

# Game Project

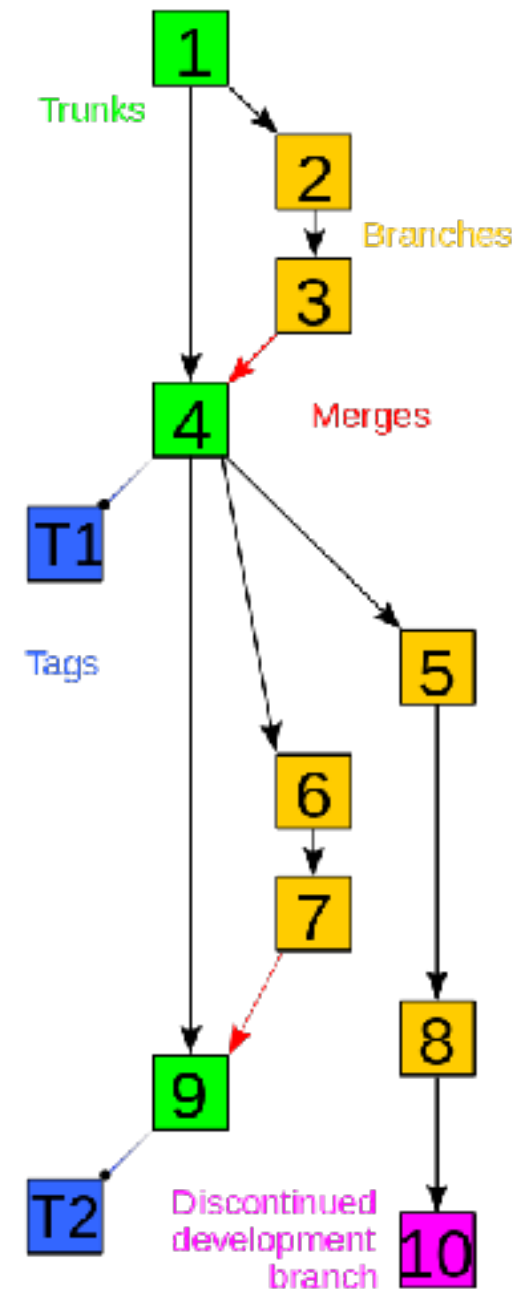
Week 2

# Agenda

- HTTP basics
- API basics
- HTML basics
- Build crawler in Python
- Advanced topics

# Version Control

- Best practice
- Lab



# HTTP Basics

Hypertext Transfer Protocol (Secure)

## LAYER

Application Layer

Transport Layer

Network Layer

Network Interface Layer

Hardware

## PROTOCOL

APPLICATION

UDP

TCP

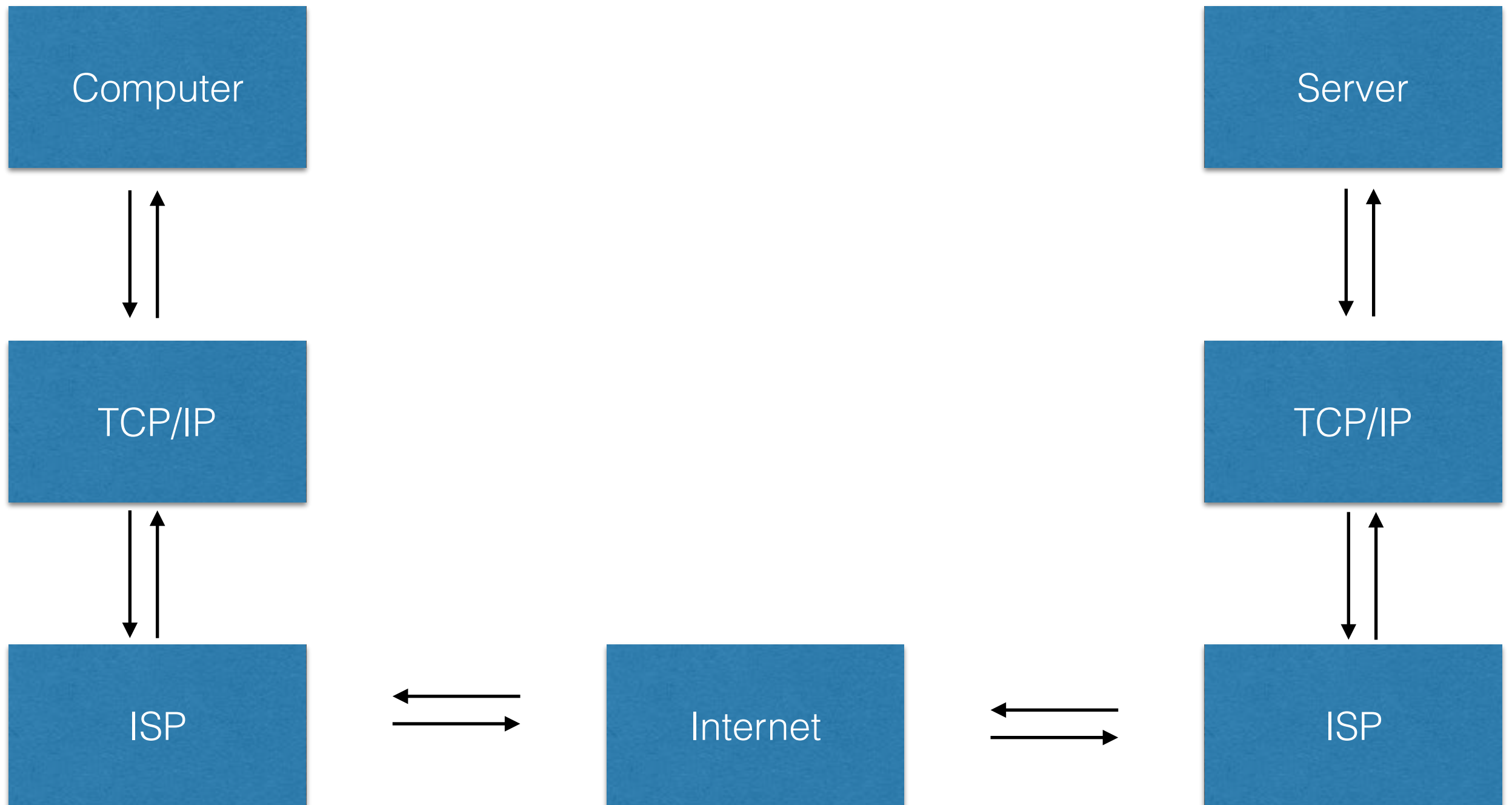
INTERNET PROTOCOL

NETWORK INTERFACE

PHYSICAL NETWORK

[https://en.wikipedia.org/wiki/Hypertext\\_Transfer\\_Protocol](https://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)

# HTTP Basics



# HTTP Basics

- Methods:
  - GET - requests a representation of the specified resource.
  - POST - requests that the server accept the entity enclosed in the request
  - PUT
  - DELETE
  - etc.

# HTTP Basics

## ▼ Response Headers

**alt-svc:** quic=":443"; ma=2592000; v="36,35,34,33,32"  
**cache-control:** private, max-age=0  
**content-encoding:** gzip  
**content-type:** text/html; charset=UTF-8  
**date:** Fri, 23 Sep 2016 22:53:15 GMT  
**expires:** -1  
**server:** gws  
**set-cookie:** DV=; expires=Mon, 01-Jan-1990 00:00:00 GMT; path=/; domain=www.google.com  
**set-cookie:** DV=; expires=Mon, 01-Jan-1990 00:00:00 GMT; path=/; domain=.www.google.com  
**set-cookie:** DV=; expires=Mon, 01-Jan-1990 00:00:00 GMT; path=/; domain=google.com  
**set-cookie:** DV=; expires=Mon, 01-Jan-1990 00:00:00 GMT; path=/; domain=.google.com  
**status:** 200  
**strict-transport-security:** max-age=86400  
**x-frame-options:** SAMEORIGIN  
**x-xss-protection:** 1; mode=block

## ▼ Request Headers

**:authority:** www.google.com  
**:method:** GET

**:path:** /

**:scheme:** https

**accept:** text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,\*/\*;q=0.8

**accept-encoding:** gzip, deflate, sdch, br

**accept-language:** en-US,en;q=0.8

**cache-control:** max-age=0

**cookie:** NID=87=tjwyEVryOp0ys9FVnzDatnDSrwoCtKifPf9uw-m3DG4qTTJwV322vv\_h2yhmrPHVGF8f8G7sdx\_CEKaS0wlvse3g5dLlRneMLaY-TXS9S0j7G9SNHD  
fsmgnkojHBAvZdWDrUhoiaqjmKA; DV=EjUs-kXcKNsaLEWZLaMIXfTLE4GyrgI; OGPC=5062209-5:

**referer:** https://www.google.com/

**upgrade-insecure-requests:** 1

**user-agent:** Mozilla/5.0 (Macintosh; Intel Mac OS X 10\_12\_0) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/53.0.2785.116 Safari/537.36

# API Basics

- Application Programming Interface
- Request structure:
  - method
  - URL
  - endpoints (optional)
  - auth (optional)



# API Basics

- Understand each API
  - auth?
  - quota
  - parameters
- Google YouTube API
  - Get video info
  - Get video stats