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Web Application Development Laboratory Lab 1 – Introduction

Exercise 1: HTML and CSS images

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8" />
5     <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6     <meta name="keywords" content="youtube,video" />
7     <meta property="title" content="Web Application Development" />
8     <meta property="description" content="Web Application Development" />
9     <meta property="og:title" content="Web Application Development" />
10    <meta property="og:description" content="Web Application Development" />
11    <title>Lab 1 - Curriculum Vitae</title>
12    <style>
13      label {
14        font-size: 20px;
15      }
16    </style>
17    <link rel="icon" type="image/x-icon" href="favicon.ico" />
18  </head>
19  <body>
20    <main style="display: flex; align-items: center; justify-content: center">
21      <section style="padding: 0 24px 0 24px; margin-top: 32px; border: 2px solid black">
22        <div style="width: 50%; padding: 1.5px; background-color: black; margin-top: 32px"></div>
23        <h1>Phạm Gia Phúc</h1>
24        <label style="color: green">Software Developer</label>
25        <section style="display: flex; flex-direction: column; margin: 8px 0 32px 0">
26          <label>123 Your Street</label>
27          <label>Your City, ST 12345</label>
28          <label>(123) 456-7890</label>
29          <label>no_reply@example.com</label>
30        </section>
31        <label style="color: green">Skills</label>
32        <section style="display: flex; flex-direction: column; margin: 8px 0 32px 0">
33          <label>
34            >HTML, CSS, JavaScript, Accessibility, Figma to Design, Responsive Web Design, Technical Writing,
35            Presentation</label>
36          >
37        </section>
38        <label style="color: green">Education</label>
39        <section style="display: flex; flex-direction: column; margin: 8px 0 32px 0">
40          <label style="font-size: 22px; color: blue">School Name, Location - Degree</label>
41          <label>Month 20xx to Month 20xx</label>
42          <label>List of exciting things you did at university</label>
43          <ul style="padding: 0; padding-left: 16px">
44            <li><label>1st place at Computer Science</label></li>
45            <li><label>1st place at Computer Science</label></li>
46            <li><label>1st place at Computer Science</label></li>
47          </ul>
48        </section>
49        <label style="color: green">Experience</label>
50        <section style="display: flex; flex-direction: column; margin: 8px 0 32px 0">
51          <label style="font-size: 22px; color: blue">Company Name, Location - Job Title</label>
52          <label>Month 2022 to Month 2025</label>
53          <ul style="padding: 0; padding-left: 16px">
54            <li><label>1st place at Computer Science</label></li>
55            <li><label>1st place at Computer Science</label></li>
56            <li><label>1st place at Computer Science</label></li>
57          </ul>
58          <label>Skills: List of skills used or gained at this company</label>
59          <label style="font-size: 22px; color: blue; margin-top: 16px">Company Name, Location - Job Title</label>
60          <label>Month 2022 to Month 2025</label>
61          <ul style="padding: 0; padding-left: 16px">
62            <li><label>1st place at Computer Science</label></li>
63            <li><label>1st place at Computer Science</label></li>
64            <li><label>1st place at Computer Science</label></li>
65          </ul>
66          <label>Skills: List of skills used or gained at this company</label>
67        </section>
68        <label style="color: green">Across the Internet</label>
69        <section style="display: flex; flex-direction: column; margin: 8px 0 32px 0">
70          <label>https://github.com/phamgiaphuc/web-app-lab</label>
71        </section>
72      </section>
73    </main>
74  </body>
75 </html>
76
```

- Output:



- Checklist:

- **Semantically correct HTML structure:** In the code, I structure the code with DOCTYPE tag for the type of document, head tag for meta tags and website's information and body tag for viewing the data
- **Single-page layout with sections for education, skills, and career history:** In the code, I use section with heading tag for each layout.
- **SEO meta tags in the head section:** In the code, I use tag meta with keywords, title and description for search engine.

```
<meta name="keywords" content="youtube,video" />  
<meta property="title" content="Web Application Development" />  
<meta property="description" content="Web Application Development" />
```
- **OG tags for better social media sharing:** I use open graph tags for better social media sharing.

```
<meta property="og:title" content="Web Application Development" />  
<meta property="og:description" content="Web Application Development" />
```
- **A favicon linked in the head section:** A favicon is an icon where the website show its logo on the browser's tabs. I use link tag to attach the icon to the index.html

```
<link rel="icon" type="image/x-icon" href="favicon.ico" />
```

Exercise 2: MySQL scripts

Database Explorer

- acus-web-service
- bitnami-mysql 2 of 6
 - classicmodels
 - web-app-lab-1
 - tables
 - courses
 - departments
 - lecturer_courses
 - lecturers
 - student_courses
 - students
- Server Objects
- bitnami-postgresql-acus
- bitnami-postgresql-shub 2 of 6
- let-on-air-docker 2
- redis-docker 1 of 16

```
1 CREATE TABLE departments (  
2   department_id INT NOT NULL AUTO_INCREMENT,  
3   department_name VARCHAR(255) NOT NULL,  
4   PRIMARY KEY (department_id)  
5 );  
6  
7 CREATE TABLE lecturers (  
8   lecturer_id INT NOT NULL AUTO_INCREMENT,  
9   lecturer_name VARCHAR(255) NOT NULL,  
10  department_id INT NOT NULL,  
11  PRIMARY KEY (lecturer_id),  
12  FOREIGN KEY (department_id) REFERENCES departments(department_id) ON DELETE CASCADE  
13 );  
14  
15 CREATE TABLE students (  
16   student_id INT NOT NULL AUTO_INCREMENT,  
17   dob DATE,  
18   student_name VARCHAR(255) NOT NULL,  
19   major VARCHAR(255),  
20   PRIMARY KEY (student_id)  
21 );  
22  
23 CREATE TABLE courses (  
24   course_id INT NOT NULL AUTO_INCREMENT,  
25   course_name VARCHAR(255),  
26   PRIMARY KEY (course_id)  
27 );  
28  
29 CREATE TABLE student_courses (  
30   student_id INT,  
31   course_id INT,  
32   PRIMARY KEY (student_id, course_id),  
33   FOREIGN KEY (student_id) REFERENCES students(student_id) ON DELETE CASCADE,  
34   FOREIGN KEY (course_id) REFERENCES courses(course_id) ON DELETE CASCADE  
35 );  
36  
37 CREATE TABLE lecturer_courses (  
38   lecturer_id INT,  
39   course_id INT,  
40   PRIMARY KEY (lecturer_id, course_id),  
41   FOREIGN KEY (lecturer_id) REFERENCES lecturers(lecturer_id) ON DELETE CASCADE,  
42   FOREIGN KEY (course_id) REFERENCES courses(course_id) ON DELETE CASCADE  
43 );
```

- Database diagram:

