THE MAKING OF

FACEBOOK

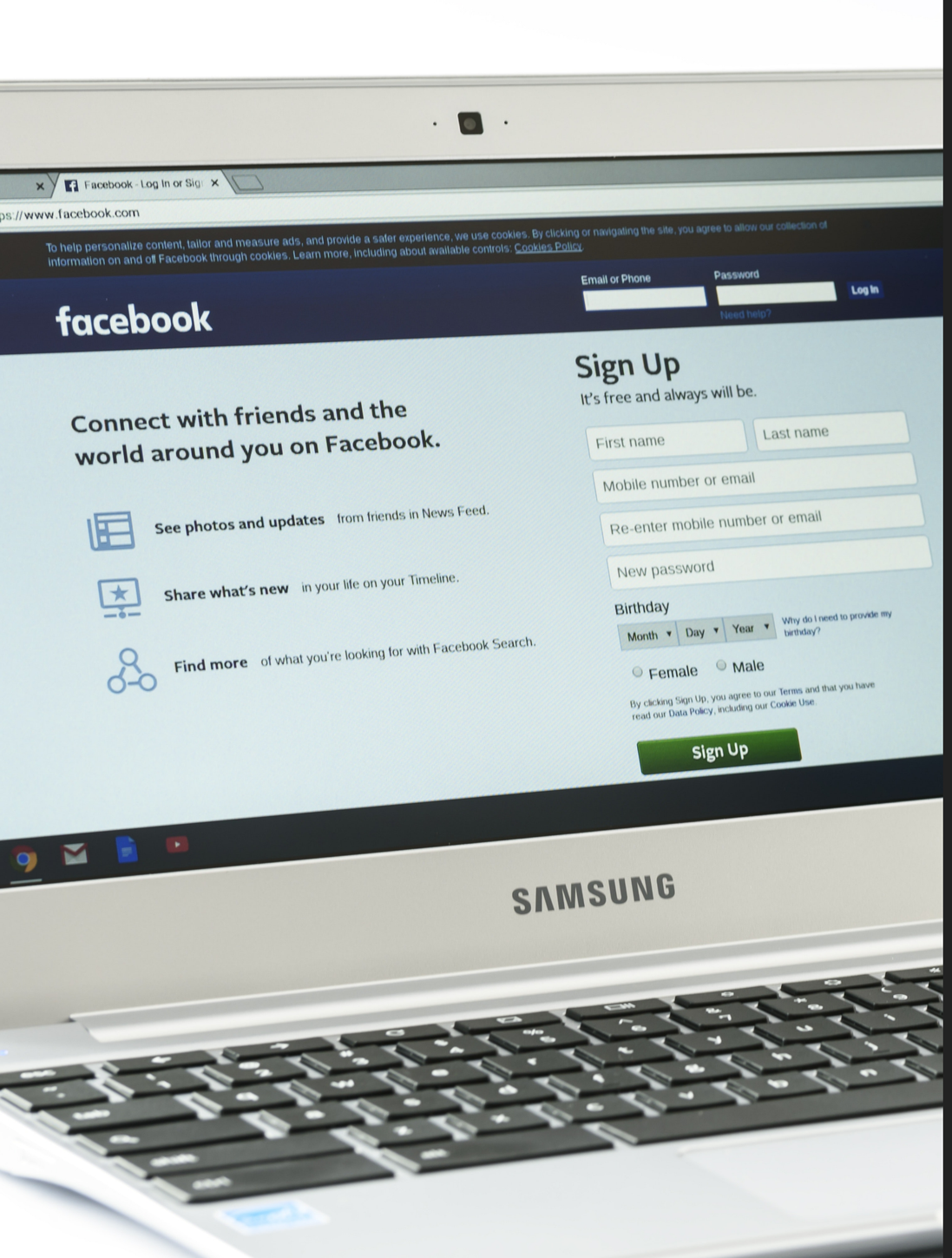
A lot goes into the making of a website to enable it to do what it is meant to do. Without understanding the foundation we cannot know what it takes to create the final output and in this presentation we will learn how Facebook was created.

THE BEGINNING OF FACEBOOK

Facebook was launched on 4th Feb, 2004 as TheFacebook as a social networking service. On 6th Feb, 2006 Facebook launched the News Feed. The original news feed is an algorithmically generated and constantly refreshing summary of updates about the activities of one's friends.

The Facebook SDK or Software Development Kit, for JavaScript provides a rich set of client-side functionality that:

- Enables you to use the Like Button and other Social Plugins on your site.
- Enables you to use Facebook Login to lower the barrier for people to sign up on your site.
- Makes it easy to call into Facebook's Graph API.
- Launch Dialogs that let people perform various actions like sharing stories.
- Facilitates communication when you're building a game or an app tab on Facebook.



LET'S LEARN ABOUT THE

FRONTEND

FRONTEND

The front end of a website is the part that users interact with, everything that you see when you're navigating around the Internet, from fonts and colors to dropdown menus and sliders.

The front end of Facebook uses variety of services, tools and programming languages. Their servers run on LAMP.

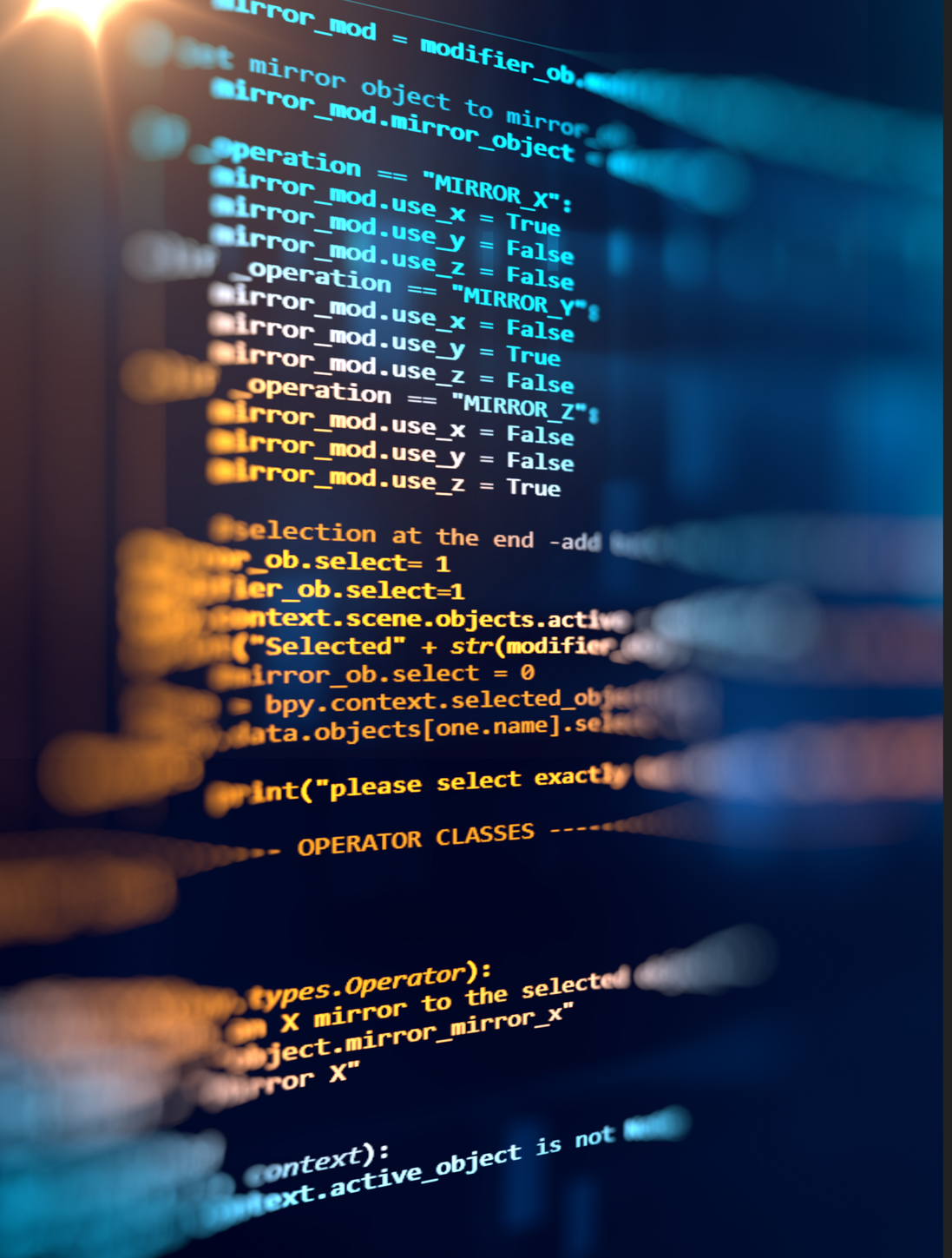
FRONTEND

LAMP stands for Linux, Apache, MySQL, and PHP. Together, they provide a proven set of software for delivering high-performance web applications. Each component contributes essential capabilities to the stack:

- Linux: An **operating system**, Facebook uses it because it offers more **flexibility** and **configuration** options than some other operating systems but has optimised it for its own purposes
- Apache: The **web server**. The Facebook website uses Apache web server because it **processes requests and serves up web assets** via HTTP so that the is accessible to anyone in the public domain over a simple web URL.

FRONTEND

- MySQL: The **database**. Facebook uses MySQL, but primarily as a key-value persistent storage. Facebook is a fairly **complex site** so MySQL is suitable as it is **well structured**, and **translating that structure into the backend is easy**.
- PHP: The **programming language**. It helps Facebook create dynamic web pages. It makes **programming easier**—and a bit more fun—by allowing programmer to write new code, hit refresh, and immediately see the resulting changes without the need for compiling.



LET'S LEARN ABOUT THE

BACKEND

BACKEND

So what makes the front end of a website possible? Where is all that data stored? This is where the back end comes in. The back end of a website consists of a server, an application, and a database.

Facebook's backend services are written in a variety of different programming languages including C++, Java, Python, and Erlang.

Facebook uses the Polyglot Persistence architecture , which means using different databases having unique features & data models for implementing different use cases/business requirements.

BACKEND

Now let’s talk about some of the core technologies that runs the backend of Facebook.

C++

Facebook rolled out a tool called HipHop. This would convert the PHP code into C++ before it was executed on the company's servers, and Facebook engineers eventually honed this tool to the point where it could juggle 500 to 600 percent more traffic than the pure PHP site on the same number of machines.

BACKEND

Python

Another important language is Python. It is the third most popular language at Facebook, behind Hack, an in-house dialect of PHP, and C++. It is used for 21 percent of Facebook Infrastructure's codebase.

Using Python enables us to write code that dynamically generates configuration objects without creating, maintaining, or learning to use complex templating systems that are typically required for this use case.

To conclude, building products that help and empower over a billion people around the world is at the core of what **Facebook** product **engineers do.** Evolution is the foundation Facebook’s structure is laid upon but few programming languages and technologies are the cornerstone which is why they keep advancing but have been hard to replace.