



School of Computer Science

Web and Database Computing 2019

Lecture 15: Web Application Architecture & Group Project

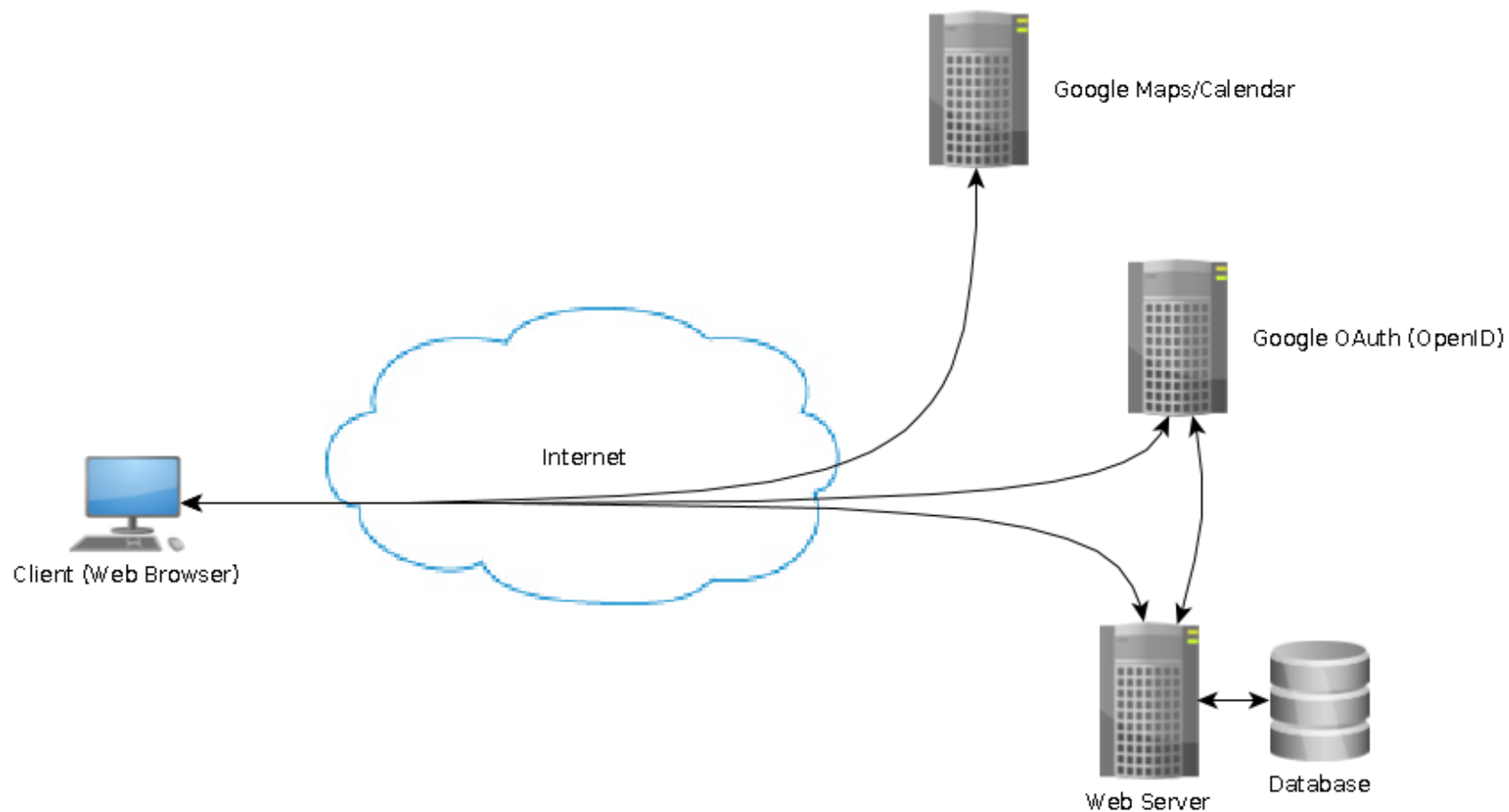
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seek LIGHT

Where we're at

- Week 1
 - Web application background
 - HTML
- Week 2
 - CSS
- Week 3
 - Javascript
- Week 4
 - Client-Server Architecture
 - NodeJS Express Server
- Week 5
 - Database background and design
 - SQL

How it all fits together



How it all fits together - AJAX model

Client requests Webpage

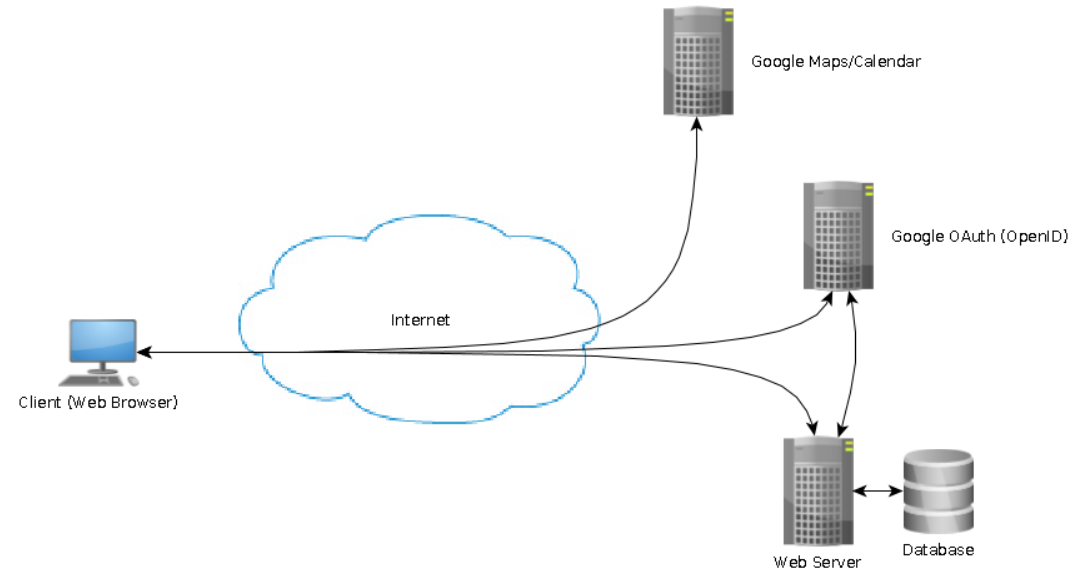
- HTTP GET/POST request sent to server

Server receives request

- Sends back static page

Client Receives response

- Renders webpage



How it all fits together - AJAX model

Client requests additional resources

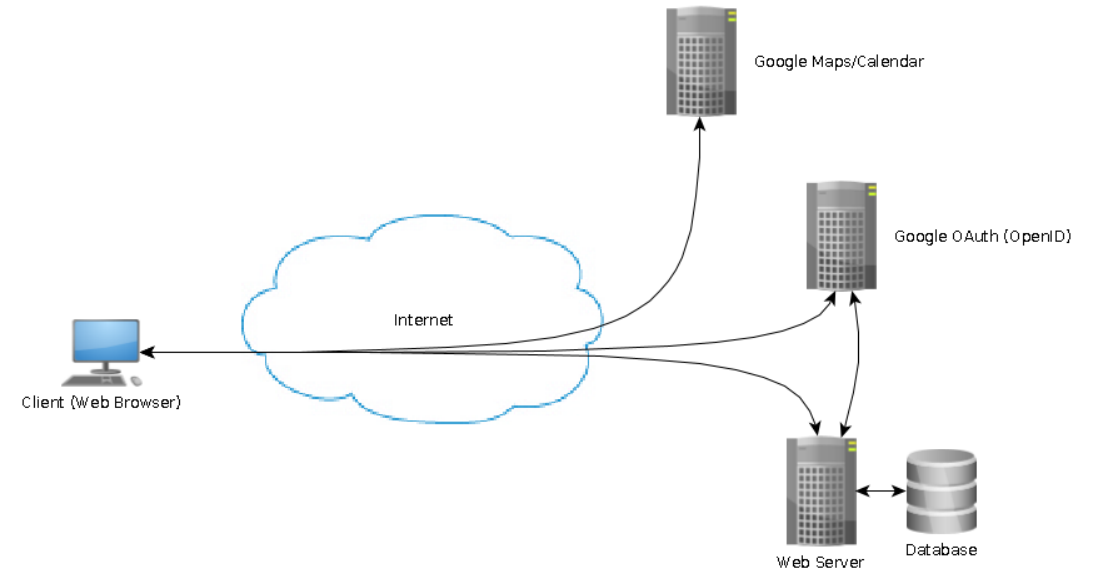
- AJAX HTTP GET/POST request sent to server or other servers

Server receives request

- Server processes request
 - Queries Database if needed (using SQL)
- Renders Dynamic response
 - Could be Plain text, HTML, JSON, XML
- Sends response to client

Client Receives response

- Processes response data
- Modifies elements on page as needed



Building our own Web Application

See the Project Specification for details

Group Project - Description

Design and develop a restaurant booking web application that allows users to book tables at restaurants, and restaurants to manage their bookings.

- Users can sign up and log in to make or manage table bookings and manage their information.
- Restaurants can sign up and log in to manage their profile and individual bookings.
- Users can search for restaurants using appropriate criteria.
- Users can leave a review after their booking.
- Users can choose to link a social media/email/other account, allowing login via that platform, to make logging in easier.

One of the following special features should also be present:

- **Find something nearby**; Using the user's location and preferences, choose and book a suitable nearby restaurant on the user's behalf.
- **Calendar Reminder**; Users can have their bookings automatically added to their Google Calendar when making a booking, and removed if cancelling.

Group Project - Groups

- This assignment must be worked on in groups of 4.
- You should form a group prior to your next workshop in week 7.
- Your group must either:
 - All be enrolled in the same Practical session (different from your workshop sessions) as you will have a final presentation as a group in the practical session
 - OR
 - Meet the requirements for an exemption

The group as a whole must be able to attend at least two (2) of the practical sessions
- You can post in the MyUni Discussions page for your specific practical session to find other group members.
- **If you are unable to form a group by the end of week 7, contact me.**
- Once you have a group, complete the **Group Assignment Group Selection Survey**.

Group Project - Individual Performance

Problem: **Group projects suck if everyone isn't pulling their weight**

Solution: Your final mark will be scaled (up or down) based on peer review by your team members.

Solution++: We will also scale your mark if you have not made a reasonable contribution to the project.

Group Project - Submission & Assessment

2 Submissions

- First Submission at End of Week 9
- Final Submission at your presentation in Week 13

Milestone	Due	Weight
Milestone 1 <ul style="list-style-type: none">• Site Design• Feature plan• Basic Implementation• Data Plan• E-R model	<i>11:59 pm</i> <i>Friday Week 9</i>	10%

Group Project - Final Submission

Milestone	Due	Weight
Final Presentation <ul style="list-style-type: none">• All progress continuing from Milestone 1, plus• Server Implementation• Login System• Database Implementation	<i>During your Week 13 Practical session</i>	15%
TOTAL		25%

Getting Started

1. Find your Group
2. Start researching examples of restaurant booking sites
 - What features do they have
 - What works well/doesn't work well
 - Common elements

Questions



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What's happening

Due:

- Prac Exercise 4 due Wednesday.
- Prac Exercises 5 coming soon.
- Start forming groups for your group project.

This week:

- UX and Accessibility

Further learning:

- Download and install MariaDB
- Start working through the SQL tutorial on w3schools.