TrueCourse

Clever Zombie

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Requirements

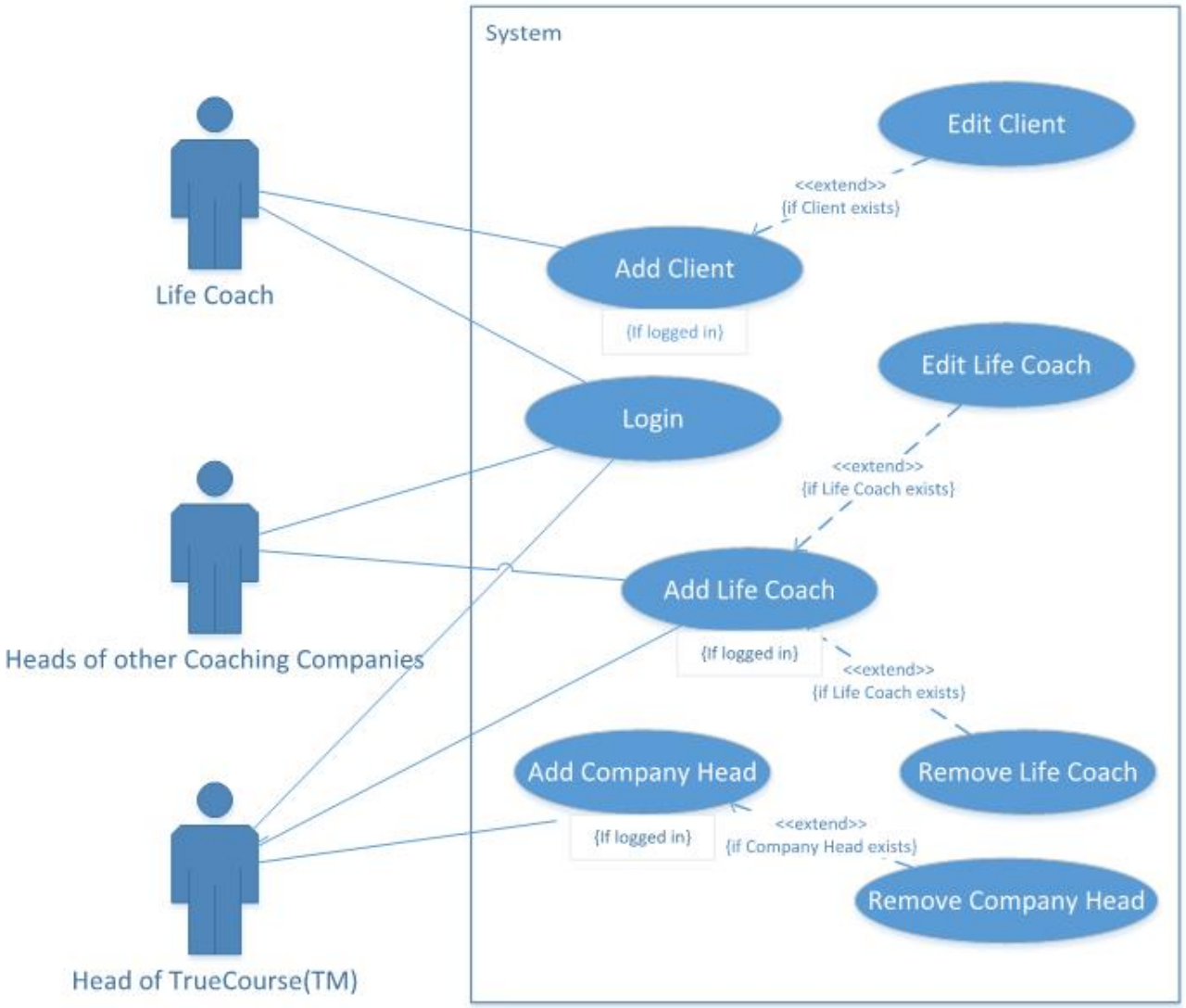
Req#	Description	Source	Priority	Notes
1	Operational Needs			
1.1	Highly scalable system to meet demands of the life coaches	Client	N/A	Load-balanced environment to distribute workload across multiple servers to improve reliability due to having more than one single point of failure.
1.2	Centralized Database	Project Team	N/A	maintains an accurate copy of the client data that can be accessed by the life coaches via the website
2	Functional requirements			
2.1	Web Access	Client	N/A	Life coaches must be able to access their information from the website we will build to be able to record data safely and securely
2.2	Administrative Tools	Project Team	N/A	Admins within TrueCourse must be able to add life coaches to the system in order for them to be able to safely control who has access to the information available within the database. Including but not limited to assigning other administrators.
2.3	Access controls	Project team	N/A	Data should only be accessible by members of the company who owns the data with the exception of true course administrators. All data requires a user log in before any information is made available.
3	Technical requirements			
3.1	Load balancing	Project team	N/A	Load balancing will ensure that the system can handle more demand by dividing up the work
3.2	Scalable	Client	N/A	linked to load balancing in which servers can be added to the load balancing pool to help expand system throughput while under heavy load
3.3	Secure	Client	N/A	Security is of the utmost importance due to the sensitivity of the data being stored in the database

3.4	Redundancy	Project Team	N/A	the failure of one server cannot bring down the entire system
4	Availability requirements			
4.1	24/7/365	Client	N/A	The website needs to be available at all times, during business hours
4.1.2	Updates to the system	Project Team	H	Updates need to be performed safely and in such a manner that the update is released gradually instead of all at once, when possible.
5	Data Migration			
5.1	Database Backup	Project Team	N/A	Databases should be backed up on a daily basis to ensure that data is retained. This data is the whole purpose of the project
5.2	Website backup	Project Team	N/A	Websites should be backed up on a weekly basis to ensure that we can quickly restore functionality in the event of a disaster
5.3	Complete backup	Project Team	N/A	Complete back up of the environment as it stands needs to be performed on a monthly basis to assist in DR planning and testing

Project Roles

- Morgan Baker: DBA
- Joseph Thompson: IT Operating System Specialist
- Thomas Evans: It Network Specialist
- Alex Palomba: Web UI
- Alexander Harris: Web Functionality
- Daniel Swezey: Project Manager

UML Diagram


System
Edit Client
<<extend>>
{if Client exists}
Add Client
{If logged in}
Edit Life Coach
Login
<<extend>>
{if Life Coach exists}
Add Life Coach
{If logged in}
<<extend>>
{if Life Coach exists}
Add Company Head
{If logged in}
<<extend>>
{if Company Head exists}
Remove Life Coach
Remove Company Head
Life Coach
Heads of other Coaching Companies
Head of TrueCourse(TM)

System Requirements

True course understands that there are many ways to access a website through the diverse amounts of technologies available. Users on the responsive websites will have the best experience through any web browser, computer, or tablet. The system will be running in a Linux server environment (LAPP server) and the website will be implemented using PHP while interacting with a PostgreSQL database. The website will be running bootstrap which is one of the most popular HTML, CSS, and JavaScript frameworks. Bootstrap is compatible with many of the popular web-browsers.

TrueCourse will support the following browsers

- Chrome
- Microsoft Edge
- Firefox
- Internet Explorer
- Safari

Operating System Minimum Requirements

Minimum	Recommended	Full supported List
Window 7		

Web Browsers Minimum Requirements

Minimum	Recommended	Full supported List
Google Chrome		
Microsoft Edge		
Mozilla Firefox		
Internet Explorer		
Safari		

SYSTEM CONCEPT

The system is designed to be scalable based on the number of servers that are added within the load balancing environment for their given tasks. This will enable the system to divide the work up based on the number of available servers to process requests being made. There will be a separate web server from the systems providing database information to the user and servers that allow users to make changes to the database to ensure the reliability and responsiveness of the website as a whole. While it may increase maintenance the trade off in website performance will greatly benefit the company when they try to sell the product as a service

CONCEPT OF OPERATIONS

1. Load balancing for critical systems, allows for a larger number of consecutive users to access the website and prevent slowdowns and downtime as we no longer are dependent on a single server to provide a specific resource.
2. Centralized database servers that are separate from the web server that are load-balanced to provide redundancy
3. Daily backups of the database to help with recovery in the event of a problem
4. Seamless website that is familiar on all devices