



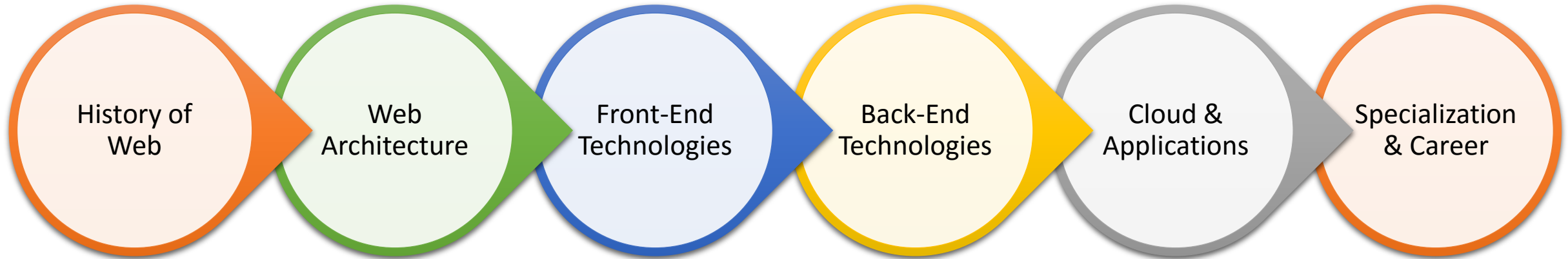
How Web Works?

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What will we learn today?



Some Key Terms



Internet:

The Internet is a worldwide network of computers, linked mostly by telephone lines.

Web:

The Web is the worldwide collection of text pages, digital photographs, music files, videos, and animations you can access over the Internet.

Webpage:

The basic building blocks of the Web are pages of text, like this one—Web pages as we call them.

Website:

A collection of Web pages on the same computer is called a website. Every web page has highlighted phrases called links (or hypertext links) all over it.



History of Web

History of Web



1969

ARPA (Advanced Research Projects Agency) goes online in December, connecting four major U.S. universities.

1972

Electronic mail is introduced by Ray Tomlinson, a Cambridge, Mass., computer scientist. He uses the @ to distinguish between the sender's name and network name in the email address

1973

Transmission Control Protocol/Internet Protocol (**TCP/IP**) is designed and in 1983 it becomes the standard.

1982

The word "Internet" is used for the first time.

1984

Domain Name System (DNS) is established, with network addresses identified by extensions such as **.com, .org, and .edu.**

Writer William Gibson coins the term "**cyberspace.**"

History of Web



1989

The World Wide Web begins as a CERN (European Organization for Nuclear Research) project called **ENQUIRE**.

AOL launches its Instant Messenger chat service.

1990

World's first website and server go live at CERN, which bears the message "This machine is a server. DO NOT POWER DOWN!"

McGill University student Alan Emtage develops **Archie**.

1991

Researchers rig up a **live shot of a coffee pot** so they could tell from their computer screens when a fresh pot had been brewed.

Later this becomes **Webcam**.

1992

The term "**surfing the internet**" is coined and popularized.

Tim Berners-Lee posts the **first photo**, of the band "**Les Horribles Cernettes**," on the Web.

1993

CERN **places its World Wide Web technology in the public domain**, donating it to the world.

The National Center for Supercomputing Applications (NCSA) releases **Mosaic 1.0**

History of Web



1994

One of the first known Web purchases takes place: **a pepperoni pizza with mushrooms and extra cheese from Pizza Hut.**
Yahoo! is created by Stanford University graduate students Jerry Yang and David Filo.

1995

Amazon.com opens for business, billing itself as the “Earth’s Biggest Bookstore.”
Match.com, the first online dating site, launches.
Microsoft releases **Windows 95** and the first version of **Internet Explorer.**

1996

Nokia releases the **Nokia 9000 Communicator**, the first cellphone with internet capabilities.
HoTMaiL launches as one of the world’s first Webmail services.

1997

Netflix launches as a company that sends DVDs to homes via mail.
Go Daddy launches as Jomax Technologies.
Google.com registers as a domain.

1998

The Internet Corporations for Assigned Names and Numbers (**ICANN**) takes over responsibility for the coordination of the global internet’s systems of unique identifiers.

History of Web



1999

MP3 downloading service **Napster** launches, overloading high-speed networks in college dormitories. Many colleges ban the service and it is later shut down for enabling the illegal sharing of music files.

2000

40 million Americans – or 48% of internet users – have purchased a product online.

32% of internet users (over 30 million people) sent e-greeting cards to loved ones and friends.

2001

Jimmy Wales launches **Wikipedia**. Users write over 20,000 encyclopedia entries in the first year.

2002

Social networking site **Friendster.com** launches, but is quickly overtaken by **Facebook**.

Microsoft launches **Xbox Live**, its online multiplayer gaming service.

2003

Apple launches the **iTunes Music Store** with 200,000 songs at **99¢** each.

Skype launches.

Professional networking site **LinkedIn** launches.

WordPress system created.

History of Web



2004

Mark Zuckerberg launches **thefacebook.com**.

1,200 Harvard students sign up within the first 24 hours.

Google starts trading on the NASDAQ.

Mozilla releases **Firefox 1.0**.

2005

Community news site **Reddit** is founded.

YouTube is founded on Valentine's Day. The first video, an explanation of what's cool about elephants, is uploaded by co-founder Jawed Karim on April 23.

2006

Google acquires **YouTube** for **\$1.65 billion**.

Twitter launches. Founder Jack Dorsey sends the first tweet: "**just setting up my twttr**"

2007

Apple releases its first **iPhone**, priced at \$499 for 4GB and \$599 for 8G.

Estonia becomes the **world's first country to use internet voting** in a parliamentary election.

2008

HTML5 is introduced.

Google releases the **Chrome** Web browser.

Deal-of-the-day website **Groupon** launches.

Apple launches its **App Store** with 552 applications.

History of Web



2009

Microsoft's **Bing** search engine launches.

Twitter raises \$98 million from investors, valuing the company at a whopping **\$1 billion**.

2010

Pinterest and **Instagram** launch.

Wikileaks collaborates with major media organizations to release **U.S. diplomatic cables**.

Ex-Facebook employees launch site **Quora**.

2011

Microsoft buys **Skype** for **\$8.5 billion**.

Google+ launches.

LinkedIn reaches 100 million users and debuts on **NYSE**.

2012

Facebook reaches **1 billion** monthly active users.

Ecommerce sales top **\$1 trillion** worldwide.

2013

A majority (56%) of Americans now own a smartphone of some kind.

Apple says app store downloads top 40 billion, with 20 billion in 2012 alone.

History of Web



2014

Facebook buys messaging app **Whatsapp** for **\$19 billion**.

45% of internet users ages 18-29 in serious relationships say the internet has had an impact on their relationship.

2015

Mark Zuckerberg (Facebook) spoke during the 70th annual U.N. General Assembly session, to increase awareness and garner support for the initiative

2016

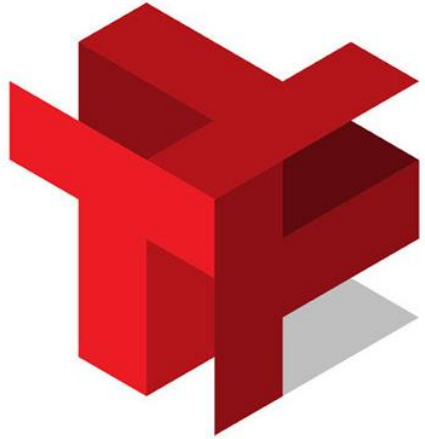
Every **60** Seconds, **72 Hours** of YouTube Video Is Uploaded

2017

Of the 7 Billion People on Planet Earth, Over **2.4 Billion** Use the Internet.

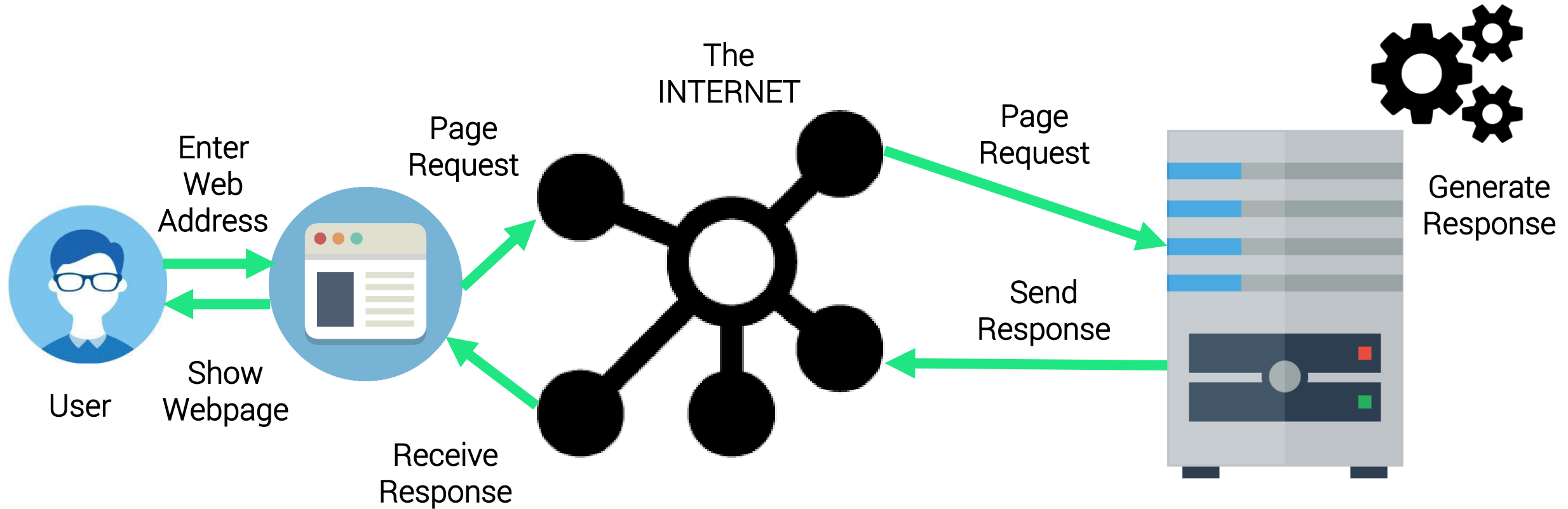
Over **8.7 Billion** Machines Are Currently Connected to the Internet.

Cont

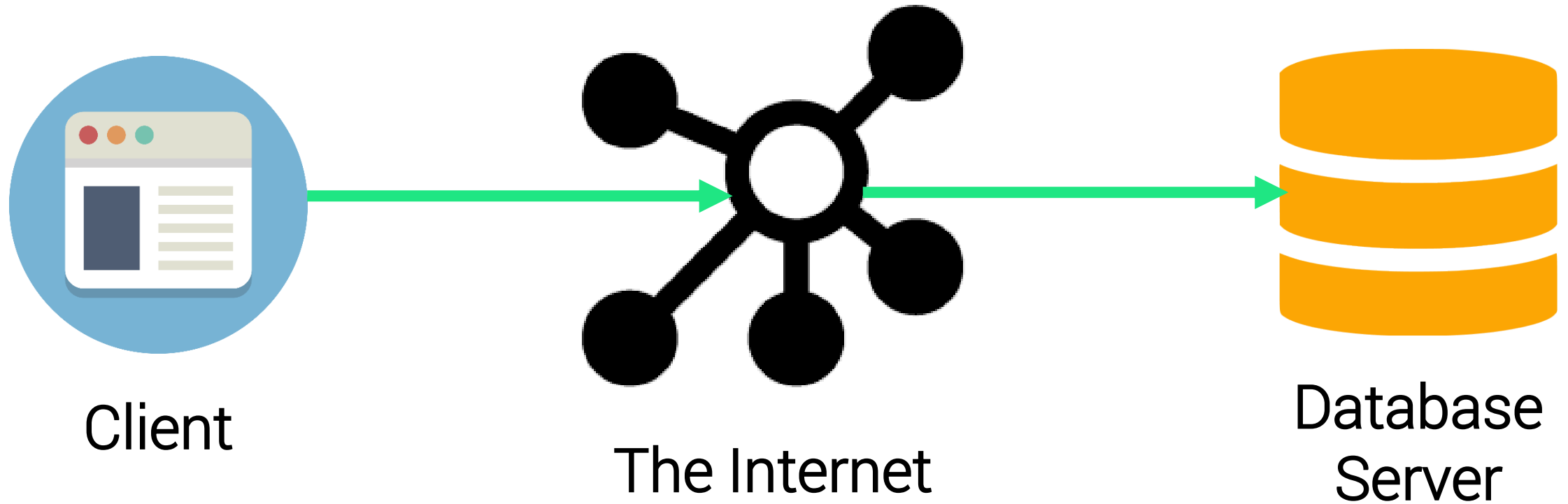


Web Architecture

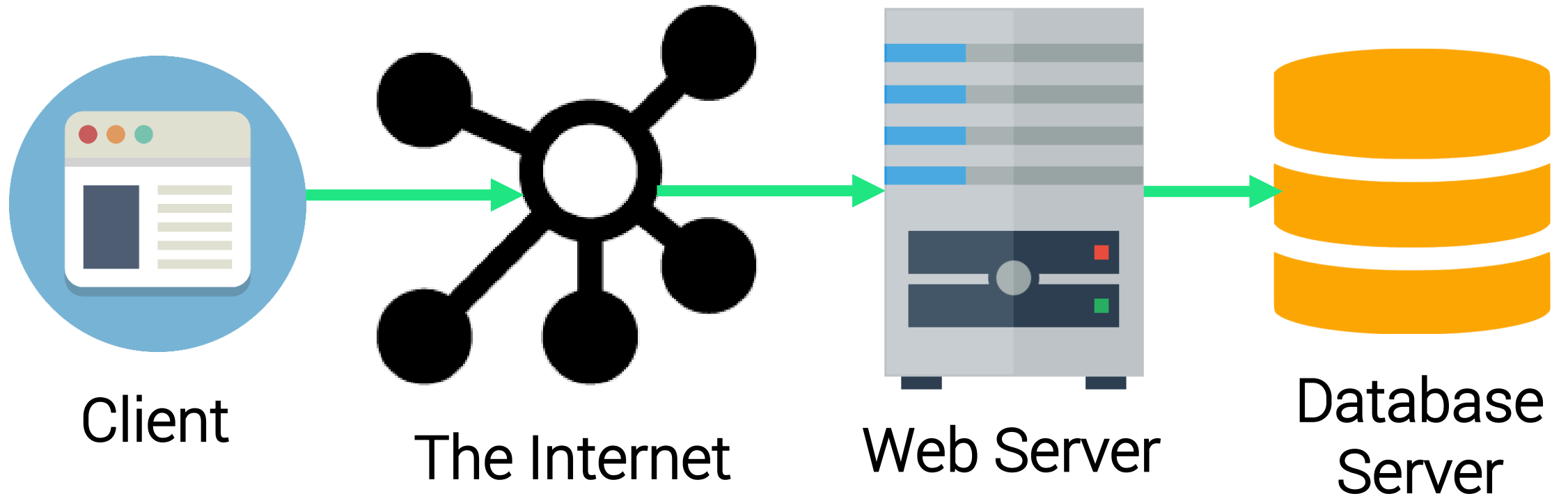
Web Architecture



Two-Tier Architecture



Three-Tier Architecture





Front-End Technologies

Front-End Technologies



HTML 5



CSS 3



JavaScript



Node JS



React JS



D3.JS



Bootstrap



Angular JS



Back-End Technologies

Back-End Technologies





Cloud & Applications

Introduction to Cloud



| | |
|------------------------------|-----|
| Cloud Marketplace | ... |
| Cloud Broker Platform | ... |
| Cloud Management | ... |
| SaaS | ... |
| PaaS | ... |
| IaaS | ... |
| Cloud Platform | ... |
| Virtualization Software/Mgmt | ... |
| Hardware | ... |



Specialization & Career Opportunities

Career in Web



1. Web Developer (Back-End Development)
2. Web Designer / UX Designer (Front-End Development)
3. Full-Stack Developer (Front-End + Back-End Development)
4. SEO Expert
5. SEM Expert
6. Content Manager
7. Web Analyst
8. Database Administrator



Any Questions?



**THANK
YOU!**