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Internet and Information Technology ITC202

Lecture 11 – Internet

Dr. Eng. Youssef Ntefeh

Course Topics

- History of computing.
- Introduction to information technology.
- System and application software
- MS Word.
- MS Excel.
- MS PowerPoint.
- Common web services and tools.

Learning Outcomes

- Using Technology to Change the World.
- Understanding the Computers Parts.
- Application Software: Programs That Let You Work.
- Introduction to Word, Excel, and PowerPoint.
- Using the Internet and Web's Resources.
- Protecting Your Digital Data and Devices.

Learning Objectives

- Define what the Internet is
- Learn about browser s/w and Web pages
- Download from the Web
- Your privacy and the Web



An introduction to networks and TCP/IP

Internet

- Are the Internet and the World Wide Web:
 - The same thing?
 - Or different?
 - If different, how?

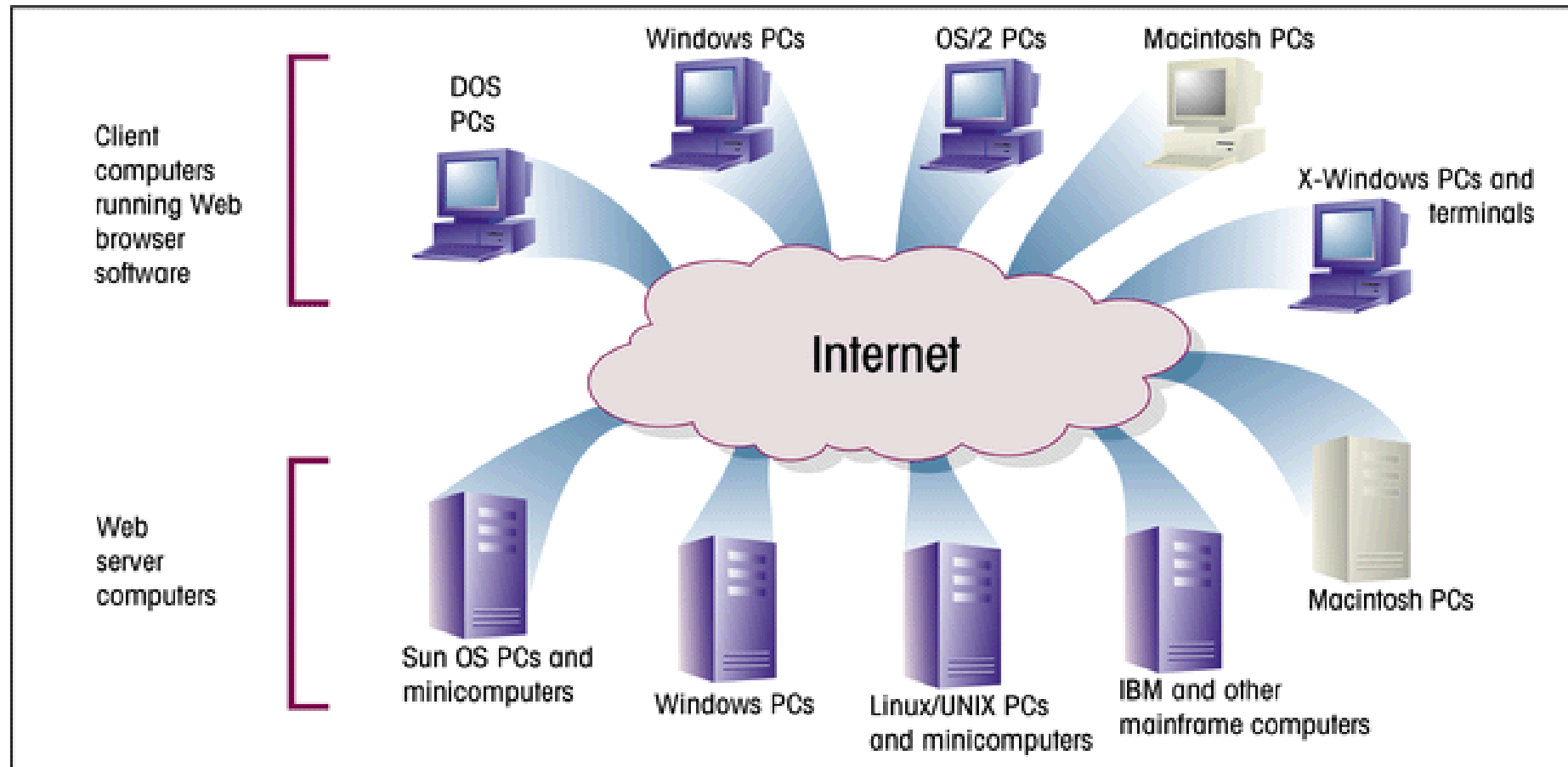
The Web is one piece of the Internet

How does the Web work?

Client/Server Structure of the World Wide Web



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How does the Web work?

- A Web browser is a software (s/w) application that runs on a device to make it work as a Web client.
- Web servers: computers that run server s/w that enable them provide files through the Web.
- Web pages are stored in files that contain HTML (HyperText Markup Language) instructions, text, images, sound, etc.

How does the Web work?

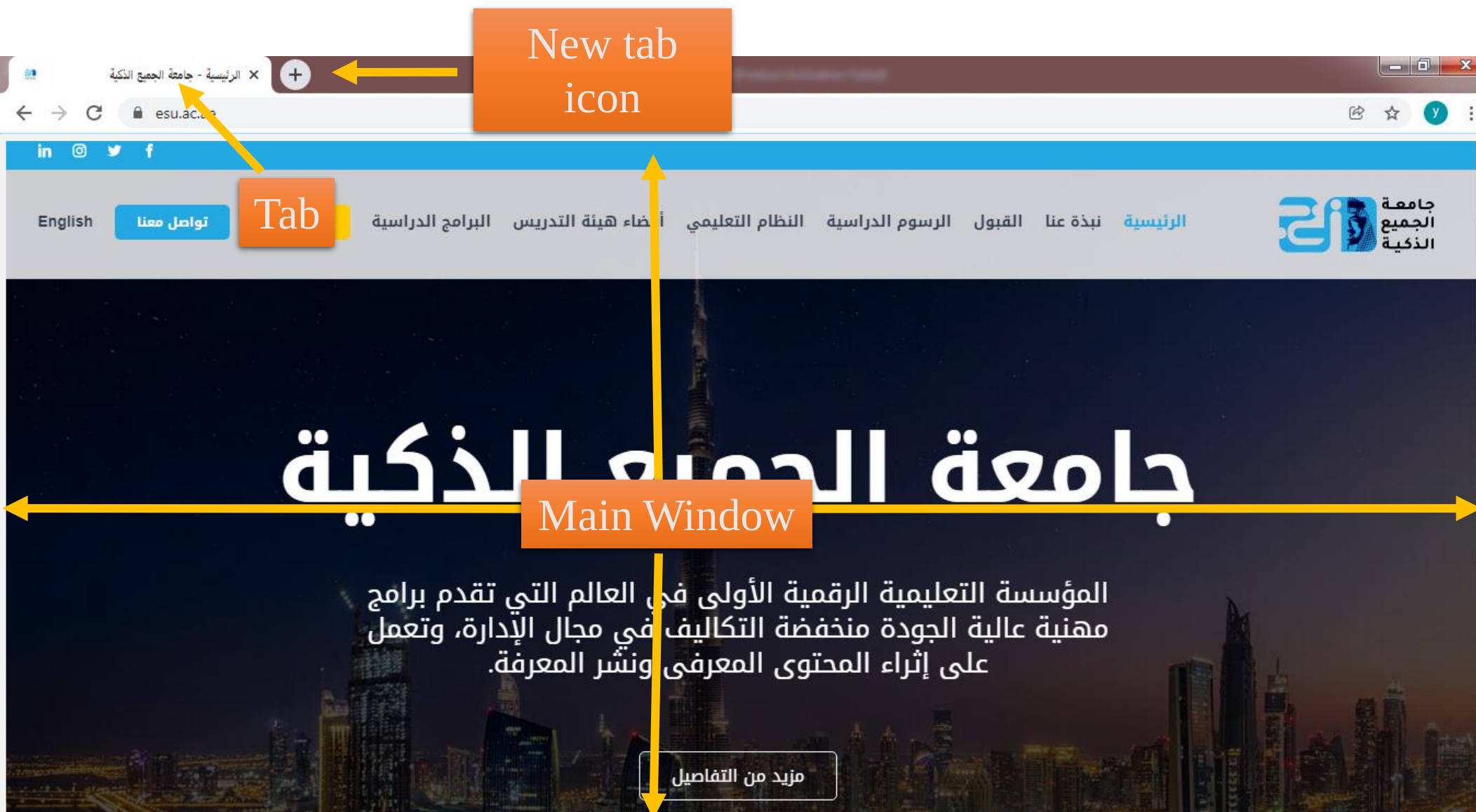
- You need:
 - A device with a browser (client s/w)
 - MS Edge, Firefox, Safari, Chrome
 - Internet Service Provider (ISP)
 - Cable, Phone company, router
- You request a web resource in the browser by:
 - Clicking on a link
 - Specifying a resource address

How does the Web browser work?

- A web page is displayed in a tab in the browsers' main window
- Can have many tabs in the browsers' main window
- Click new tab icon (+) to add a tab
 - Click tab close icon (x) to delete tab
 - Click tab to move between tabs

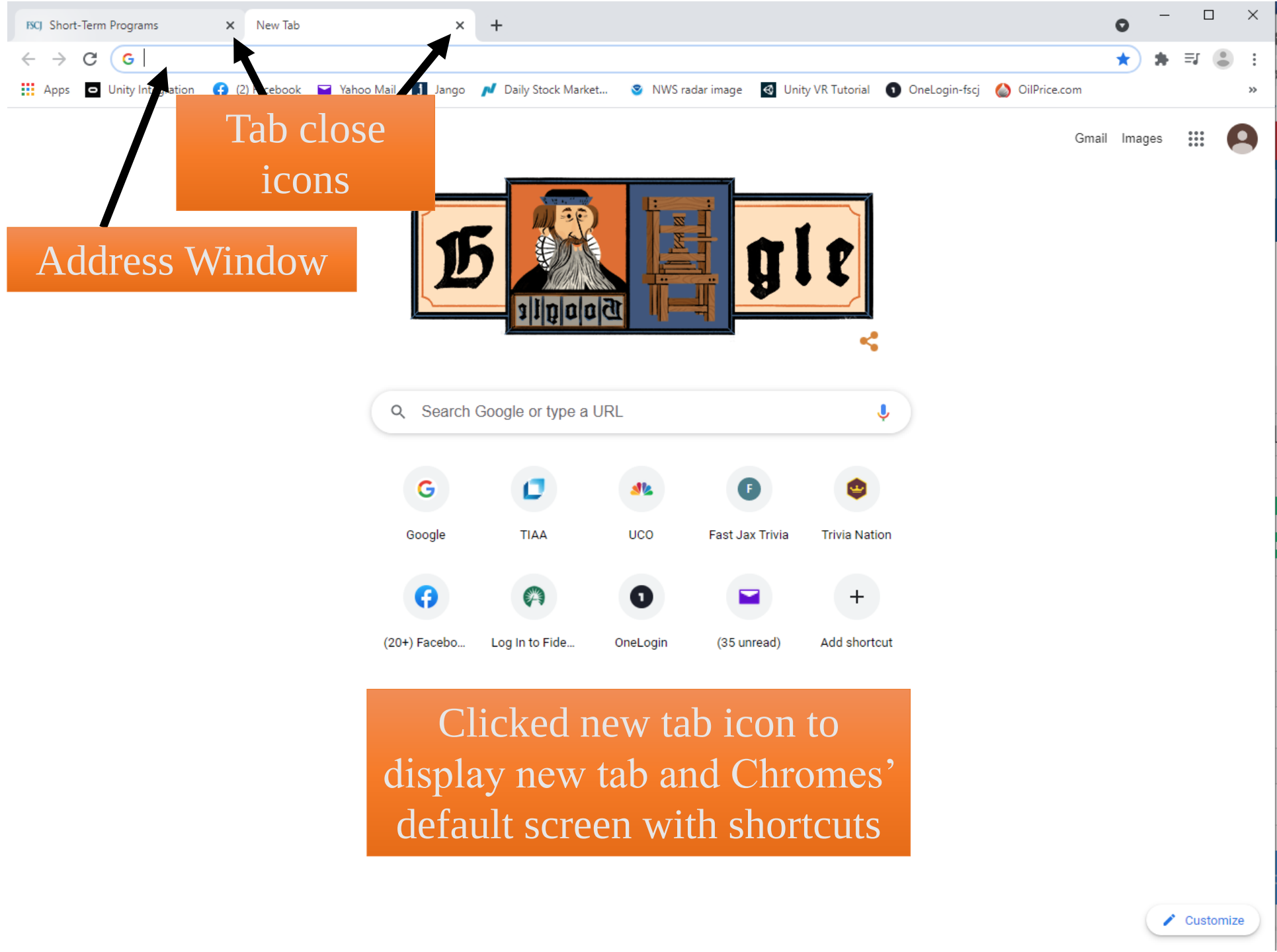


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How does the Chrome browser work?

- To display a new web page you can
 - Click one of the shortcut icons
 - Or enter a web page address in the address window
 - Huh? What's a web page address?



Uniform Resource Locator - URL

- Each web page/resource has a unique address called a URL
- URL's can be comprised of:
 - Protocol://Host/Path/File.name

Host Identification

- Host can be identified by an IP address or a Domain name
- Path is the directory (folder) and subdirectories (subfolders) where the web page is located on the host

IP address: four numbers (ranging from 0 to 255) separated by periods

Example: 104.46.104.203

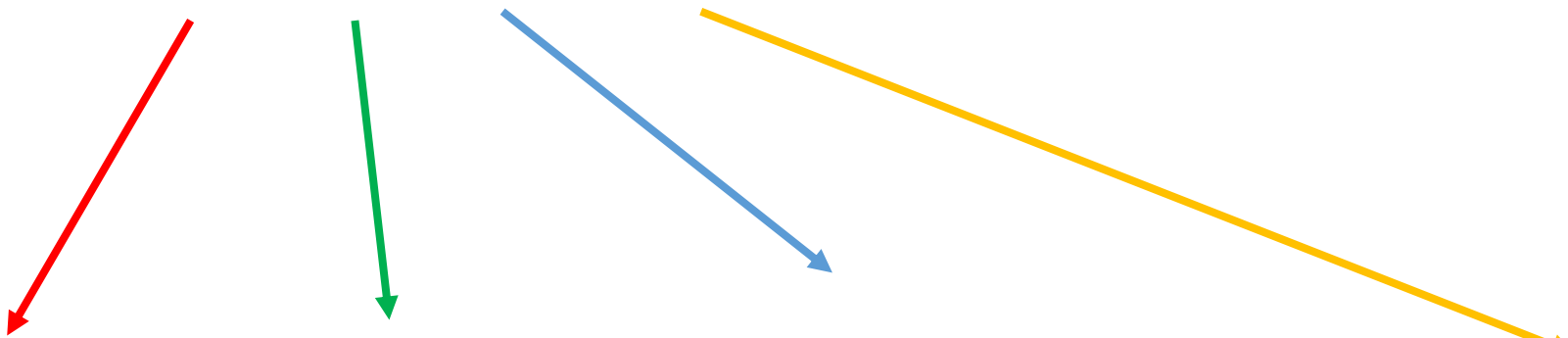
Domain name has at least three parts (subsubdomain, subdomain, top level domain) separated by periods

Example: esu.ac.ae

Non-hyperlink Access

- You must specify
 - Protocol, Host, Path, File Name
- What are these?

• Protocol, Host, Path, File Name



<https://esu.ac ae/wp-content/uploads/2021/07/Student-Manual-1.pdf>

Entering a URL in the Address Bar

- Type the URL of the location that you want to go to in the Address bar
- Try: `esu.ac.ae`
- Don't have to enter the protocol or subsubdomain anymore – why?
 - Browser does it for you!!

Address Window

English

تواصل معنا

للتسجيل

البرامج الدراسية

أعضاء هيئة التدريس

النظام التعليمي

الرسوم الدراسية

القبول

نبذة عنا

الرئيسية



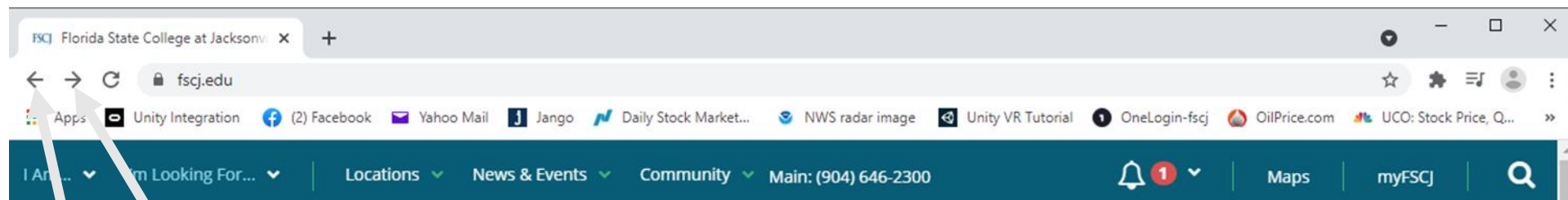
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تقدم برامج أكاديمية مبنية على أفضل نماذج التعليم عن بعد
اعتمادًا على أحدث تقنيات التعليم الإلكتروني وتقديم محتوى
تعليمي راق من مصادر ذات جودة أكاديمية عالية

مزيد من التفاصيل

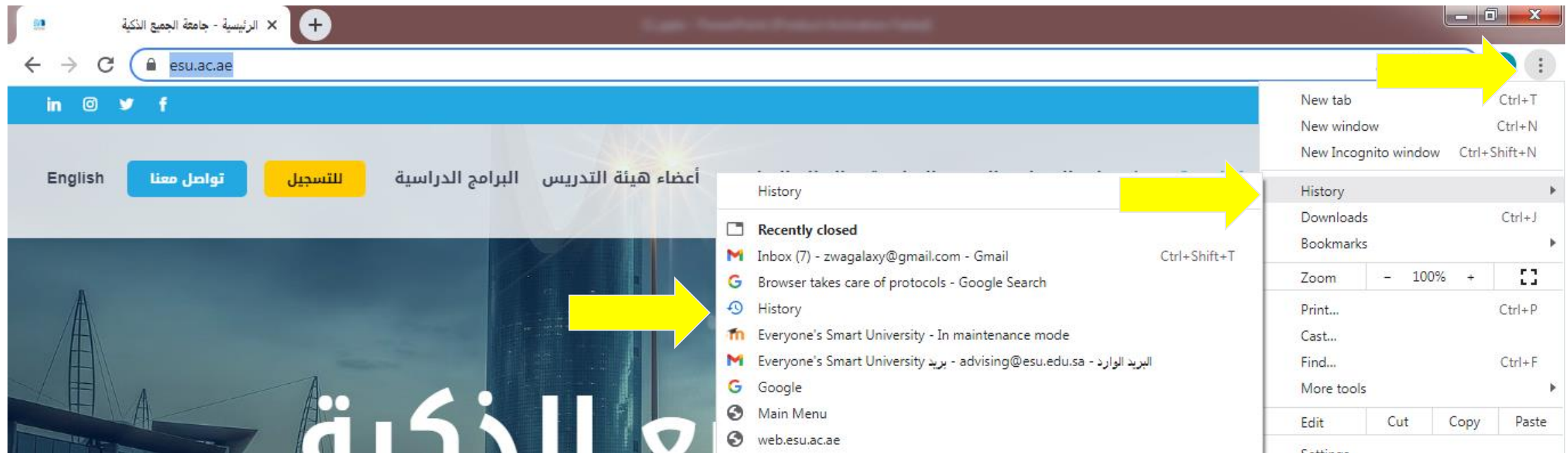
Navigating the web

- As you go from site to site, the browser stores the location of each page you visit in the history list.
- Use the Back and Forward buttons to move through the history list



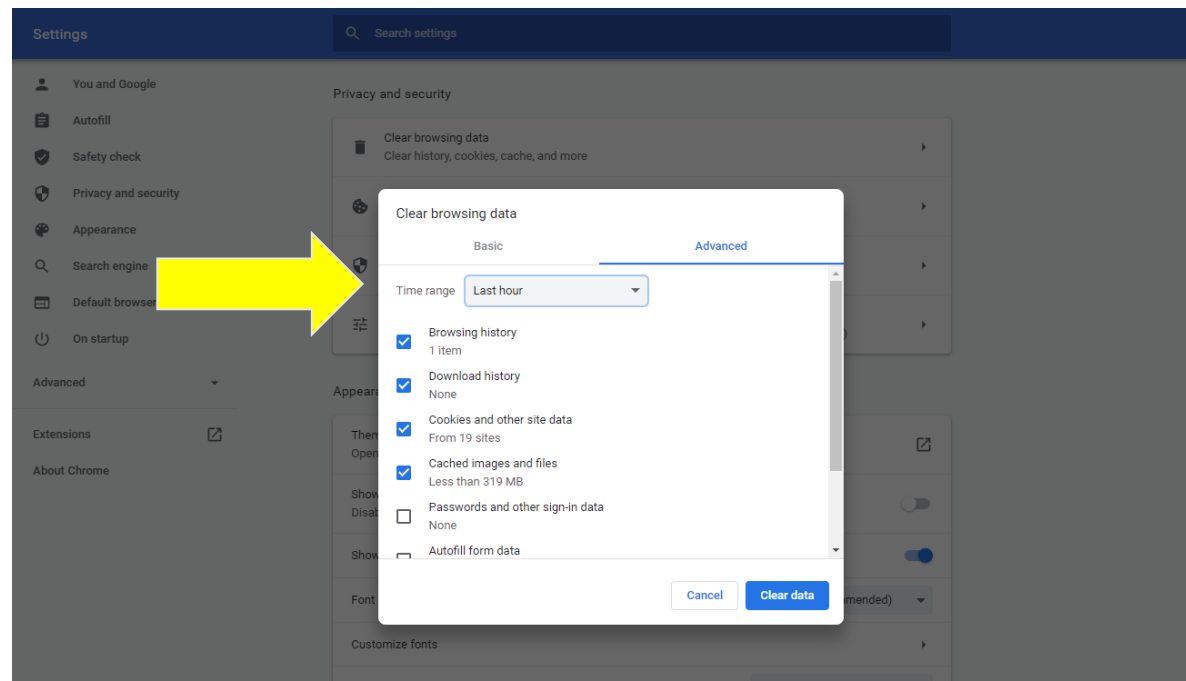
History List

- Can manage the history list from settings
- To display history, click Customize icon, then History



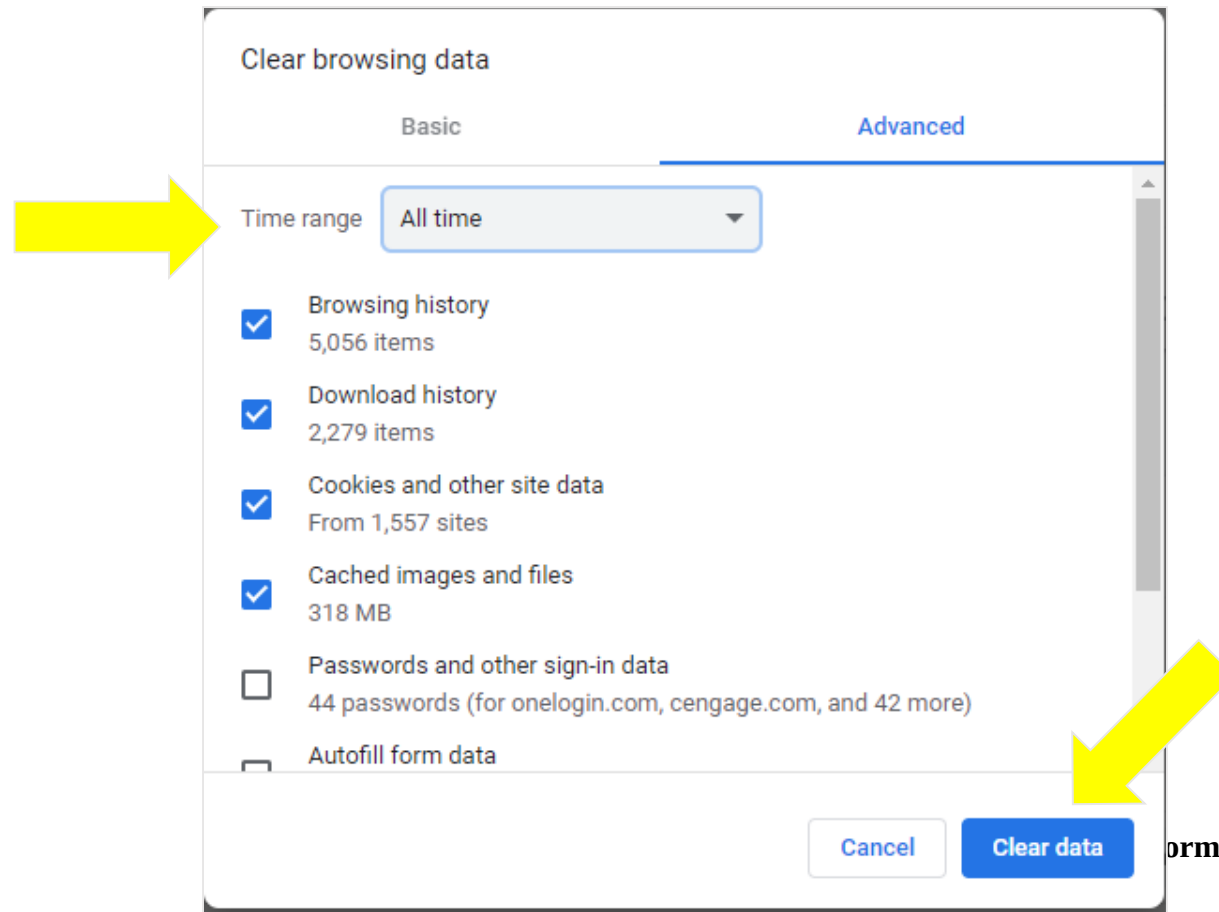
History List

- To clear the history, click Customize icon, then Settings
 - Scroll down to Privacy and security and click Clear browsing data



History List

- Select how far back you want to delete and click Clear data



Mouse Hyperlink Navigation

- Hyperlinks are text that when clicked will direct the browser to a web resource
 - Indicated with text that is a different color and underlined
 - The following is an example of a hyperlink: [this_is_hyperlink_text](#)

Navigating the Web

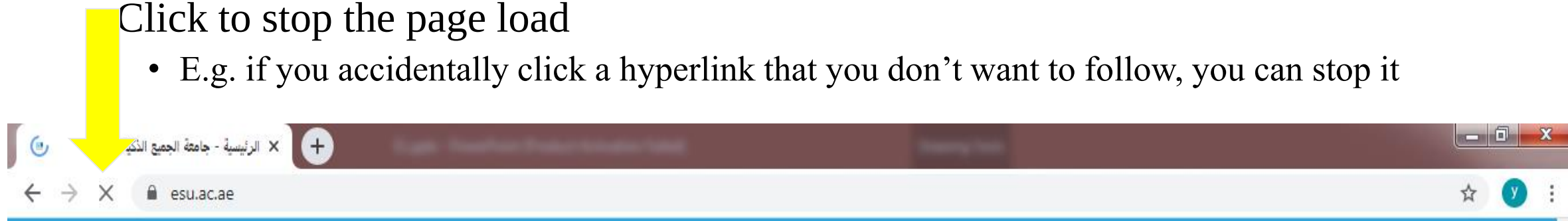
- Browser does a lot of things to make surfing the Web faster and easier
 - Example: Caching
- Frequently visited web pages are stored on your computer in a memory area called cache
 - When you visit the site again, the page will be retrieved from cache and show up faster in the browser

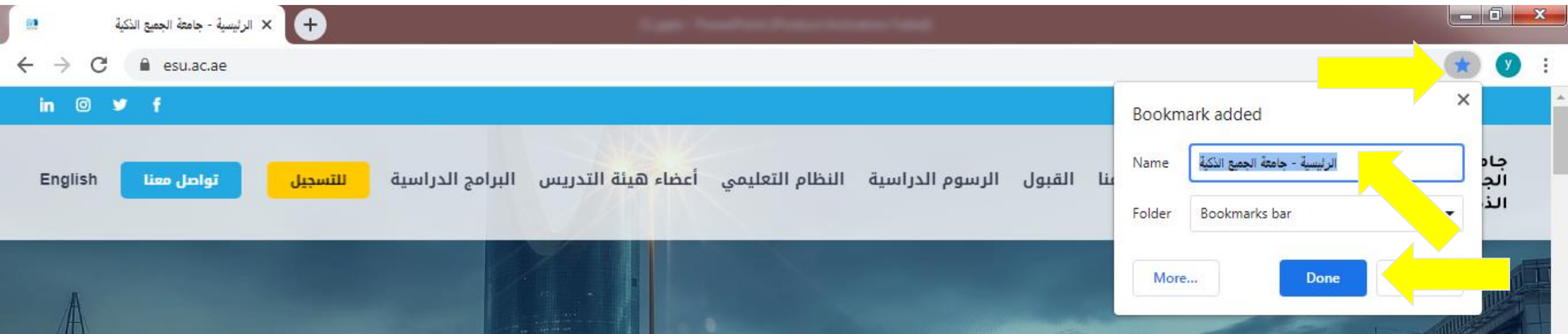
Navigating the web

- However, if the page has changed you will get the old page version
- Use Refresh button to force the browser to retrieve page from server



- While page is loading, refresh icon changes to Stop icon (x)
Click to stop the page load
 - E.g. if you accidentally click a hyperlink that you don't want to follow, you can stop it





A bookmark is a link to a web site

Create bookmarks for sites you like/need/use often:
click the Edit Bookmarks star icon, specify bookmark name text and click
the Done button

How does the Chrome browser work?

- You can control a lot things about Chrome's appearance and functions
 - Most comprehensive way is through settings
- Access settings by clicking the Customize Chrome icon () then Settings

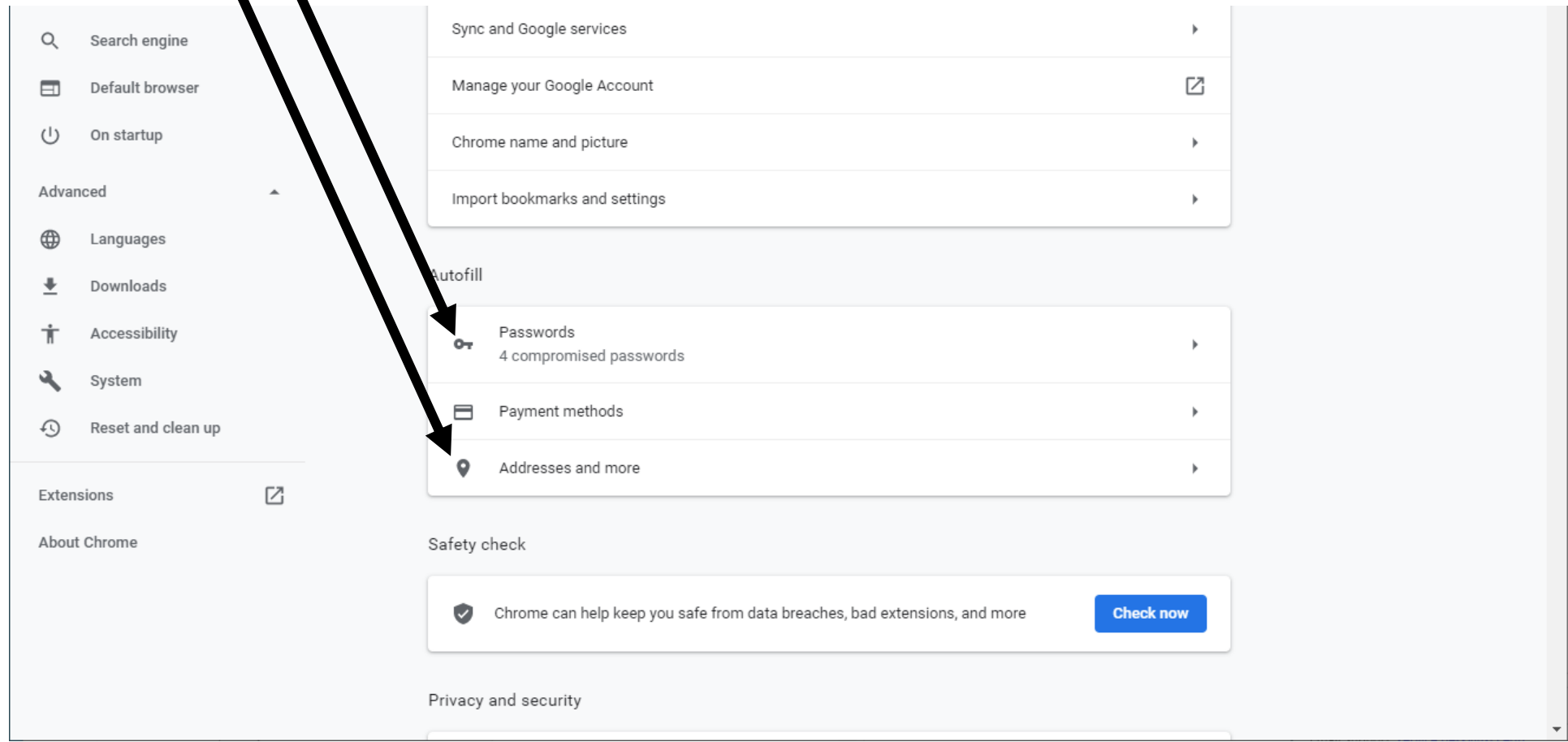
Click Customize Chrome

Then Settings

Customize

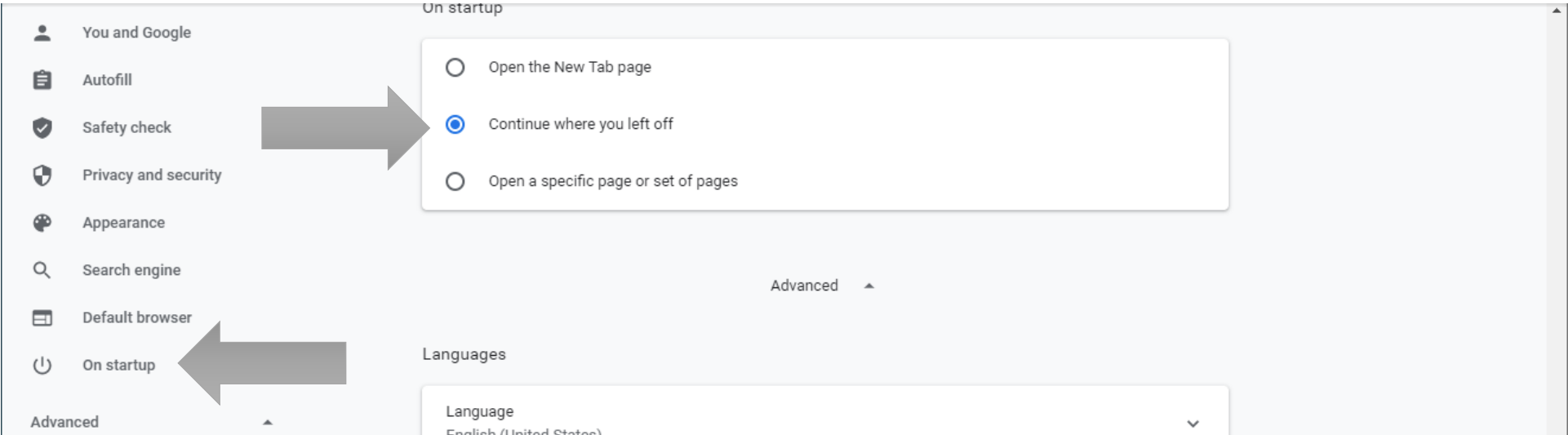
The image shows a Google Chrome browser window with a 'New Tab' open. The address bar shows 'G |'. The main content area features a large, stylized Google logo with a historical figure (Leonardo da Vinci) integrated into the letter 'o'. Below the logo is a search bar. At the bottom, there are two rows of shortcuts: Google, TIAA, UCO, Fast Jax Trivia, Trivia Nation in the first row, and (20+) Facebook, Log In to Fide..., OneLogin, (35 unread), and Add shortcut in the second row. A yellow box with the text 'Click Customize Chrome' has an arrow pointing to the three-dot menu icon in the top right corner. Another yellow box with the text 'Then Settings' has an arrow pointing to the 'Settings' option in the dropdown menu. The dropdown menu is open, showing options like 'New tab', 'History', 'Downloads', 'Bookmarks', 'Zoom', 'Print...', 'Cast...', 'Find...', 'More tools', 'Edit', 'Cut', 'Copy', 'Paste', 'Settings', 'Help', and 'Exit'. A 'Customize' button is visible in the bottom right corner of the page.

Several convenience settings like autofill (i.e. specify passwords and text Chrome uses to fill out web forms)

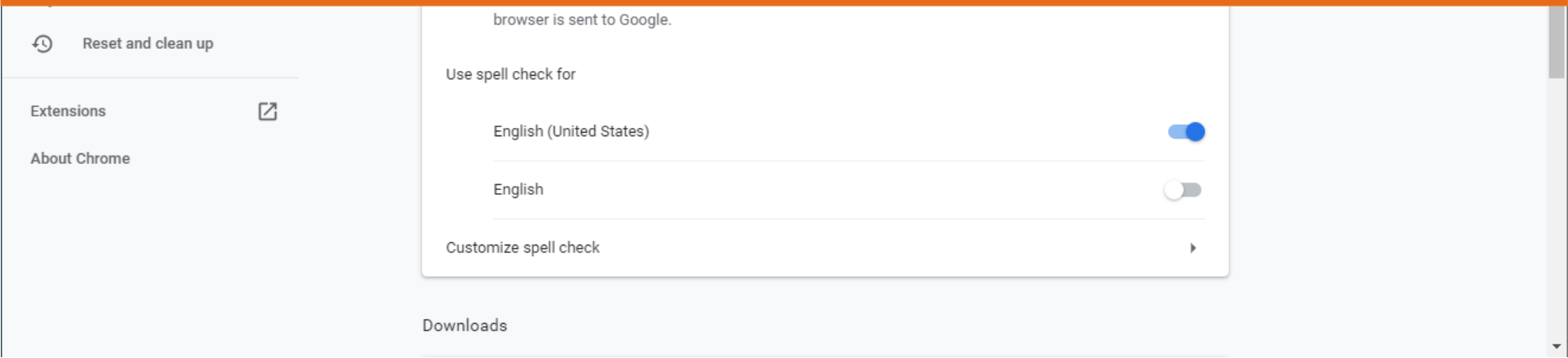


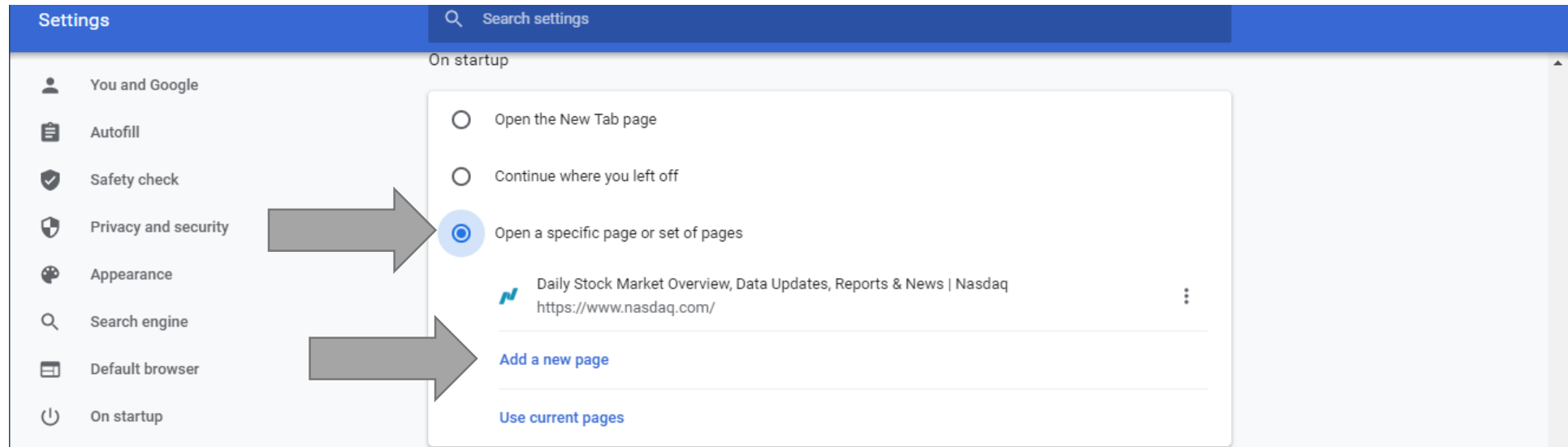
Chrome settings

- A couple settings that you will probably want to set up
 - What to do on startup
 - Where to store downloaded files
- The “on startup” primary options
 - Redisplay all pages you were looking at when you ended last
 - Open a specific page

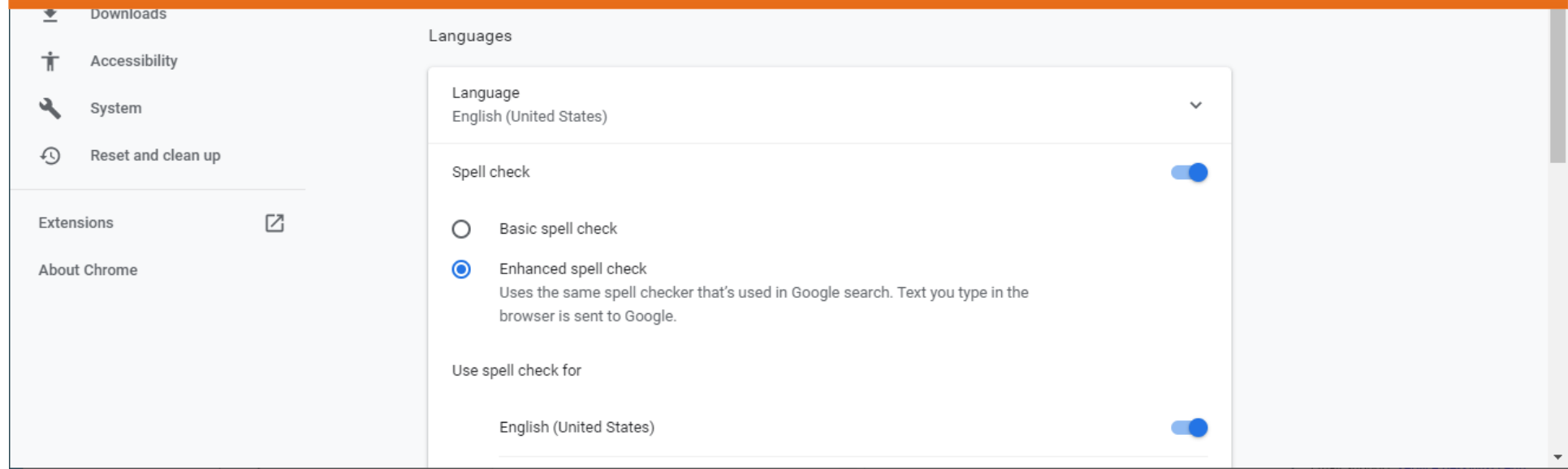


If system restarts (like after a power outage), will bring up all pages you were viewing





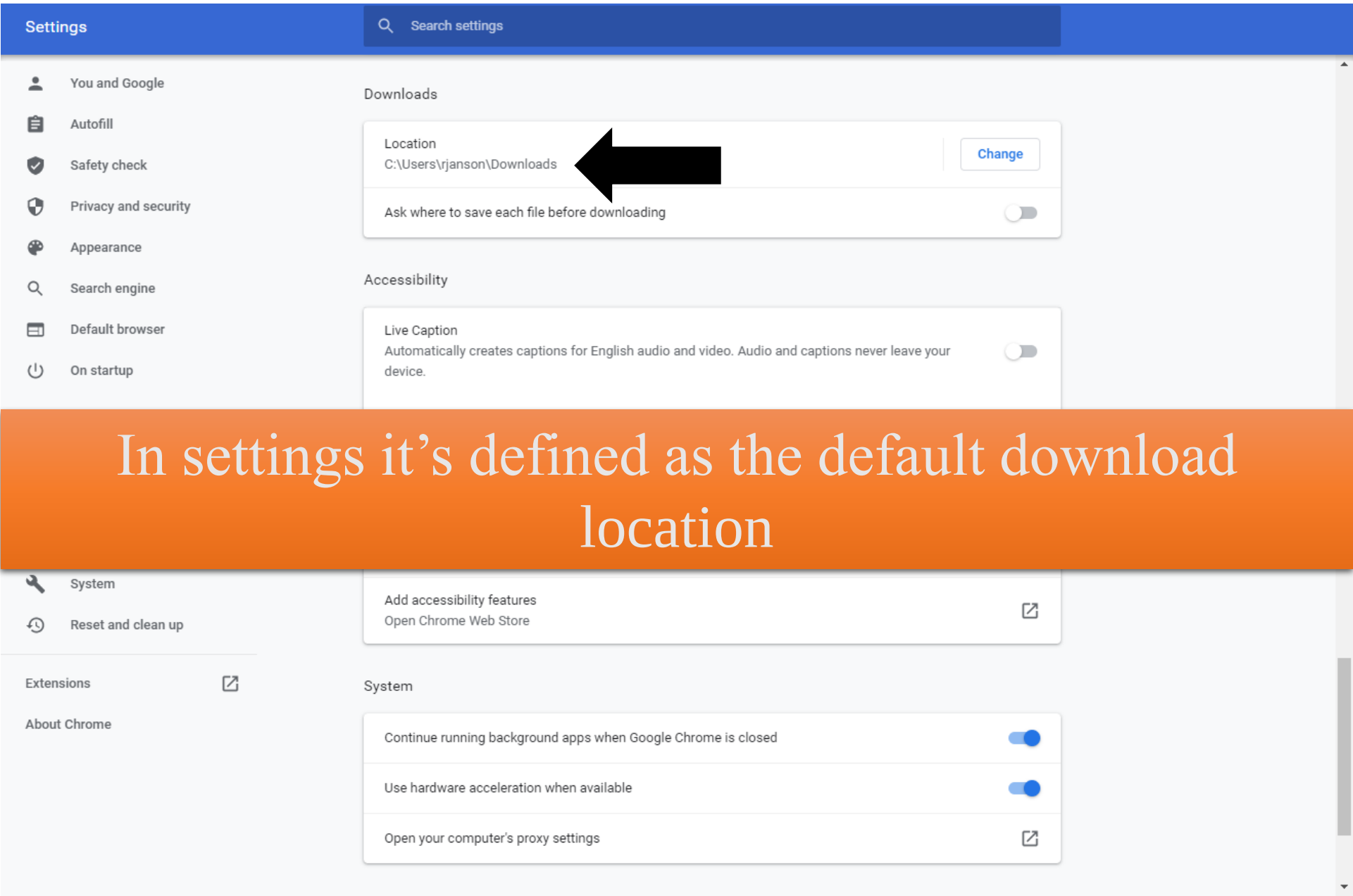
Or you can designate specific page(s) to open

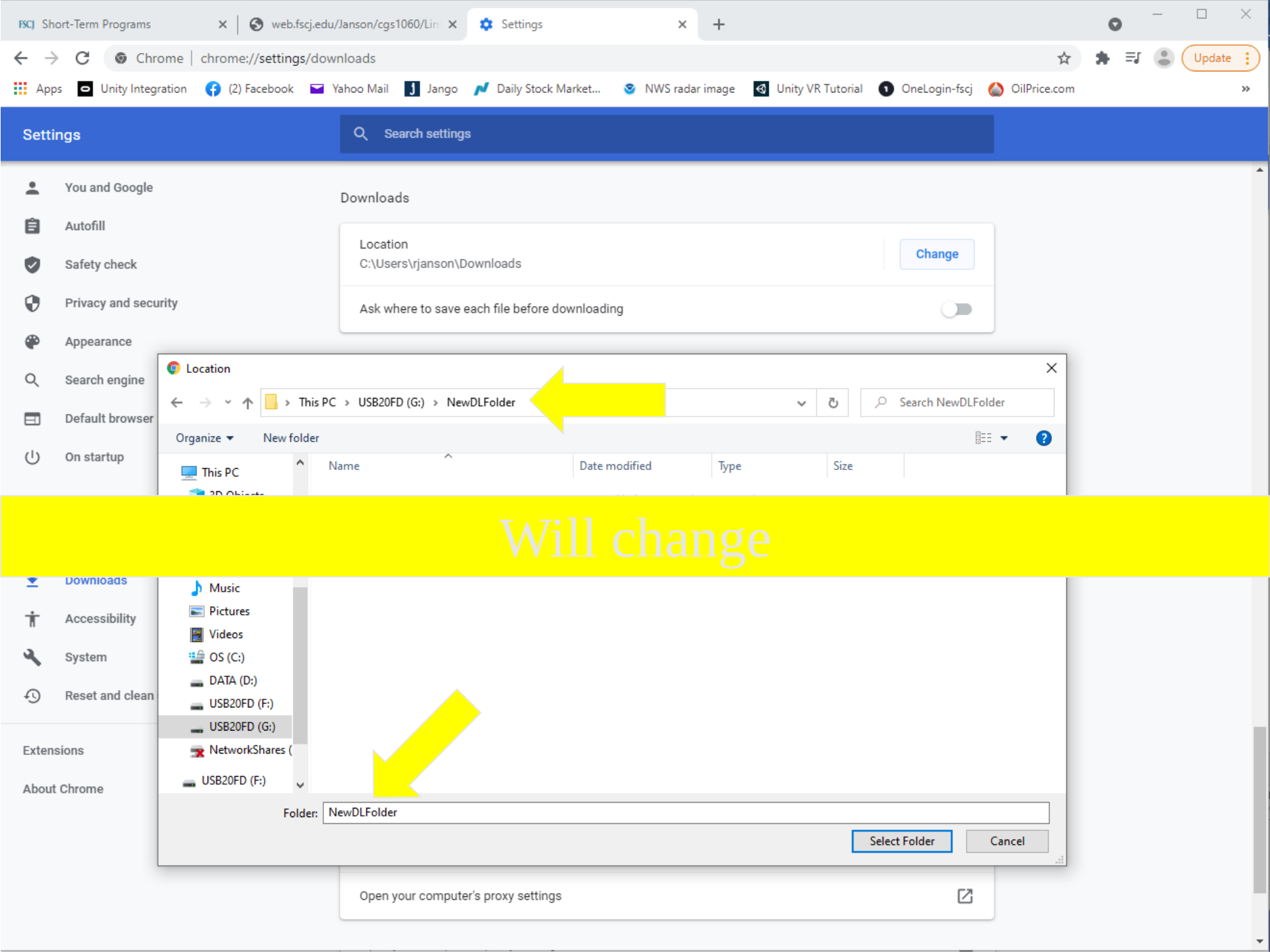


Downloading files from the WWW

- Another method to move information over the Internet.
- Most browsers provide basic download function.
- Notice the following URL is a pdf document not a web page.

<https://esu.edu.sa/wp-content/uploads/2020/11/Policy-and-Procedures.pdf>





Short-Term Programs | web.fscj.edu/Janson/cgs1060/Lin | Settings

Chrome | chrome://settings/downloads

Apps | Unity Integration | (2) Facebook | Yahoo Mail | Jango | Daily Stock Market... | NWS radar image | Unity VR Tutorial | OneLogin-fscj | OilPrice.com

Settings

Search settings

- You and Google
- Autofill
- Safety check
- Privacy and security
- Appearance
- Search engine
- Default browser

Downloads

Location: G:\NewDLFolder [Change](#)

Ask where to save each file before downloading: ☐

Accessibility

Live Caption

Extensions

About Chrome

System

Continue running background apps when Google Chrome is closed: ☒

Use hardware acceleration when available: ☒

Open your computer's system settings

Sample.doc

Show all

Download location changed
Enter the Word doc URL and hit Enter
File is downloaded (lower left tab indicates the download)

Click tabs, drop down arrow & choose Show in folder

Apps Unity Integration (2) Facebook Yahoo Mail Jango Daily Stock Market... NWS radar image Unity VR Tutorial OneLogin-fscj OilPrice.com

Settings Search settings

You and Google Downloads

Autofill Location Change

Safe autofill NewDLFolder

Private File Home Share View

Appearance

Search This PC > USB20FD (G:) > NewDLFolder Search NewDLFolder

Name	Date modified	Type	Size
Sample.doc	4/21/2021 2:38 PM	Microsoft Word 9...	50 KB

Documents Pictures CGS1060 CGS1100 Grading StuProjs OneDrive This PC

1 item 1 item selected 50.0 KB

Reset and clean up Open Chrome Web Store

Extensions System

About Chrome

Continue running background apps when Google Chrome is closed

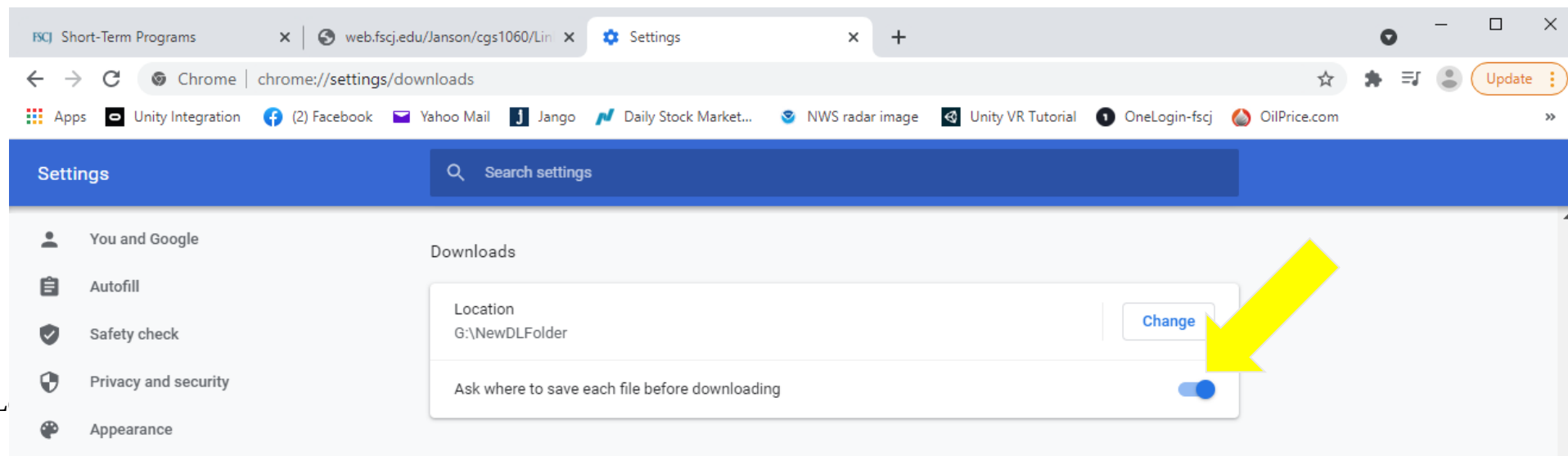
Use hardware acceleration when available

Open your computer's system settings

Sample.doc Show all X

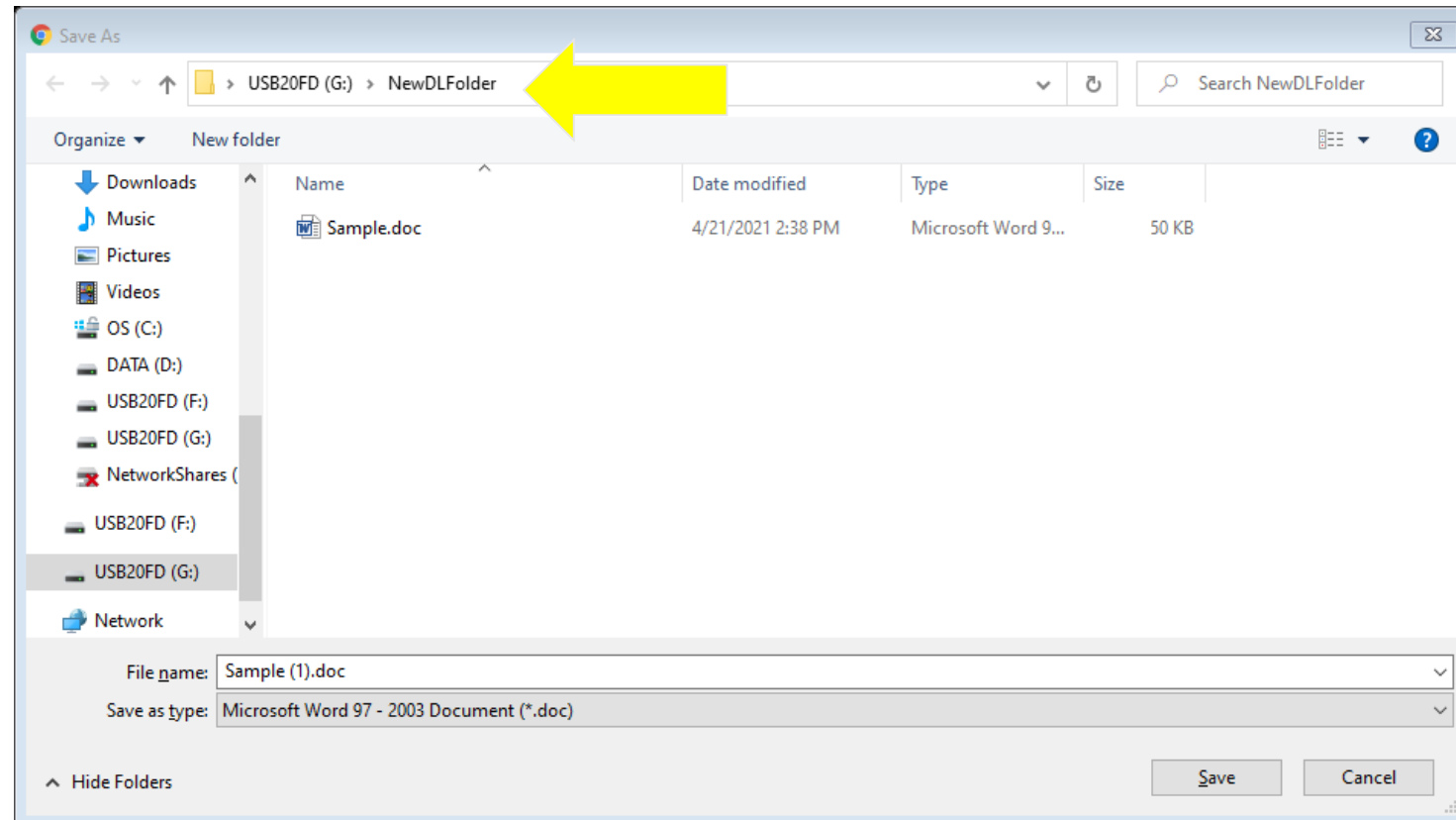
Downloading from WWW

- If you turn on the “Ask where to save...” option
- For each download, you will be prompted for a location



Downloading from WWW

- Notice default location is already specified when you are prompted for a location to save to



Learning Outcomes

- Using Technology to Change the World.
- Understanding the Computers Parts.
- Application Software: Programs That Let You Work.
- Introduction to Word, Excel, and PowerPoint.
- Using the Internet and Web's Resources.
- Protecting Your Digital Data and Devices.

DIFFERENCE BETWEEN

Viruses

Malware

Trojans

Ransomware

Spyware

& Worms!



Attack Types

- Backdoors: access that circumvents security

- Programmer created when s/w written
- Installed after initial illegal access
 - Certain key combination
 - Create a new user id and pw

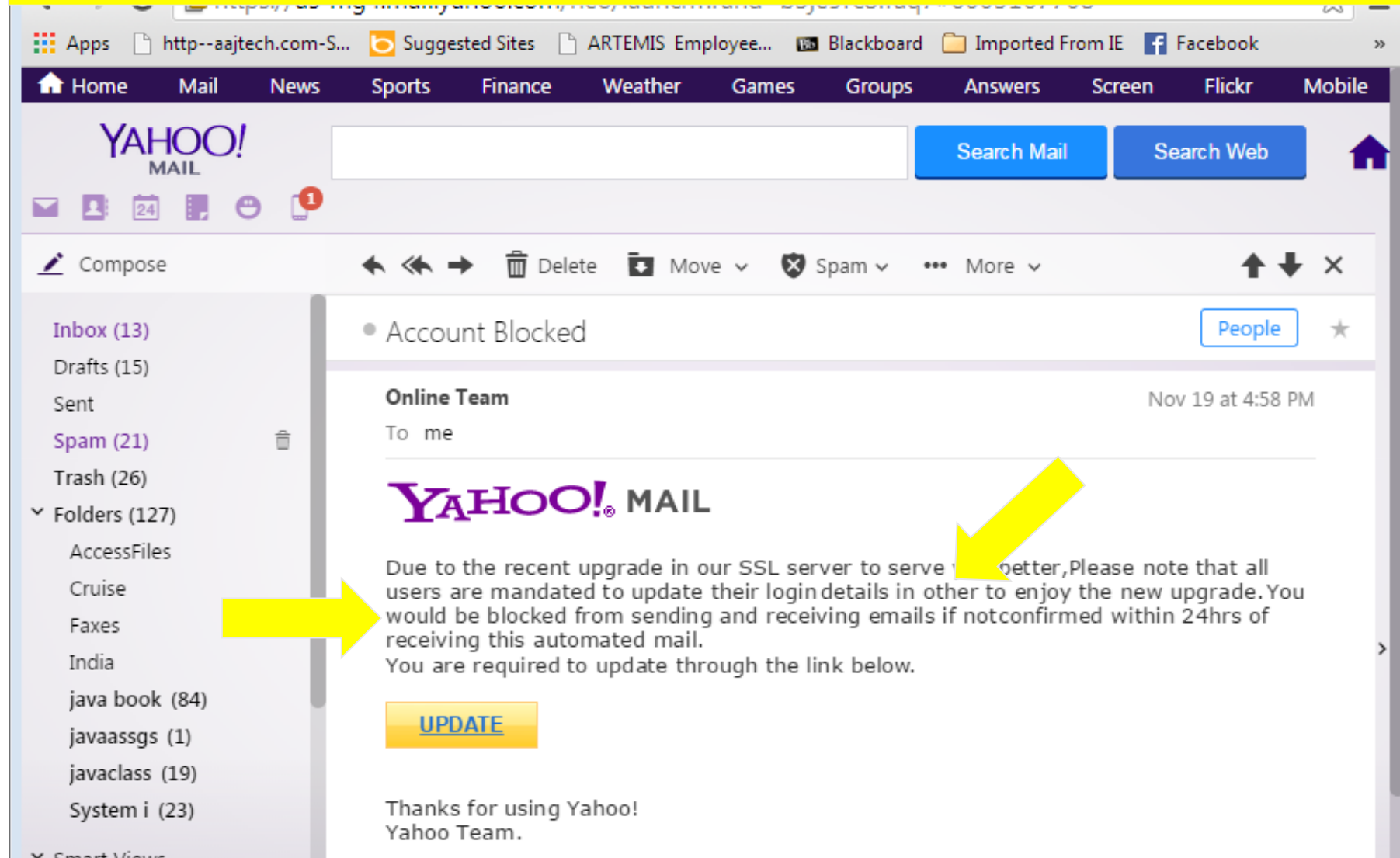


- Spoofing: make your computer resources look like someone else's

- Make your ip or email address look like BOAs



Got this email from "Yahoo"



Notice typo, bad grammar, and short time frame – trying to scare me into making a bad choice

How?

- User tries to open an infected file
 - Opens what they think is a picture.
- User inadvertently runs it
 - Thinks they're running a game.
- Uses an infected secondary storage media
 - Where has that thumb drive been?
- Connects to an infected network

Prevention?

- Never open a file from an unknown source.
- Don't use unknown secondary storage media.
- Don't open email attachments unless they are expected.
 - Even if it is from someone you trust
- Install antivirus s/w
 - Most computers come with some.
 - Lots of free stuff available.

Antivirus S/W

- Initially will scan all files looking for malware
 - If found will delete
 - If can't delete will quarantine
- Thereafter will check any downloaded files.
- Update s/w often
 - Updates will protect against the latest threats.





Reference



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