

Distributed Software Development



2012-11-06



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MÄLARDALENS HÖGSKOLA



E-HEALTH SERVICE

Requirements and Design

Petar Kekez

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The E-Health team is:



2012-11-06



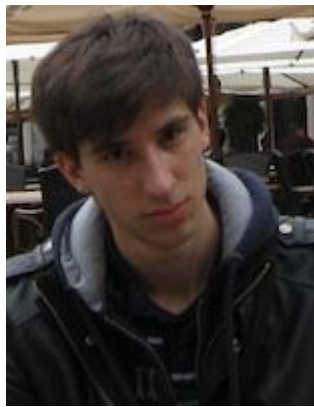
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Contents

- Requirements (Bojan)
- Design description (Petar)

General requirements

- Web application + mobile application
- One hospital and one first aid team
- User roles:
 - Administrator (web application)
 - Doctors (web + mobile application)
 - Patients (web + mobile application)
 - First aid (web application)

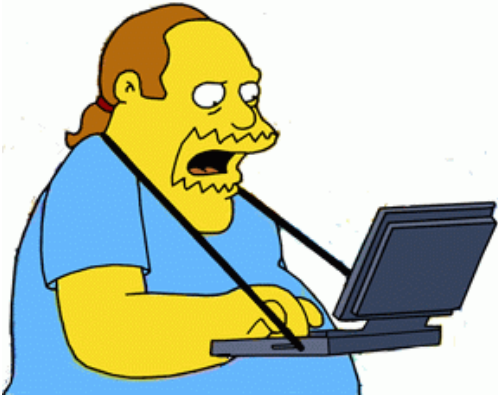
Functional requirements

Outside users



Priority	Requirement
HIGH	Check doctors' public information
LOW	Download doctor's public information as PDF

Administrator



Priority	Requirement
HIGH	Add and delete doctors
MEDIUM	Change the login password for the first aid



Patients

Priority	Requirement
HIGH	Each patient has exactly one assigned doctor
HIGH	Update current location by inputting an address
HIGH	Send an alarm to the first aid (mobile application)
HIGH	Input a new measurement of vital parameters

Doctors



Priority	Requirement
HIGH	Edit his public information
HIGH	Add and delete patients
HIGH	Administer patient's medical record
HIGH	Define patient's mandatory vital parameters
HIGH	For each patient's vital parameter set a normal interval
HIGH	Send alarm with patient's medical record to the first aid
HIGH	Input and delete measurements of vital parameters
MEDIUM	Change his login password



First aid

Priority	Requirement
HIGH	Display alarms sent by patients or doctors
HIGH	Delete received alarm from patients or doctors
LOW	Get alerted when the system recognizes an unusual alarm activity
LOW	Delete received notification for unusual alarm activities

Non-functional requirements

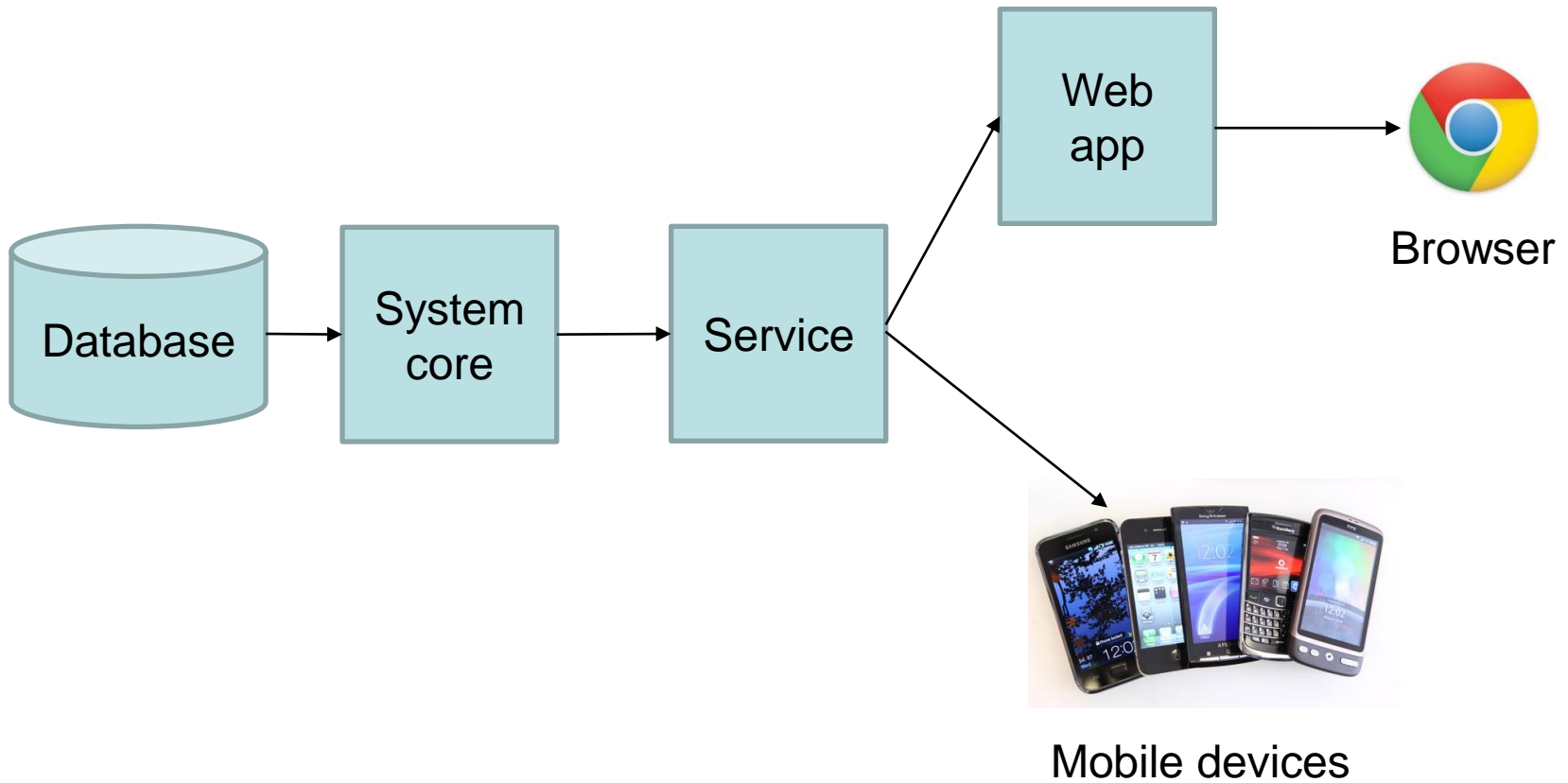
- Mobile application:
 - Android OS
 - Windows Phone 7 (optional)
- The user interface:
 - Intuitive and easy-to-use
 - Adjusted to the platform (web vs. mobile)
- Availability
- Security (mandatory login; encryption)
- Concurrency

Possible future development

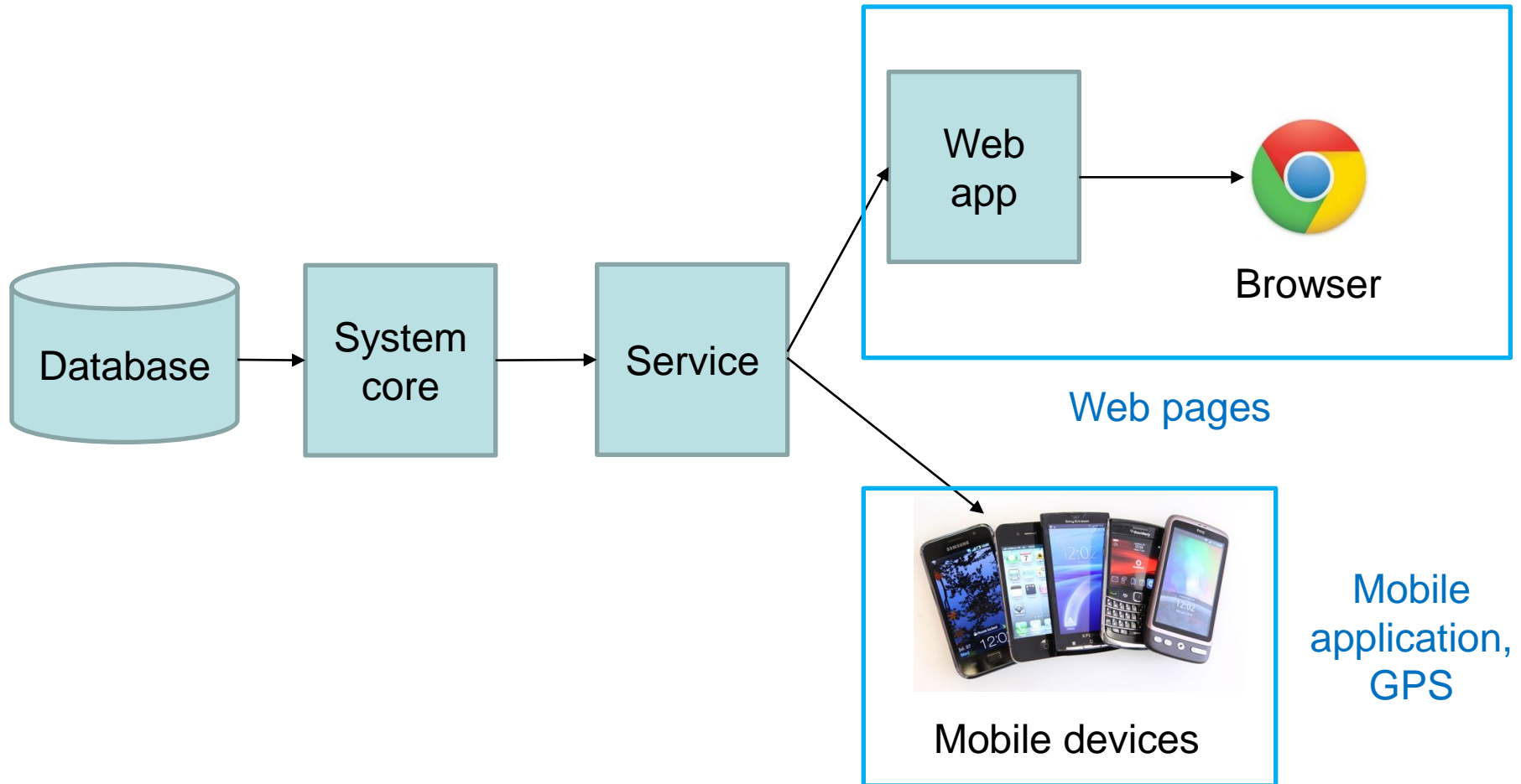
- Integrate sensors with the system
- Development for other mobile platforms
- Expand to a regional or even national system



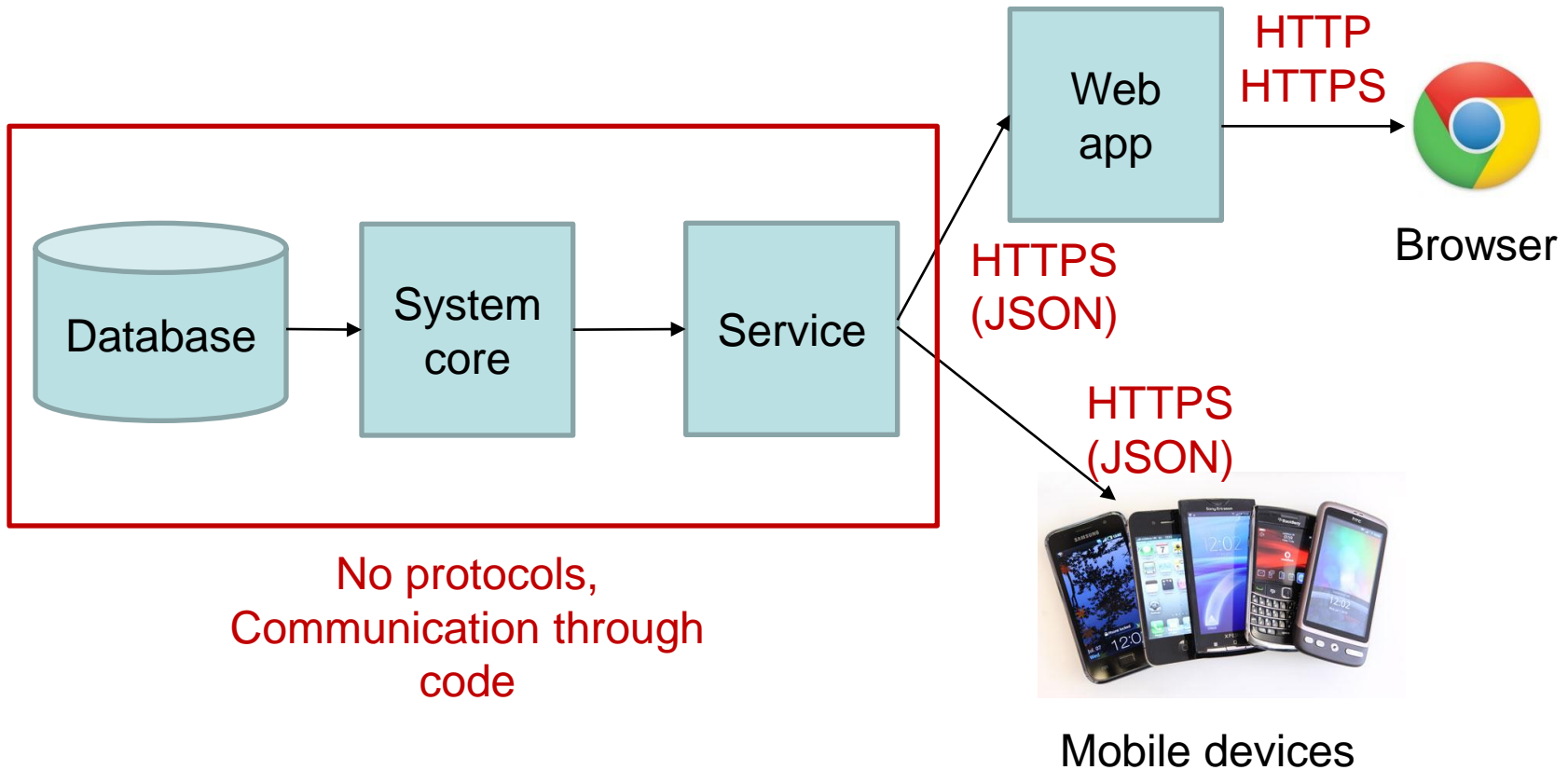
Architecture



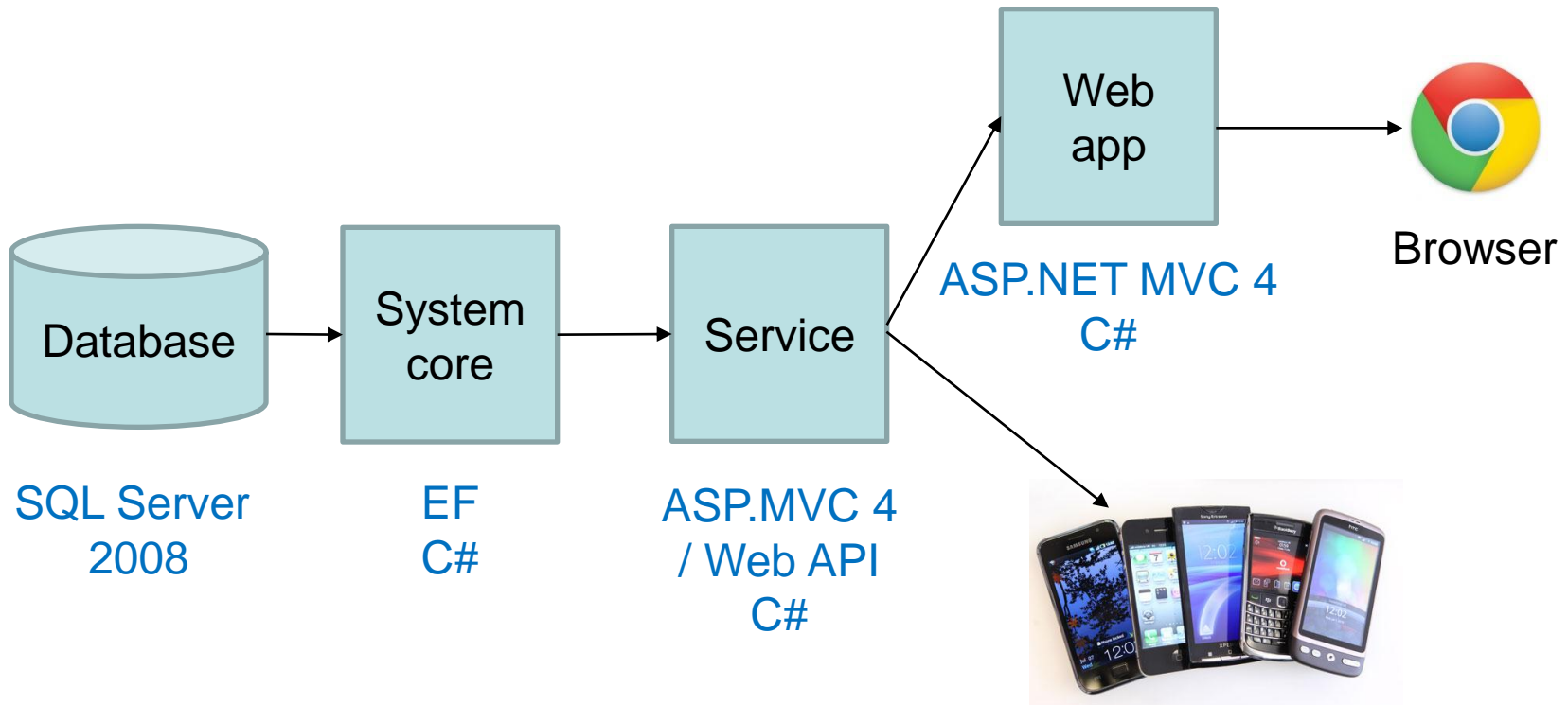
External interfaces



Protocols



Technologies



SQL Server
2008

EF
C#

ASP.MVC 4
/ Web API
C#

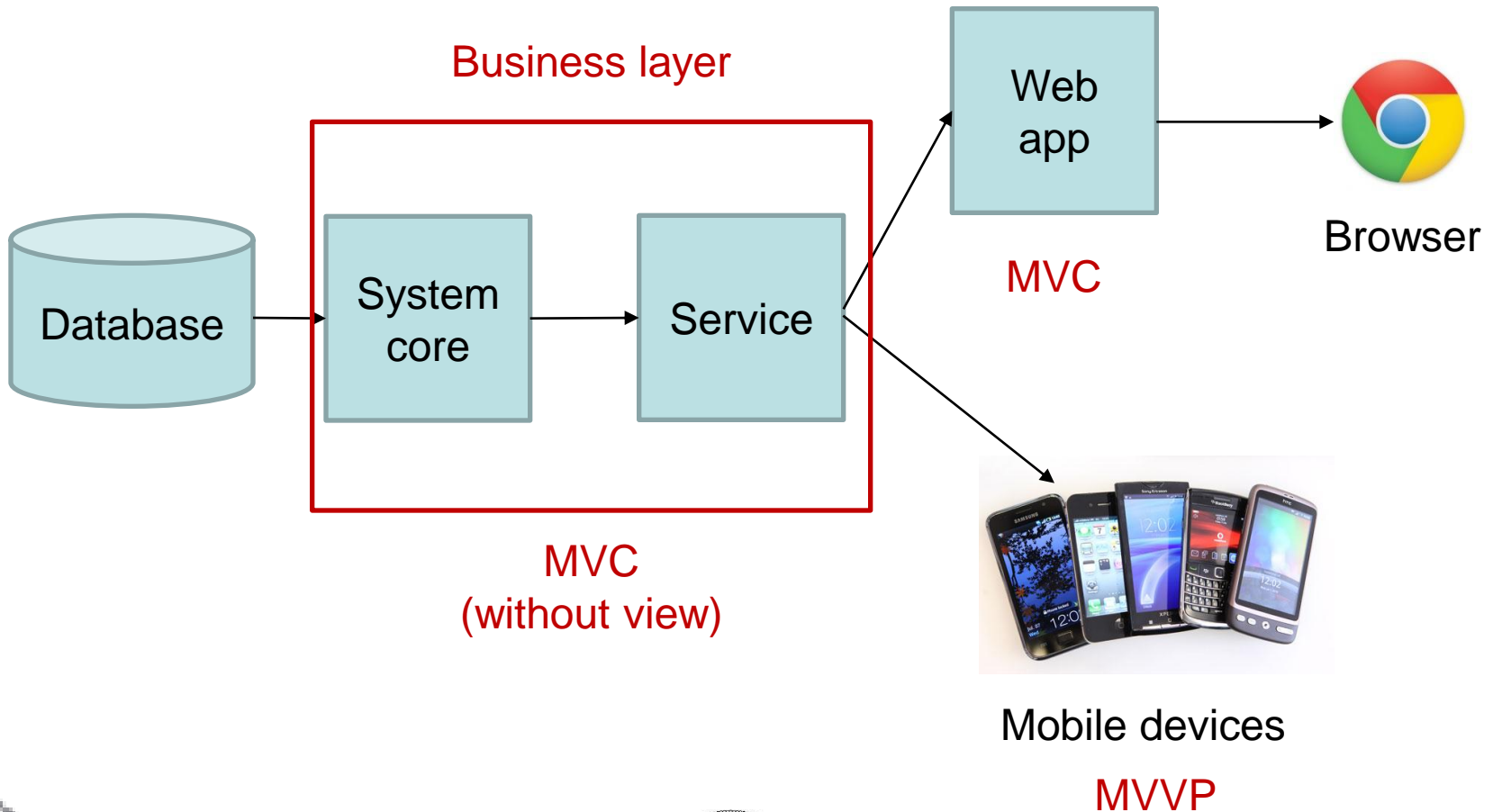
ASP.NET MVC 4
C#

Browser

Mobile devices

Android 2.1, Java
Windows Phone 7.5, C#

Patterns



Questions



References

- [1] <http://www.homersimpson.cc/images/grabpics/townspeople/sea-captain-1.jpg>
- [2] <http://images2.makefive.com/images/entertainment/television/best-simpsons-character/comic-book-guy-7.gif>
- [3] <http://amysmusings.files.wordpress.com/2010/01/grampa41.gif>
- [4] <http://www.homersimpson.cc/images/grabpics/townspeople/dr-hibbert-2.jpg>
- [5] http://images1.wikia.nocookie.net/_cb20120509073413/simpsons/images/5/5e/Dr._Riviera.png
- [6] <http://www.jacksonpartners.co.uk/wp-content/uploads/2012/06/green-question-mark11.jpg>