Lab 3 - Images

IMPORTANT! Save all your work to a safe location such as OneDrive.
Create a folder for GUI & Web Development into which you will save all your work for this module, arranged how you wish. Ideally you should create a folder each week for your lab exercises. Note that you should create **a separate file** for each exercise.

Exercise 1: Include an image on a webpage

1. Download the image "ny.jpg" from lab3_resources folder included in the labs section along with this lab on Moodle and save it to your week folder in your OneDrive. Create a web page as shown below, including the downloaded image:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Using images in HTML</title>
5  </head>
6  <body>
7      <img src="ny.jpg" alt="New York!">
8  </body>
```

Note that on line 8 you are specifying the image source (src) and the location. If your HTML page and image are in the same folder, you will not need to specify a folder.

2. Save and run your page to ensure that the image is displayed.

3. Change the size of the image using the width and height attributes, as shown below:

```
<img src="ny.jpg" alt="New York!" width="100" height="100">
```

Save and run your page to see how it has changed the size of the image. The image should now be displayed as 100 pixels wide and 100 pixels high.

4. Add a second image to your page – download the image provided in lab resources folder in Week 4 section on Moodle called "london.jpg". Ensure that this image is 320 pixels wide by 180 pixels wide and has the alternate text attribute set to *"London!"*

Exercise 2: Aligning Images

Using the text (paris.txt) and images (parisPic1.jpg and paris2.png) provided in the lab3_resources folder included in the labs section along with this lab on Moodle recreate the following page using the *align* attribute.

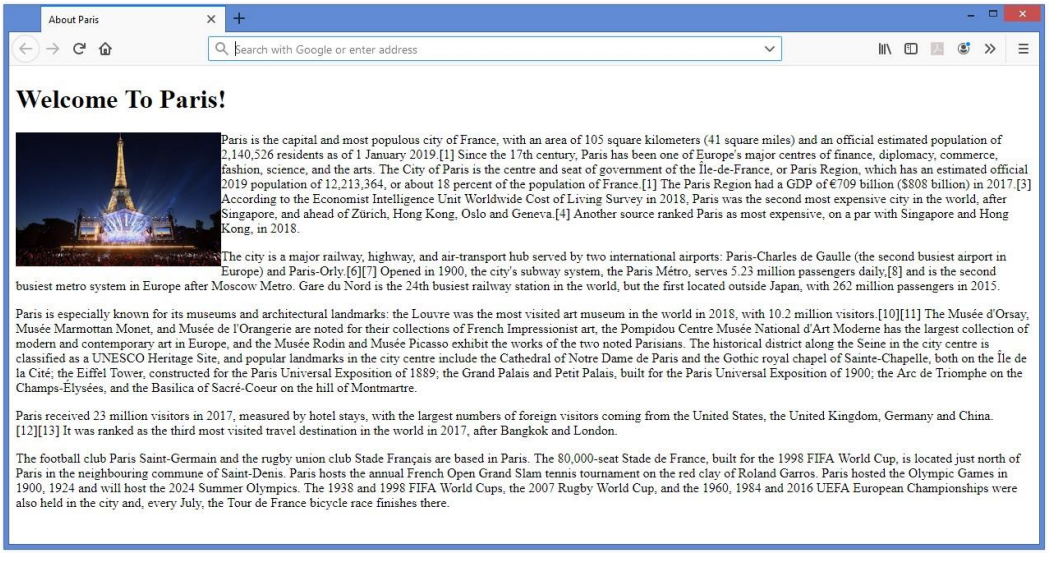
1. Download the text and format it using a H1 for the heading and a paragraph tag for each paragraph:

```
<!DOCTYPE html>
<html>
    <head>
        <title>About Paris</title>
    </head>

    <body>

        <h1>Welcome To Paris!</h1>

        <p>Paris is the capital and most populous city of France, with an area of 105 square kilometres (41 square miles) and an official estimated population of 2,140,526 residents as of 1 January 2019.[1] Since the 17th century, Paris has been one of Europe's major centres of finance, diplomacy, commerce, fashion, science, and the arts. The City of Paris is the centre and seat of government of the Île-de-France, or Paris Region, which has an estimated official 2019 population of 12,213,364, or about 18 percent of the population of France.[1] The Paris Region had a GDP of €709 billion ($808 billion) in 2017.[3] According to the Economist Intelligence Unit Worldwide Cost of Living Survey in 2018, Paris was the second most expensive city in the world, after Singapore, and ahead of Zürich, Hong Kong, Oslo and Geneva.[4] Another source ranked Paris as most expensive, on a par with Singapore and Hong Kong, in 2018.</p>

        <p>The city is a major railway, highway, and air-transport hub served by two international airports: Paris-Charles de Gaulle (the second busiest airport in Europe) and Paris-Orly.[6][7] Opened in 1900, the city's subway system, the Paris Métro, serves 5.23 million passengers daily,[8] and is the second busiest metro system in Europe after Moscow Metro. Gare du Nord is the 24th busiest railway station in the world, but the first located outside Japan, with 262 million passengers in 2015.</p>

        <p>Paris is especially known for its museums and architectural landmarks: the Louvre was the most visited art museum in the world in 2018, with 10.2 million visitors.[10][11] The Musée d'Orsay, Musée Marmottan Monet, and Musée de l'Orangerie are noted for their collections of French Impressionist art, the Pompidou Centre Musée National d'Art Moderne has the largest collection of modern and contemporary art in Europe, and the Musée Rodin and Musée Picasso exhibit the works of the two noted Parisians. The historical district along the Seine in the city centre is classified as a UNESCO Heritage Site, and popular landmarks in the city centre include the Cathedral of Notre Dame de Paris and the Gothic royal chapel of Sainte-Chapelle, both on the Île de la Cité; the Eiffel Tower, constructed for the Paris Universal Exposition of 1889; the Grand Palais and Petit Palais, built for the Paris Universal Exposition of 1900; the Arc de Triomphe on the Champs-Élysées, and the Basilica of Sacré-Coeur on the hill of Montmartre.
```

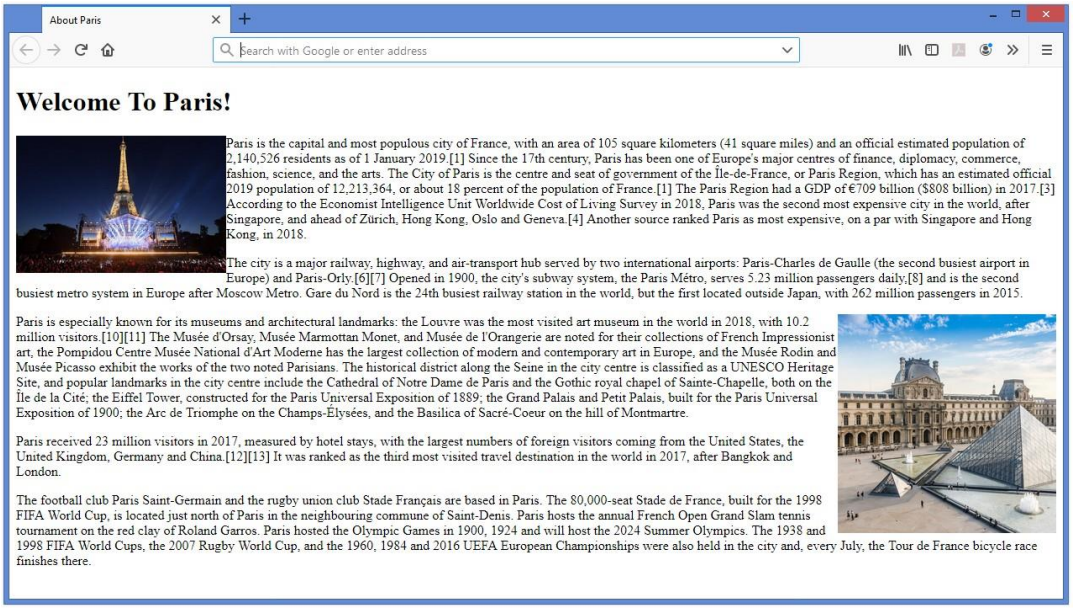
2. In this exercise the images will be placed inside paragraphs and aligned to the left or the right. Include the image “parisPic1.jpg” inside the first paragraph, specify the width and height of 250 and 163 as shown below. Include the align attribute, assigning the value left to it. This will align the image to the left of the paragraph.

```
        <h1>Welcome To Paris!</h1>

        <p><img src="parispic1.jpg" align="left" width="250" height="163" alt="The Eiffel Tower">Paris is the capital and most populous city of France, with an area of 105 square kilometers (41 square miles) and an official estimated population of 2,140,526 residents as of 1 January 2019.[1] Since the 17th century, Paris has been one of Europe's major centres of finance, diplomacy, commerce, fashion, science, and the arts. The City of Paris is the centre and seat of government of the Île-de-France, or
```

3. Save and run your page – it should look like what is shown below:



4. Add the second image provided in lab3_resources folder in the labs section on Moodle called “paris2.png”. Note that this image is a PNG (portable network graphics) file. This image should be placed inside the third paragraph and be aligned to the right. Your finished page should look like what is shown below:



Exercise 3: Create a website on the history of the Web using images

In this exercise you will create a webpage about the history of the World Wide Web, using the text provided in lab3_resources folder in the labs section on Moodle (History of the WWW text.docx). Ensure that you have a separate web page for each page of the sections as shown in the docx document.

Your finished website should have a style like the example shown below: e.g., have a "menu bar" near the top with links to other pages. Each page should contain 2 images – you can decide on the alignment and layout. The images for the entire site are in included in a zip file called "Images for the history of the internet" in the lab3_resources folder in the labs section on Moodle. Unzip this file and **keep the existing folder structure**.

Hint for adding space around your images:

```
<img src="images/arpanet/licklider.jpg" alt="Licklider" align="left" border="2" hspace="15" vspace="15">
```

Note: hspace and vspace create space on the outside of the image (pushing the text away from the image).

Exercise 4: Using an image as a link

Using the page created in exercise 1, make the image a clickable link to the New York Wikipedia page:

```
<!DOCTYPE html>
<html>
<head>
    <title>Using images in HTML</title>
</head>
<body>
    <a href="https://en.wikipedia.org/wiki/New_York_City">
        <img src="ny.jpg" alt="New York!" width="100" height="100">
    </a>
</body>
```

Save and run your page and check that clicking the image now works as a link.

Exercise 5: Holiday Website

You are back from Italy and it's time to post about some of your travels. In this exercise, you will add thumbnail images to a travel log and make them link to pages with full-sized images.

All the thumbnails and photos you need have been created for you and some of the HTML files have skeleton code inserted already.

Download a copy of tuscany.zip from lab3_resources folder in the labs section on Moodle. Unzip this file within the GUI folder you are using for this weeks lab. **Don't make any changes to the structure.**

This site is made up of a main page (index.html) and 3 separate HTML documents containing each of the larger image views. First, you will add the thumbnails and then you will add the full-size versions to their respective pages. Finally, you will make the thumbnails link to those pages.

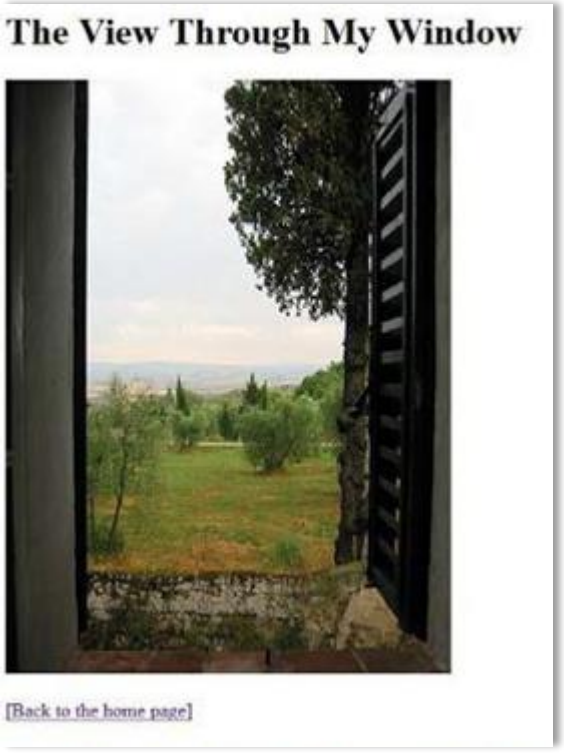
Open the file ***index.html*** and add the small thumbnail images to this page to accompany the text. The first one has been completed for you already and is placed at the beginning of the paragraph.

```
<h2>Pozzarello</h2>
<p><a href="window.html"><img src="thumbnails/window_thumb.jpg" alt="view from the bedroom window" width="75" height="100"></a> The house we stayed in was called Pozzarello …
```

Add the image **countryside_thumb.jpg** (100 px wide x 75 px tall) and **sienna_thumb.jpg** (75 x 100) at the beginning of the paragraphs in their respective sections. Be sure to include the pathname, an alternative text description and pixel dimensions.

When you are done, save the file and then open it in the browser to make sure that the images are visible and appear the right size.

Next, add the images to the individual HTML documents. Window.html is done already. The full-sized images are in a directory called photos.



Add images to **countryside.html** and **sienna.html** similar to how image is added in **window.html**.
Hint: All of the images are 500 pixels on their widest side and 375 pixels on their shortest side, but the orientation varies.

Save each file and check that they are working correctly.

Back in **index.html**, link the thumbnails to their respective files. The first one is done for you. Make the remaining thumbnail images link to each of the documents.

There are 3 additional images (*sweets.jpg*, *cathedral.jpg* and *lavender.jpg*) with their thumbnail versions (*sweets_thumb.jpg*, *cathedral_thumb.jpg* and *lavender_thumb.jpg*) in their appropriate directories. This time you will have to add your own descriptions to the homepage and create the HTML documents for the full- size images from scratch.

Added Challenge:
For an added challenge, create a new directory called *photopages* in the Tuscany directory. Move **countryside.html** and **sienna.html** into that directory and then update the URLs on those pages so that the images are visible again.

Exercise 6: Apple History Website

Recreate the website (or as close as you can) as shown on the following pages. Your finished website should have 3 pages – a home page, a page on Steve Jobs, and a page on Steve Wozniak.

Download a copy of apple.zip from the lab3_resources folder in the labs section on Moodle. Unzip this file within your GUI folder in OneDrive for this weeks lab.

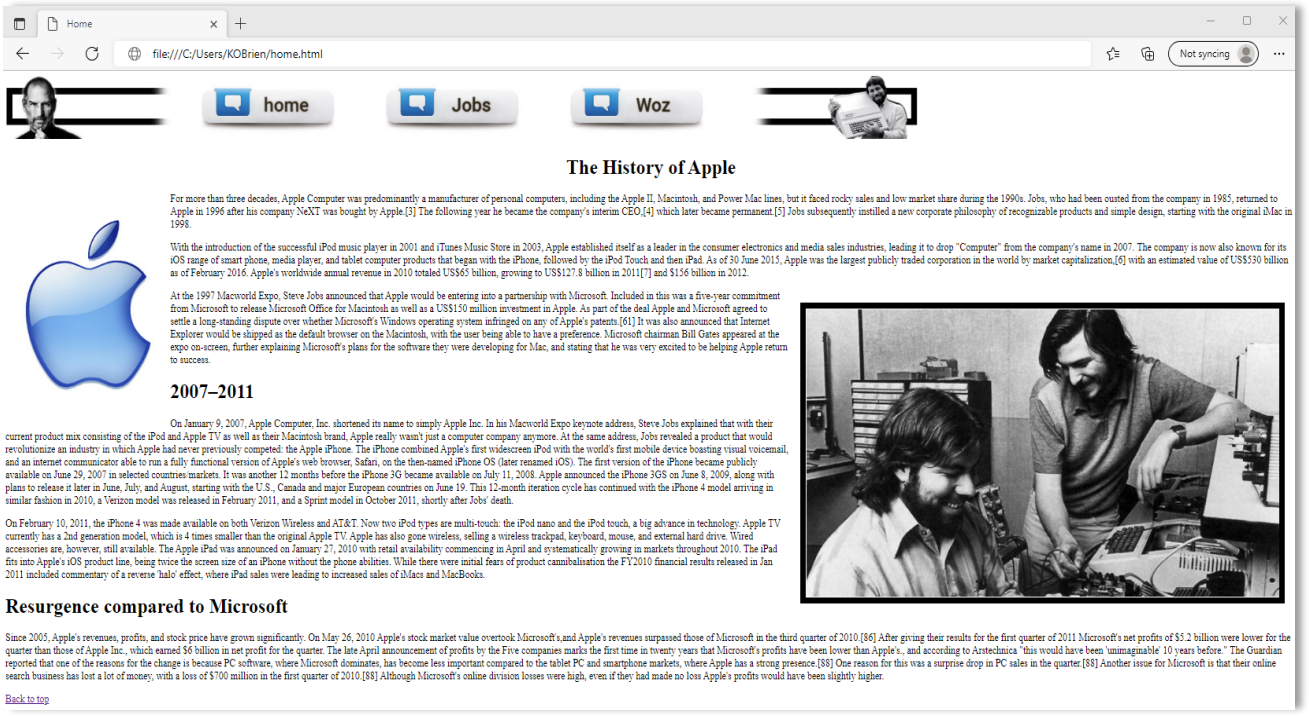
All the images should be in a **separate folder** to the pages. Please ensure that all images have an alt tag set. All pages should have a title and ensure that your name is in the header of the html as a comment, on each page.

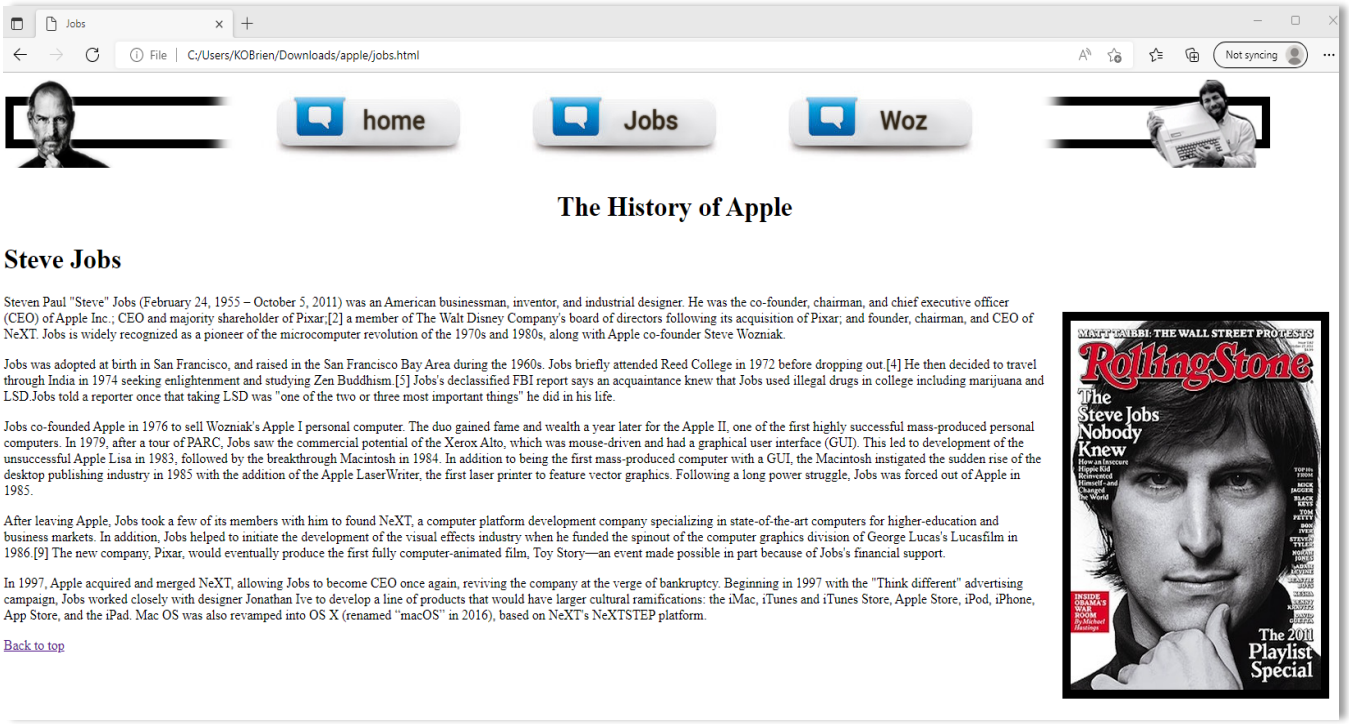
Hints

Below is a sample img tag that may be of use:

```
<img src="images/photo1.jpg" align="right" border="5" hspace="15" height="300">
```

Your website should have pages that look similar to those shown below:





The History of Apple

Steve Jobs

Steven Paul "Steve" Jobs (February 24, 1955 – October 5, 2011) was an American businessman, inventor, and industrial designer. He was the co-founder, chairman, and chief executive officer (CEO) of Apple Inc.; CEO and majority shareholder of Pixar;[2] a member of The Walt Disney Company's board of directors following its acquisition of Pixar; and founder, chairman, and CEO of NeXT. Jobs is widely recognized as a pioneer of the microcomputer revolution of the 1970s and 1980s, along with Apple co-founder Steve Wozniak.

Jobs was adopted at birth in San Francisco, and raised in the San Francisco Bay Area during the 1960s. Jobs briefly attended Reed College in 1972 before dropping out.[4] He then decided to travel through India in 1974 seeking enlightenment and studying Zen Buddhism.[5] Jobs's declassified FBI report says an acquaintance knew that Jobs used illegal drugs in college including marijuana and LSD.Jobs told a reporter once that taking LSD was "one of the two or three most important things" he did in his life.

Jobs co-founded Apple in 1976 to sell Wozniak's Apple I personal computer. The duo gained fame and wealth a year later for the Apple II, one of the first highly successful mass-produced personal computers. In 1979, after a tour of PARC, Jobs saw the commercial potential of the Xerox Alto, which was mouse-driven and had a graphical user interface (GUI). This led to development of the unsuccessful Apple Lisa in 1983, followed by the breakthrough Macintosh in 1984. In addition to being the first mass-produced computer with a GUI, the Macintosh instigated the sudden rise of the desktop publishing industry in 1985 with the addition of the Apple LaserWriter, the first laser printer to feature vector graphics. Following a long power struggle, Jobs was forced out of Apple in 1985.

After leaving Apple, Jobs took a few of its members with him to found NeXT, a computer platform development company specializing in state-of-the-art computers for higher-education and business markets. In addition, Jobs helped to initiate the development of the visual effects industry when he funded the spinout of the computer graphics division of George Lucas's Lucasfilm in 1986.[9] The new company, Pixar, would eventually produce the first fully computer-animated film, Toy Story—an event made possible in part because of Jobs's financial support.

In 1997, Apple acquired and merged NeXT, allowing Jobs to become CEO once again, reviving the company at the verge of bankruptcy. Beginning in 1997 with the "Think different" advertising campaign, Jobs worked closely with designer Jonathan Ive to develop a line of products that would have larger cultural ramifications: the iMac, iTunes and iTunes Store, Apple Store, iPod, iPhone, App Store, and the iPad. Mac OS was also revamped into OS X (renamed "macOS" in 2016), based on NeXT's NeXTSTEP platform.

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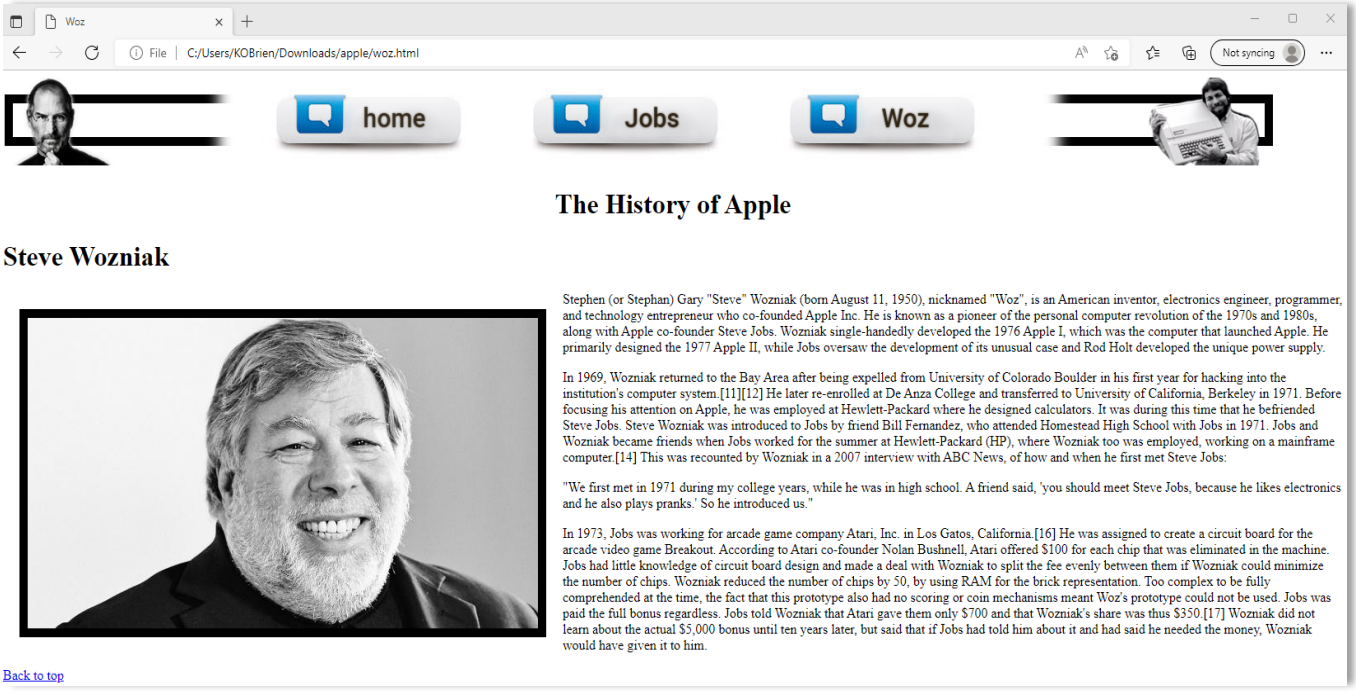

The History of Apple

Steve Wozniak

Stephen (or Stephan) Gary "Steve" Wozniak (born August 11, 1950), nicknamed "Woz", is an American inventor, electronics engineer, programmer, and technology entrepreneur who co-founded Apple Inc. He is known as a pioneer of the personal computer revolution of the 1970s and 1980s, along with Apple co-founder Steve Jobs. Wozniak single-handedly developed the 1976 Apple I, which was the computer that launched Apple. He primarily designed the 1977 Apple II, while Jobs oversaw the development of its unusual case and Rod Holt developed the unique power supply.

In 1969, Wozniak returned to the Bay Area after being expelled from University of Colorado Boulder in his first year for hacking into the institution's computer system.[11][12] He later re-enrolled at De Anza College and transferred to University of California, Berkeley in 1971. Before focusing his attention on Apple, he was employed at Hewlett-Packard where he designed calculators. It was during this time that he befriended Steve Jobs. Steve Wozniak was introduced to Jobs by friend Bill Fernandez, who attended Homestead High School with Jobs in 1971. Jobs and Wozniak became friends when Jobs worked for the summer at Hewlett-Packard (HP), where Wozniak too was employed, working on a mainframe computer.[14] This was recounted by Wozniak in a 2007 interview with ABC News, of how and when he first met Steve Jobs:

"We first met in 1971 during my college years, while he was in high school. A friend said, 'you should meet Steve Jobs, because he likes electronics and he also plays pranks.' So he introduced us."

In 1973, Jobs was working for arcade game company Atari, Inc. in Los Gatos, California.[16] He was assigned to create a circuit board for the arcade video game Breakout. According to Atari co-founder Nolan Bushnell, Atari offered $100 for each chip that was eliminated in the machine. Jobs had little knowledge of circuit board design and made a deal with Wozniak to split the fee evenly between them if Wozniak could minimize the number of chips. Wozniak reduced the number of chips by 50, by using RAM for the brick representation. Too complex to be fully comprehended at the time, the fact that this prototype also had no scoring or coin mechanisms meant Woz's prototype could not be used. Jobs was paid the full bonus regardless. Jobs told Wozniak that Atari gave them only $700 and that Wozniak's share was thus $350.[17] Wozniak did not learn about the actual $5,000 bonus until ten years later, but said that if Jobs had told him about it and had said he needed the money, Wozniak would have given it to him.

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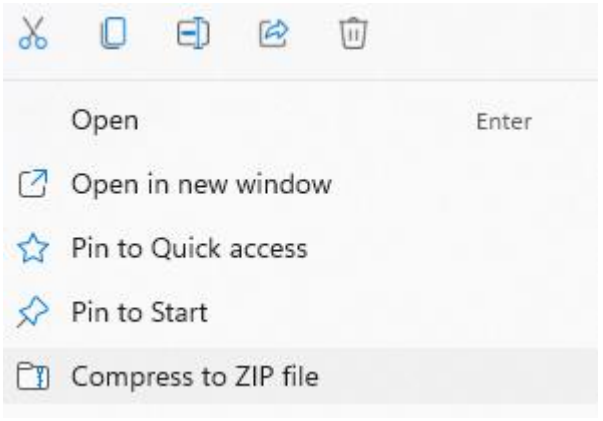
Upload your work to Moodle

1. Navigate to the location of the folder where you saved all your work for today's lab.
2. Right-click on the folder and select "Compress to ZIP file". This will create a compressed version of any files you have worked on for the lab.



3. There should be a new compressed file created. This is the file that you will need to upload to Moodle.
4. In Moodle, navigate to the labs section, and click the ***upload*** link for lab 3 .
5. Click "add submission" and add the ZIP file you created here and then complete the submission process.