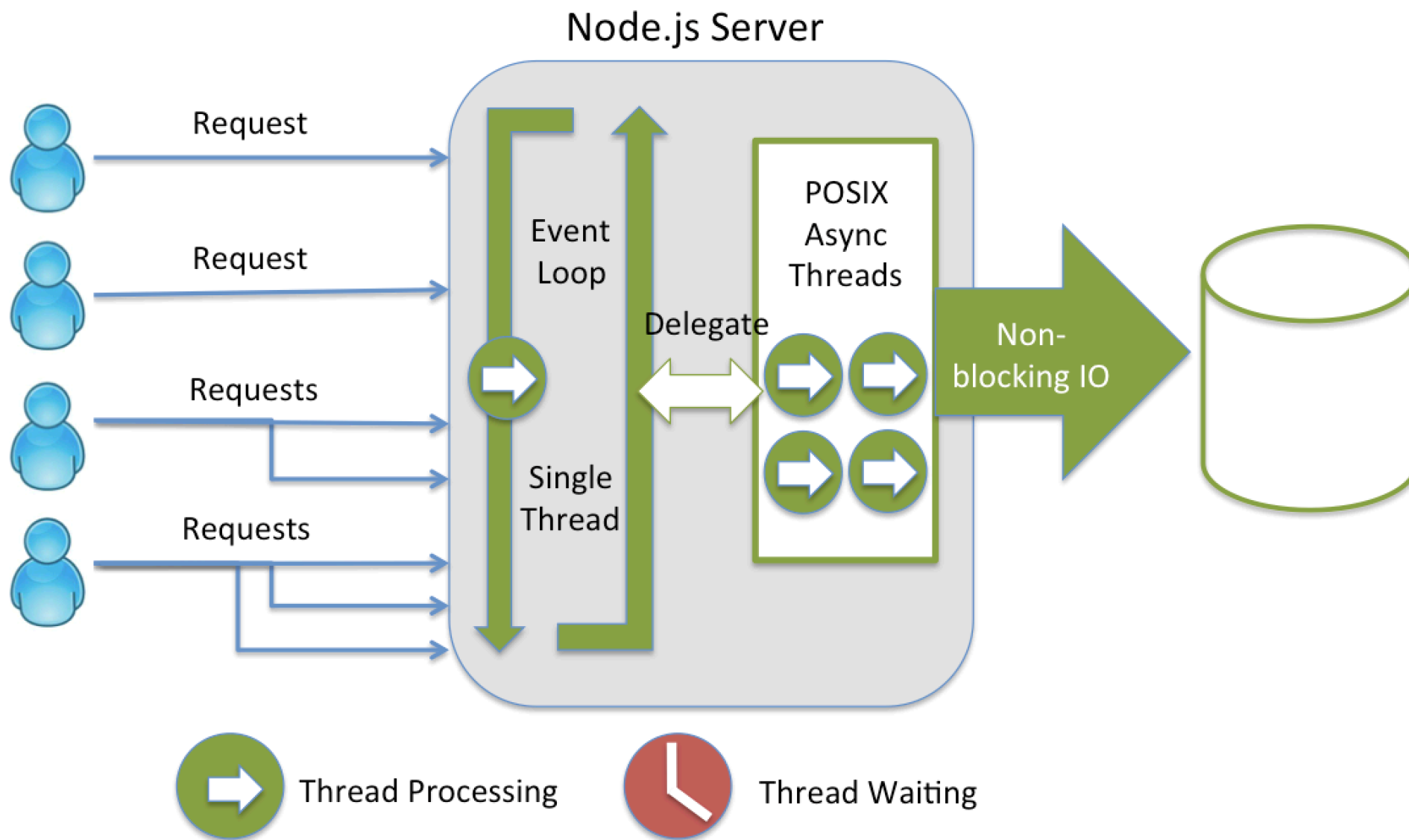
2. HTTP



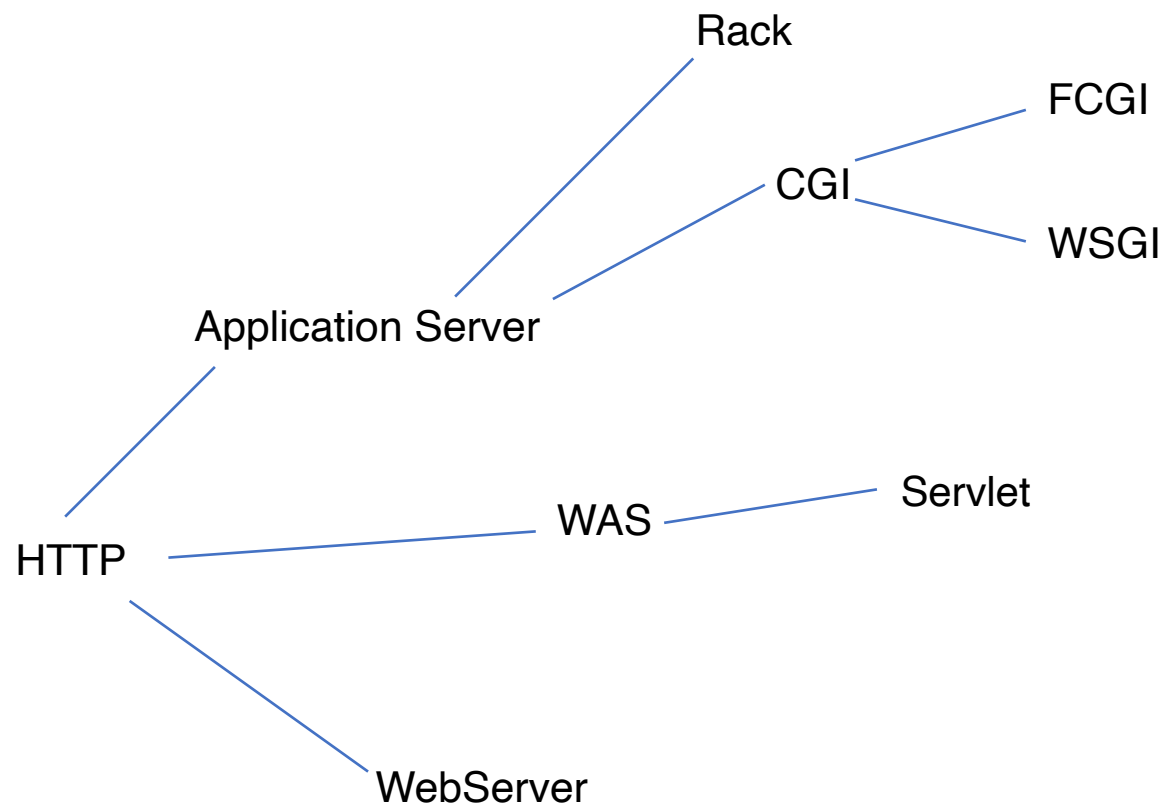
근데 아예 자체로 처리하는 애가 있어요.

Node.js/Express

2. HTTP



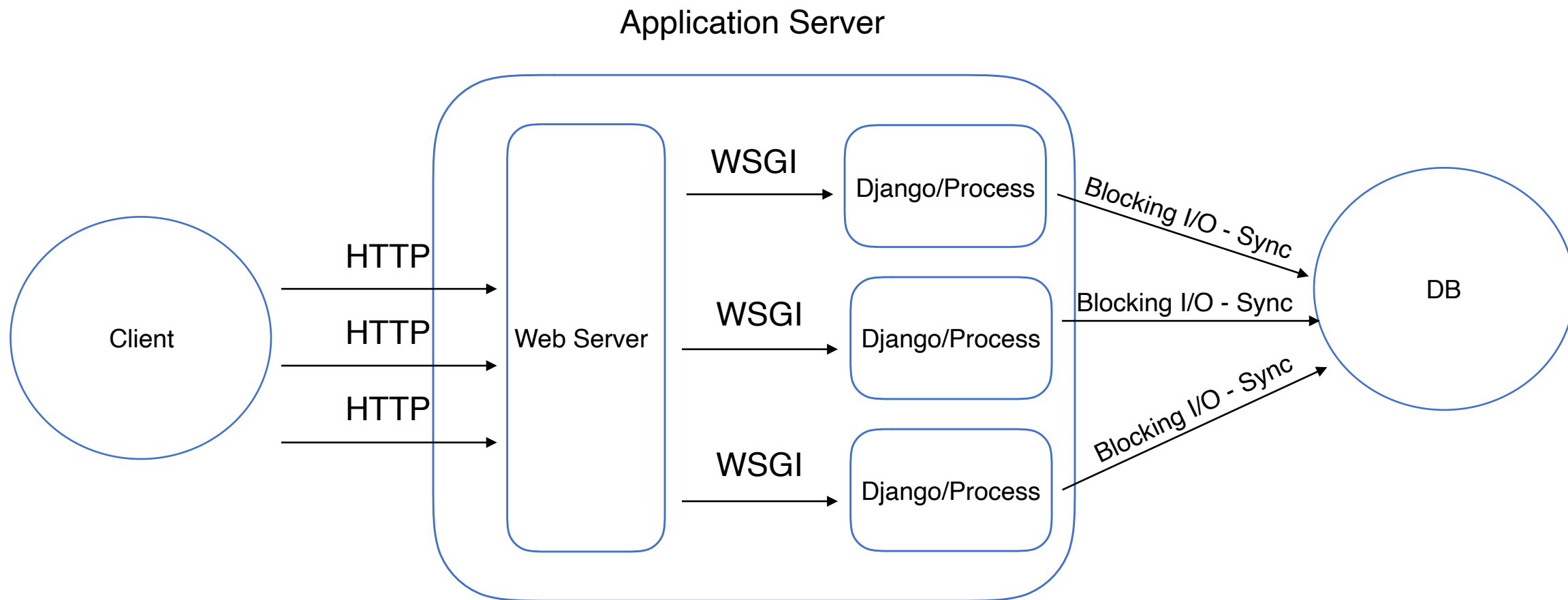
2. HTTP



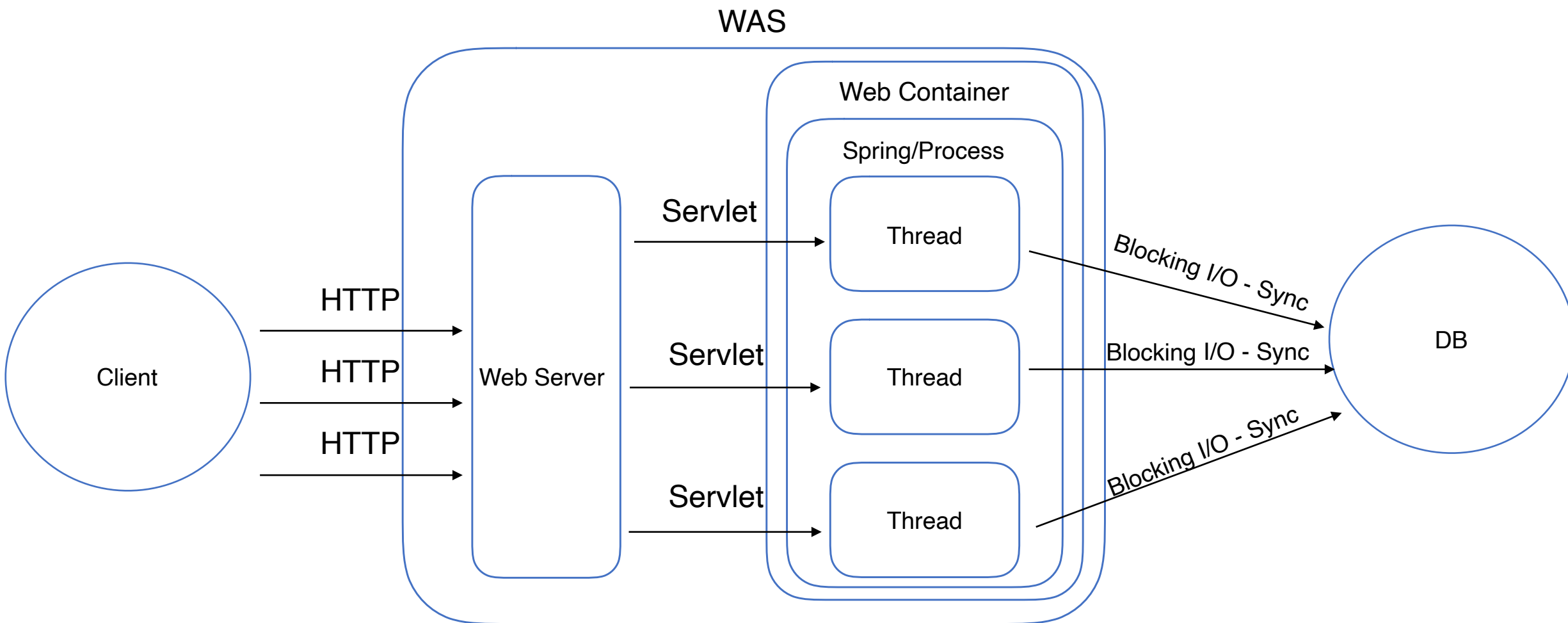
03

합쳐 보자

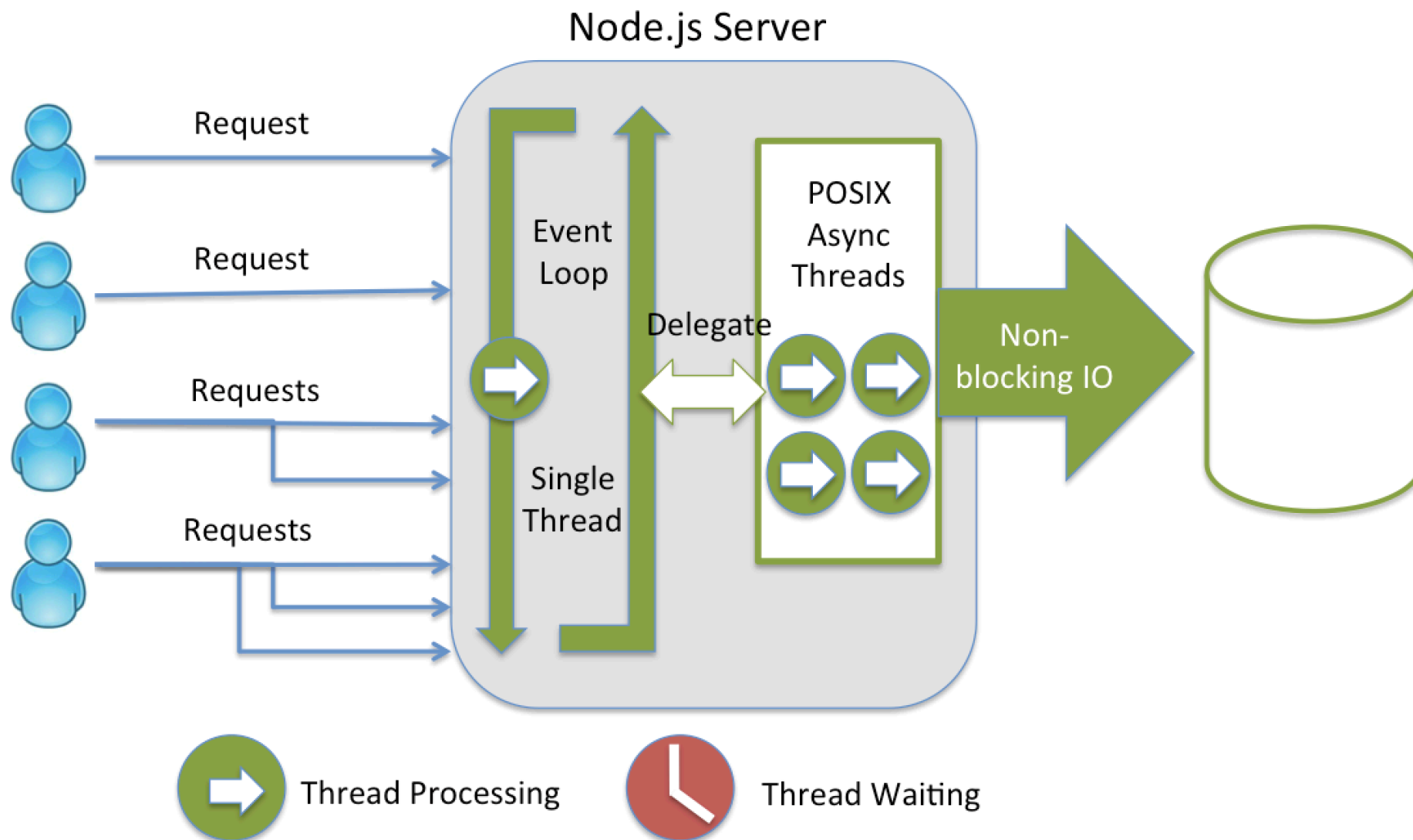
WSGI - Python/Django



Servlet - Java/Spring



Node.js/Express



THANKS FOR WATCHING

감사합니다

2020.04.25

이동준

