PROJECT REPORT
CSE4500 Platform Computing
Instructor: Lawrence Orijuela

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LAB:_Project 1_____________________________	

Report

1. What is HTML and what does it stand for?

   HTML stands for Hyper Text Markup Language. While not technically a programming language, HTML is more of a standard for structuring, describing, and presenting content on a website. HTML consists of blocked elements surrounded by tags that help modify those elements for presentation.

2. What do the varios different tags do?
   - **a.** <Head> : Appears at the top of the document and specifies information about the document. For example, the title of the tab in the browser is denoted here as well as any linked stylesheets.
   - **b.** <Body> : Specifies the body element of the document, where most of the visible content of the website is defined.
   - **c.** <h1> to <h6>: These are all header tags that are usually used for titling sections of the website. <h1> is the largest default font size and weight, descending down to <h6> being the smallest.
   - **d.** <p>: Paragraph tag that wraps a section of text to be displayed on the website.
   - **e.** <br>: Inserts a single line break at its location in the document.

3. Explain the process of adding a web app to the internet.

   Web applications are built and served to the internet via web server. There are many ways of doing that, depending on the application stack and environment. Popular servers include Nginx, IIS, Tomcat, and Apache. The process for serving a web application differs according to the platform and the application code. Additionally, considerations for front and back end servers as well as databases, redis caches, and possibly IAM or authentication servers could change the method of deploying an application to the internet. In our case, we're using a VS code plugin to serve the application on a local host port. The application is not on the internet in that case, but we can test how it would look by serving in on the local host.

4. Explain the process of adding an unordered list. An ordered list.

An unordered list can be added by enclosing the list with <ul> and </ul> tags. Elements of the list can be inserted between the <ul> tags and enclosed by their own individual <li> tags.
For example:

```
<ul>
    <li>Item 1</li>
    <li>Item 2</li>
</ul>
```

An ordered list can be added by enclosing the list with <ol> and </ol> tags. Elements of the list can be inserted between the <ol> tags and enclosed by their own individual <li> tags.
For example:

```
<ol>
    <li>Item 1</li>
    <li>Item 2</li>
</ol>
```

5. Explain the process of adding a table.

A table can be added by enclosing the block in <table> and </table> tags.

Table rows are enclosed in <tr> and </tr> tags.

Table headers are enclosed in <th> and </th> tags.

Individual cells in each row are enclosed in <td> and </td> tags.

For example:

```
<table>
    <tr>
        <th>Column Header 1</th>
        <th>Column Header 2</th>
    </tr>
    <tr>
        <td>Row 1 Cell 1</td>
        <td>Row 1 Cell 2</td>
    </tr>
</table>
```

6. Explain the process of adding formatting through Cascading Style Sheets.

A separate .css file is created which contains blocks of code that reference specific HTML tags or elements. The .css file is then linked to the HTML document within a <link> tag inside the <head> block. The link tag contains a reference to the relative path to the .css file.

For example, the CSS block defined below would center all <h1> elements in the HTML document:

```
h1 {
   text-align: center
}
```

7. Explain the process of adding an image or a video.

   An image can be added using the <img> tag. The most basic way to do that is as follows: <img src=”path_to_local_image_file.png”>

   A video can be added using the <video> tag. The most basic way to do that is as follows: <video src’”path_to_local_image_file.mp4”>

   There are more attributes that can be included in an <img> or <video> tag block in order to format the image or video and add various other options. Additionally, images and video can be referenced via HTTP or HTTPS instead of pathing to them locally.

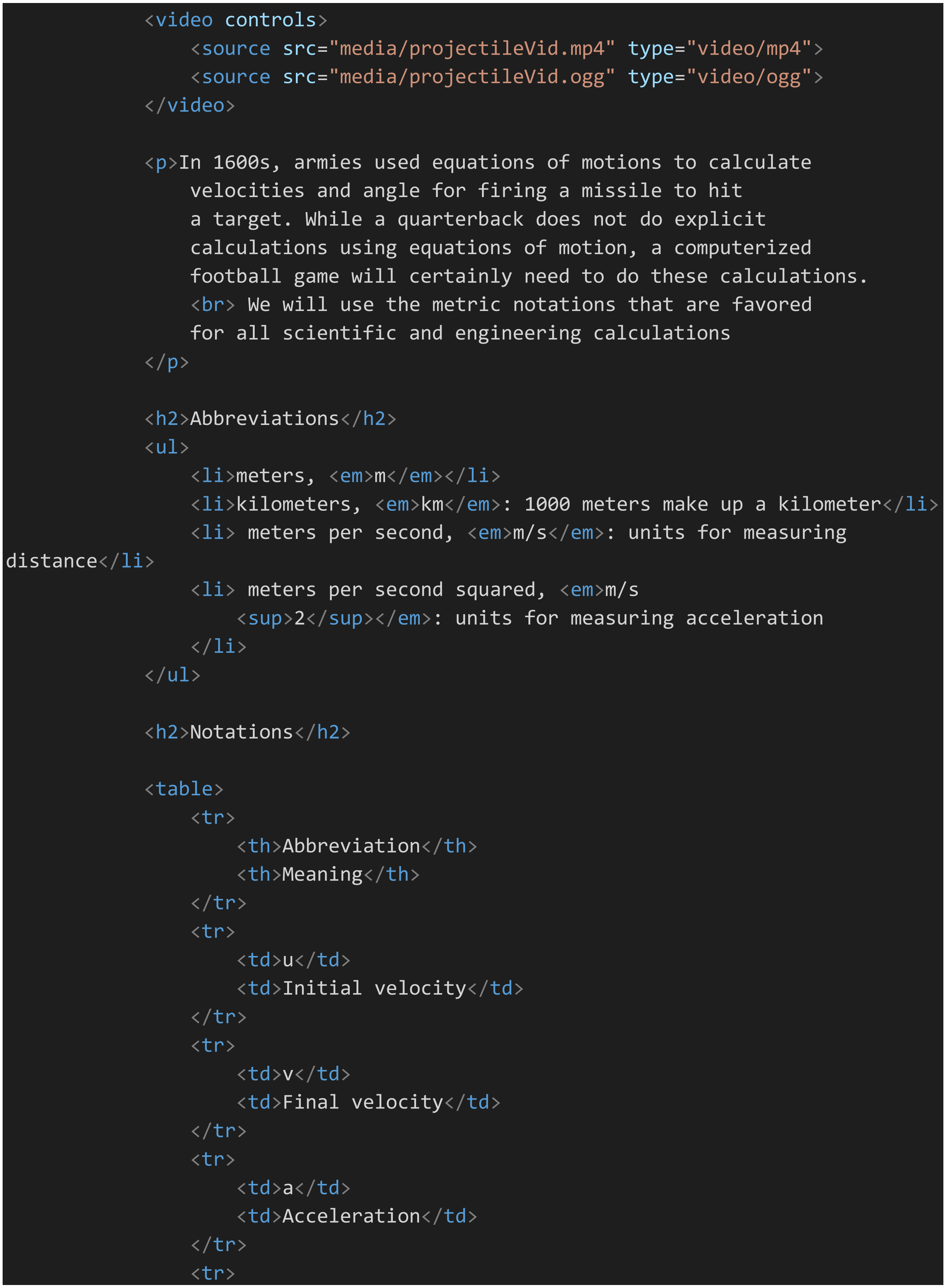
Source Code

```html
<!-- CSE-4500 Platform Computing SPR23
     Nathan Bush - 007463099
     Project 1 - Project1.html -->

<!DOCTYPE html>
<html>
    <head>
        <title>Physics Application</title>
        <link rel="stylesheet" href="css/Project1.css">
    </head>

    <body>
        <div>
            <h1>Projectiles</h1>

            <figure>
                <img src="media/projectilePic.png"
                alt="A Cannon Firing a Projectile"
                width="333"
                height="228">
                <figcaption>
                    <strong>Fig. 1 - A Projectile Fired From a Cannon</strong>
                </figcaption>
            </figure>
```



```html
            <video controls>
                <source src="media/projectileVid.mp4" type="video/mp4">
                <source src="media/projectileVid.ogg" type="video/ogg">
            </video>

            <p>In 1600s, armies used equations of motions to calculate
                velocities and angle for firing a missile to hit
                a target. While a quarterback does not do explicit
                calculations using equations of motion, a computerized
                football game will certainly need to do these calculations.
                <br> We will use the metric notations that are favored
                for all scientific and engineering calculations
            </p>

            <h2>Abbreviations</h2>
            <ul>
                <li>meters, <em>m</em></li>
                <li>kilometers, <em>km</em>: 1000 meters make up a kilometer</li>
                <li> meters per second, <em>m/s</em>: units for measuring
distance</li>
                <li> meters per second squared, <em>m/s
                    <sup>2</sup></em>: units for measuring acceleration
                </li>
            </ul>

            <h2>Notations</h2>

            <table>
                <tr>
                    <th>Abbreviation</th>
                    <th>Meaning</th>
                </tr>
                <tr>
                    <td>u</td>
                    <td>Initial velocity</td>
                </tr>
                <tr>
                    <td>v</td>
                    <td>Final velocity</td>
                </tr>
                <tr>
                    <td>a</td>
                    <td>Acceleration</td>
                </tr>
                <tr>
```

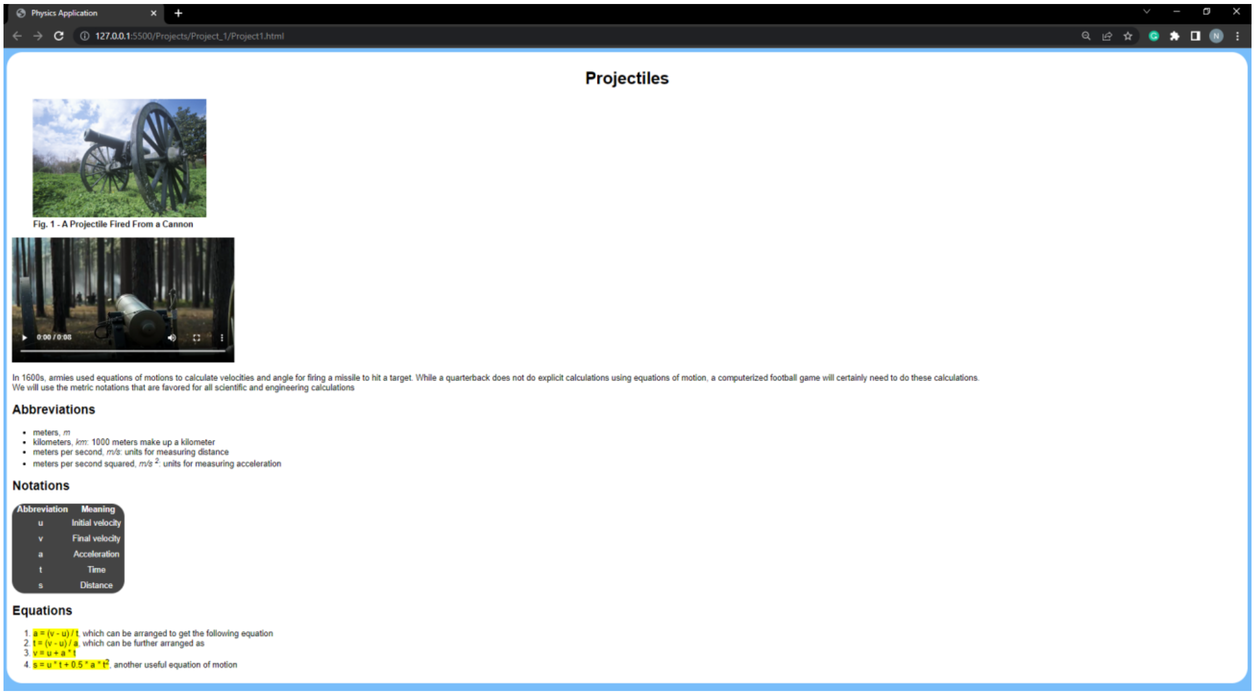
```
                    <td>t</td>
                    <td>Time</td>
                </tr>
                <tr>
                    <td>s</td>
                    <td>Distance</td>
                </tr>
            </table>

            <h2>Equations</h2>
            <ol>
                <li><mark>a = (v - u) / t</mark>, which can be arranged to get the following
                    equation</li>
                <li><mark>t = (v - u) / a</mark>, which can be further arranged as</li>
                <li><mark>v = u + a * t</mark></li>
                <li><mark>s = u * t + 0.5 * a * t<sup>2</sup></mark>, another useful
                    equation of motion</li>
            </ol>
        </div>
    </body>
</html>
```

```
/* CSE-4500 Platform Computing SPR23
     Nathan Bush - 007463099
     Project 1 - Project1.css */

body {
  background-color: #78BDFA;
  font-family: Arial;
}
div {
  background-color: white;
  border-radius: 30px;
  padding: 10px;
}
h1 {
  text-align: center;
}
table {
  background-color: #444444;
  color: white;
  border-radius: 25px;
  text-align: center;
}
table tr td {
  padding: 5px;
}
table tr th {
  padding-left: 8px;
}
```

Screenshots



Projectiles

Fig. 1 - A Projectile Fired From a Cannon

In 1600s, armies used equations of motions to calculate velocities and angle for firing a missile to hit a target. While a quarterback does not do explicit calculations using equations of motion, a computerized football game will certainly need to do these calculations. We will use the metric notations that are favored for all scientific and engineering calculations

Abbreviations

- meters, *m*
- kilometers, *km*: 1000 meters make up a kilometer
- meters per second, *m/s*: units for measuring distance
- meters per second squared, *m/s* ^{2}: units for measuring acceleration

Notations

Abbreviation	Meaning
u	Initial velocity
v	Final velocity
a	Acceleration
t	Time
s	Distance

Equations

1. a = (v - u) / t, which can be arranged to get the following equation
2. t = (v - u) / a, which can be further arranged as
3. v = u + a * t
4. s = u * t + 0.5 * a * t^2, another useful equation of motion