Take Home Final Exam

This exam is marked out of 100 points and accounts for 25% of your final grade. It must be uploaded to your webspace no later than 6:30 pm on Friday, April 3, 2020. Late assignments will be docked 1% per day.

Ensure you read all the instructions carefully and follow them as described.

Your task is to build a **five-page website** according to the specifications described below. You are free to use any and all resources from the class, as well as anything you find online, with one caveat: **You cannot recycle code verbatim from class exercises or previous assignments.**

Summary of Evaluation Criteria

Common Page Elements	10
Page 1: Home Page	10
Pages 2-4: Primary Content Pages (3 total)	45
Page 5: Contact Page	10
Layout	20
Submission Criteria	5
Total	100

Common Page Elements

All pages should include:
- A link to **an external stylesheet** that specifies global **styles for headings and links**;
- a **common header** (site title/identification and/or logo) that includes the use of a background image;
- a **global navigation system**, and;
- **common footer** that includes your **name**, **email address** and the **name of the course and its CRN** (202010-70400).

/ 10 pts

Content

1. Home Page
   Content for the home page must include:
   a. A paragraph introducing the purpose of your site. This introductory paragraph should include a **link to the class website** and **link to the COMP 1850 course home page on bcit.ca**.

b. A paragraph describing the difference between the Internet and the World Wide Web.

c. Three topic boxes (see **Layout** section) pointing to the **Primary Content** pages you choose to include (see below).

/ 10 pts

2. Primary Content Pages

Choose **three (3)** of the following as topics for your **Primary Content Pages**, and include the content as described:

a. **What is HTML?**
    i.   Describe the origin and purpose of HTML.
    ii. Describe the purpose of the head and body sections of a web page. Provide your answers in the form of a simple HTML table.
    iii. Describe the difference between block and inline elements. Provide an example of each (e.g., lists, headings, tables, anchors, images, etc.), showing examples of both the markup required and the rendered display.

b. **Introducing CSS**
    i.   List three reasons to use CSS on a web page. Structure your answer as a list.
    ii. Describe an advantage to using embedded styles instead of inline styles.
    iii. Using a simple HTML table, outline the elements of the box model and their characteristics. Style alternate rows with a different background colour.

c. **Site Planning and Architecture**
    i.   Describe the primary components of information architecture.
    ii. Describe the difference between hierarchical and linear organizational methods. Give examples of when you use each method.
    iii. Describe sample documents might produce as part of your site planning and architecture process, including images depicting examples.

d. **Elements of Design**
    i.   List the four basic principles of design described in class and describe why we should aim to adhere to them.
    ii. For two the four elements, provide a visual example of their usage, either created yourself or as a screenshot from a website demonstrating their use.
    iii. For the same two elements, provide links to websites you believe demonstrate a good use of that design principle.

e. **Using JavaScript**
    i.   Provide an overview of JavaScript and three popular uses.

ii. Describe the difference between a property and a method, with respect to objects.

iii. As an example of JavaScript, create a button that, when clicked, launches an alert box that displays a message of your choosing.
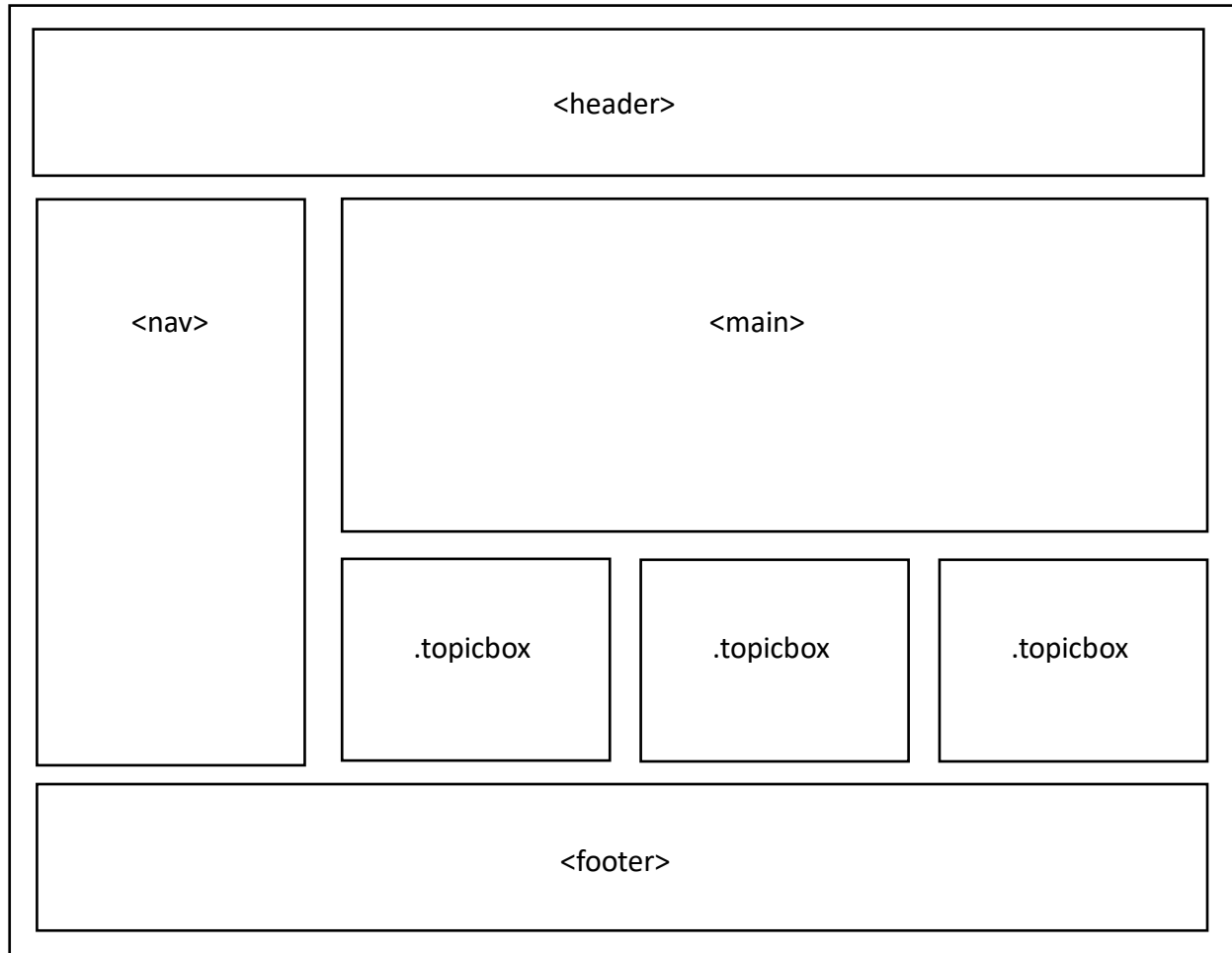
/ 45 pts

3. Contact Page

Create a contact page for your site that includes a form that allows visitors to send you feedback. Use the **formmail.php** script covered in Session 9 to send data to your email address. The form should include fields for:

a. Name
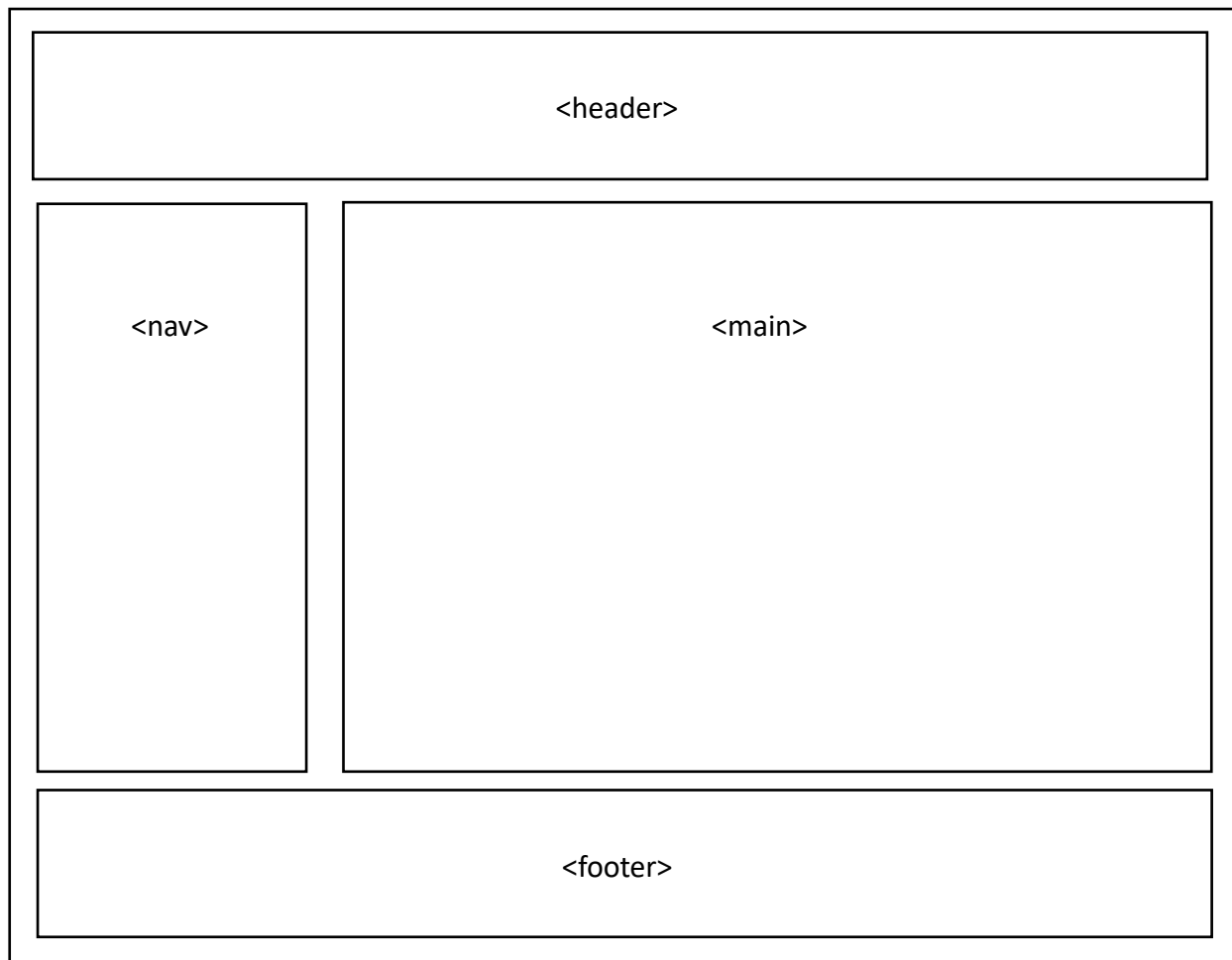b. Email address
c. Comments

/ 10 pts

Layout

You will have **two** different page layouts, one for your home page and one for your secondary pages. Your home page should use CSS to achieve the following layout:

```
┌─────────────────────────────────────────────────────────────┐
│  ┌───────────────────────────────────────────────────────┐  │
│  │                      <header>                         │  │
│  └───────────────────────────────────────────────────────┘  │
│  ┌──────────┐  ┌─────────────────────────────────────────┐  │
│  │          │  │                                         │  │
│  │          │  │                <main>                   │  │
│  │  <nav>   │  │                                         │  │
│  │          │  └─────────────────────────────────────────┘  │
│  │          │  ┌─────────┐   ┌─────────┐   ┌─────────┐      │
│  │          │  │.topicbox│   │.topicbox│   │.topicbox│      │
│  │          │  └─────────┘   └─────────┘   └─────────┘      │
│  └──────────┘                                               │
│  ┌───────────────────────────────────────────────────────┐  │
│  │                      <footer>                         │  │
│  └───────────────────────────────────────────────────────┘  │
└─────────────────────────────────────────────────────────────┘
```

Details:
1. Use the structural elements indicated in the diagram (header, nav, etc.).
2. Use CSS to style the elements to create the depicted layout. Create a **.topicbox** class and apply it to three **div** elements to create jumping off points to your **Primary Content Pages**.
3. The **header** should use a background image as part of the CSS specifications.
4. The **footer** should use a background colour as part of the CSS specifications.
5. The three **topic boxes should stand out** so as to draw attention to their contents. There should be a link to the respective content pages represented by the topic boxes.
6. The remainder of the details of how the main page elements are laid out and styled (colours, fonts, margins, padding, borders, etc.) are left to the student. **A portion of evaluation will be based on adherence to the basic design principles discussed in class**.

Your secondary pages should use CSS to achieve the following layout:

```
+-----------------------------------------------------------+
|  +-----------------------------------------------------+  |
|  |                                                     |  |
|  |                     <header>                        |  |
|  |                                                     |  |
|  +-----------------------------------------------------+  |
|  +----------------+  +-------------------------------+  |  |
|  |                |  |                               |  |  |
|  |                |  |                               |  |  |
|  |                |  |                               |  |  |
|  |    <nav>       |  |           <main>              |  |  |
|  |                |  |                               |  |  |
|  |                |  |                               |  |  |
|  |                |  |                               |  |  |
|  |                |  |                               |  |  |
|  +----------------+  +-------------------------------+  |  |
|  +-----------------------------------------------------+  |
|  |                                                     |  |
|  |                    <footer>                         |  |
|  |                                                     |  |
|  +-----------------------------------------------------+  |
+-----------------------------------------------------------+
```

Details:
1. Use the structural elements indicated in the diagram (header, nav, etc.). Carry over any style choices made on the home page in order to **ensure unity between the pages**.
2. Use CSS to style the content elements that you place in the main section of each page. Do not use any deprecated elements or presentational attributes in your HTML (e.g., center, align, bgcolor, etc.).
3. **Each page should have a clear page title**, both as a <title> element and a heading within the <body> of the page.

/ 20 pts

Submission Criteria

1. Content is evaluated both on the **completeness of your answers** and for the **quality of your HTML and CSS**. Ensure all pages have been checked with a validator.
2. Cite all your sources. If you sourced material from the textbook or the class website, indicate which page. If you sourced it from another website, **provide a link**.
3. To submit the exam, create a directory in your webspace on **students.bcitwebdev.com** called **finalexam-username**, where **username** is the first initial of your first name, followed by your last name, e.g.:

   /finalexam-dtanchak

4. Upload all your files into this directory by **6:30 pm on Friday, April 3, 2020**.
5. **Send an email to your instructor** with the URL of your final exam before the due date/time. Any emails received after this due date/time, will be docked 1% per day (yes, even if you are only a few minutes late).

/ 5 pts