



FUNDAMENTALS OF WEB DESIGN (415)

REGIONAL 2023

Production:

Multiple Choice (20 @ 10 points each) _____ (100 points)

Application _____ (340 points)

TOTAL POINTS _____ (440 points)

Test Time: 90 minutes

GENERAL GUIDELINES:

Failure to adhere to any of the following rules will result in disqualification:

1. Member must hand in this test booklet and all printouts if any. Failure to do so will result in disqualification.
2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests (handwritten, photocopied, or keyed) are allowed in the testing area.
3. Electronic devices will be monitored according to ACT standards.

MULTIPLE CHOICE ANSWERS

1. B
2. C
3. C
4. C
5. C
6. A
7. A
8. B
9. A
10. B
11. D
12. B
13. A
14. B
15. C
16. B
17. C
18. D
19. A
20. B

APPLICATION

During this exercise, you are only allowed to use **Notepad**. The use of an online editor or any use of the Internet will result in immediate disqualification.

Screen capture of the expected result is included for your inspection and is to be used as a guide for completing this exercise.

When complete, submit your files generated for this exercise (HTML and Style Sheet). Also, you will need to submit a screenshot (using the snipping tool or screenshot tool) of your finished work as it appears in the web browser so that it may be used for grading purposes.

Your task is to regenerate the web page shown in the screen capture provided in this packet, using HTML5, CSS, and the parameters specified below.

1. Overall Specifications
 - a. The documents must be valid HTML5.
 - b. The documents must be styled with an external cascading style sheet.
 - i. ALL styling **MUST** be done with the style sheet. Using tags or style attributes within tags is **PROHIBITED**.
 - c. **The document must not use tables for any sort of layout or positioning.**
2. File Creation
 - a. Create a folder using your contestant number as the name of the folder.
 - b. Ensure you have the “popcorn.jpg” from the start files in your project folder.
 - c. Create two new files called index.html and a stylesheet named styles.css; these files should be saved to your project folder
3. General Page Specifications
 - a. The opening HTML element must include the language attribute with the value for the English language.
 - b. Title should have **Your Contestant Number – Fundamentals of Web Design.**
 - c. The head tag must have a meta element with the character set an attribute with a value of UTF-8.
 - d. You should link your style sheet along with defining the relationship and type.
 - e. The background color of your webpage should be #ad0a02.
 - f. The text color of your webpage should be #d1d1d1.
 - g. The default font for the page body needs to be Verdana. The fallback fonts, in order, should be Geneva, Tahoma and then the generic font family should be sans-serif.
 - h. The default font size needs to be 1em.
 - i. A class called “mainHeading” should be created with the following attributes:
 - i. Helvetica, Arial, Tahoma, sans-serif;
 - ii. Font size of 4 em
 - iii. Font color of #000000
 - iv. Align the text to be centered

- j. A class called “paragraphHeadings” should be created with the following attributes:
 - i. Bold font-weight
 - ii. Font size of 14 px
 - iii. Font color of white
 - k. A class called “centerImage” should be created with the following attributes:
 - i. Displayed as block
 - ii. All margins set to auto
 - iii. Width set to 80%
 - l. A style for anchor points (a) should be created with the following attributes:
 - i. Font color of white
4. Page Content
- a. All About Popcorn (this is heading 1 with the mainHeading class)
 - b. Add the “popcorn.jpg” image with alternate text for the image: “popcorn in a glass bowl”
 - c. Type the following paragraph:
 - i. Corn was domesticated about 10,000 years ago in what is now Mexico. Archaeologists discovered that people have known about popcorn for thousands of years. Fossil evidence from Peru suggests that corn was popped as early as 4,700 BC. Through the 19th century, popping of the kernels was achieved by hand on stove tops. Kernels were sold on the East Coast of the United States under names such as Pearls or Nonpareil. The term popped corn first appeared in John Russell Bartlett's 1848 Dictionary of Americanisms. Popcorn is an ingredient in Cracker Jack and, in the early years of the product, it was popped by hand.
 - d. Type the following paragraph:
 - i. Consumption of Popcorn: (apply the paragraphHeading class)
 - ii. Popcorn is a popular snack food at sporting events and in movie theaters, where it has been served since the 1930s. Cinemas have come under fire due to their high markup on popcorn. More information about popcorn can be found here:
 - e. Type the following Unordered List:
 - i. Popping Mechanism
 - ii. Cooking Methods
 - iii. Nutritional Value
 - iv. Terminology

- f. Type the following paragraph:
 - i. Popping Mechanism: (apply the paragraphHeading class)
 - ii. Each kernel of popcorn contains a certain amount of moisture and oil. Unlike most other grains, the outer hull of the popcorn kernel is both strong and impervious to moisture and the starch inside consists almost entirely of a hard type. As the oil and water within the kernel are heated, they turn the moisture in the kernel into pressurized steam. Under these conditions, the starch inside the kernel gelatinizes, softens, and becomes pliable. The internal pressure of the entrapped steam continues to increase until the breaking point of the hull is reached. Special varieties are grown to give improved popping yield. Though the kernels of some other types will pop, the cultivated strain for popcorn is *Zea mays everta*, which is a special kind of flint corn.
- g. Type the following paragraph:
 - i. Cooking Methods: (apply the paragraphHeading class)
 - ii. Popcorn can be cooked with butter or oil. Although small quantities can be popped in a stove-top kettle or pot in a home kitchen, commercial sale of freshly popped popcorn employs specially designed popcorn machines, which were invented in Chicago, Illinois, by Charles Cretors in 1885. Cretors successfully introduced his invention at the Columbian Exposition in 1893. At this same world's fair, F. W. Rueckheim introduced a molasses-flavored "Candied Popcorn", the first caramel corn; his brother, Louis Rueckheim, slightly altered the recipe and introduced it as Cracker Jack popcorn in 1896.
- h. Type the following paragraph:
 - i. Nutritional Value: (apply the paragraphHeading class)
 - ii. Air-popped popcorn (no salt or other additives) is 4% water, 78% carbohydrates (including 15% dietary fiber), 12% protein, and 4% fat (table). In a 100 gram reference amount, popcorn provides 382 calories and is a rich source (20% or more of the Daily Value, DV) of riboflavin (25% DV) and several dietary minerals, particularly manganese, phosphorus, and zinc (36-45% DV). B vitamins and other minerals are in appreciable amounts.

- i. Type the following paragraph:
 - i. Terminology: (apply the paragraphHeading class)
 - ii. In the popcorn industry, a popped kernel of corn is known as a "flake". Two shapes of flakes are commercially important. "Butterfly" (or "snowflake") flakes are irregular in shape and have a number of protruding "wings". "Mushroom" flakes are largely ball-shaped, with few wings. Butterfly flakes are regarded as having better mouthfeel, with greater tenderness and less noticeable hulls. Mushroom flakes are less fragile than butterfly flakes and are therefore often used for packaged popcorn or confectionery, such as caramel corn.[19] The kernels from a single cob of popcorn may form both butterfly and mushroom flakes; hybrids that produce 100% butterfly flakes or 100% mushroom flakes exist, the latter developed only as recently as 1998. Growing conditions and popping environment can also affect the butterfly-to-mushroom ratio. When referring to multiple pieces of popcorn collectively, it is acceptable to use the term "popcorn". When referring to a singular piece of popcorn, the accepted term is "kernel".
- j. Create an anchor for each of the unordered list items pointing to the correct paragraphs on this page.
 - i. The bullet points should not be linked.
 - ii. Links should point to bolded paragraph headings:
 1. Popping Mechanism (add an id called "popping")
 2. Cooking Methods (add an id called "cooking")
 3. Nutritional Value (add an id called "nutrition")
 4. Terminology (add an id called "terms")

SAMPLE

All About Popcorn



Corn was domesticated about 10,000 years ago in what is now Mexico. Archaeologists discovered that people have known about popcorn for thousands of years. Fossil evidence from Peru suggests that corn was popped as early as 4,700 BC. Through the 19th century, popping of the kernels was achieved by hand on stove tops. Kernels were sold on the East Coast of the United States under names such as Pearls or Nonpareil. The term popped corn first appeared in John Russell Bartlett's 1848 Dictionary of Americanisms. Popcorn is an ingredient in Cracker Jack and, in the early years of the product, it was popped by hand.

Consumption of Popcorn: Popcorn is a popular snack food at sporting events and in movie theaters, where it has been served since the 1930s. Cinemas have come under fire due to their high markup on popcorn. More information about popcorn can be found here:

- [Popping Mechanism](#)
- [Cooking Methods](#)
- [Nutritional Value](#)
- [Terminology](#)

Popping Mechanism: Each kernel of popcorn contains a certain amount of moisture and oil. Unlike most other grains, the outer hull of the popcorn kernel is both strong and impervious to moisture and the starch inside consists almost entirely of a hard type. As the oil and water within the kernel are heated, they turn the moisture in the kernel into pressurized steam. Under these conditions, the starch inside the kernel gelatinizes, softens, and becomes pliable. The internal pressure of the entrapped steam continues to increase until the breaking point of the hull is reached. Special varieties are grown to give improved popping yield. Though the kernels of some other types will pop, the cultivated strain for popcorn is *Zea mays everta*, which is a special kind of flint corn.

Cooking Methods: Popcorn can be cooked with butter or oil. Although small quantities can be popped in a stove-top kettle or pot in a home kitchen, commercial sale of freshly popped popcorn employs specially designed popcorn machines, which were invented in Chicago, Illinois, by Charles Cretors in 1885. Cretors successfully introduced his invention at the Columbian Exposition in 1893. At this same world's fair, F. W. Rueckheim introduced a molasses-flavored "Candied Popcorn", the first caramel corn; his brother, Louis Rueckheim, slightly altered the recipe and introduced it as Cracker Jack popcorn in 1896.

Nutritional Value: Air-popped popcorn (no salt or other additives) is 4% water, 78% carbohydrates (including 15% dietary fiber), 12% protein, and 4% fat (table). In a 100 gram reference amount, popcorn provides 382 calories and is a rich source (20% or more of the Daily Value, DV) of riboflavin (25% DV) and several dietary minerals, particularly manganese, phosphorus, and zinc (36-45% DV). B vitamins and other minerals are in appreciable amounts.

Terminology: In the popcorn industry, a popped kernel of corn is known as a "flake". Two shapes of flakes are commercially important. "Butterfly" (or "snowflake") flakes are irregular in shape and have a number of protruding "wings". "Mushroom" flakes are largely ball-shaped, with few wings. Butterfly flakes are regarded as having better mouthfeel, with greater tenderness and less noticeable hulls. Mushroom flakes are less fragile than butterfly flakes and are therefore often used for packaged popcorn or confectionery, such as caramel corn. The kernels from a single cob of popcorn may form both butterfly and mushroom flakes; hybrids that produce 100% butterfly flakes or 100% mushroom flakes exist, the latter developed only as recently as 1998. Growing conditions and popping environment can also affect the butterfly-to-mushroom ratio. When referring to multiple pieces of popcorn collectively, it is acceptable to use the term "popcorn". When referring to a singular piece of popcorn, the accepted term is "kernel".

APPLICATION RUBRIC

HTML	Point Value	Score
Doctype declaration is correct	5	
<html></html> is in correct location with en designation	5	
<head></head> is in correct location	5	
<title></title> is in correct location and contestant # is present	5	
<meta> contains charset for UTF-8	5	
<link> tag reference to a CSS style sheet	15	
<body></body> is in correct location	5	
<h1></h1> contains mainHeading class	10	
 contains alt of “popcorn in a glass bowl” and the centerImage class	15	
Paragraph 1 (“Corn was domesticated...”) was typed correctly with no mistakes (-1 point for each mistake for max of -10) and is located in the correct location	15	
Paragraph heading (“Consumption of Popcorn”) uses , the paragraphHeading class, and is located within the <p></p> tags	15	
Paragraph 2 (“Popcorn is a popular...”) was typed correctly with no mistakes (-1 point for each mistake for max of -10) and is located in the correct location	15	
Unordered list is located within Paragraph 2, with correct , correct <a>, and references to paragraph headings	25	
Paragraph heading (“Popping Mechanism”) uses , the paragraphHeading class, is located within the <p></p> tags, and has an id for linking	15	
Paragraph 3 (“Each kernel of popcorn...”) was typed correctly with no mistakes (-1 point for each mistake for max of -10) and is located in the correct location	15	
Paragraph heading (“Cooking Methods”) uses , the paragraphHeading class, is located within the <p></p> tags, and has an id for linking	15	
Paragraph 4 (“Popcorn can be cooked...”) was typed correctly with no mistakes (-1 point for each mistake for max of -10) and is located in the correct location	15	
Paragraph heading (“Nutritional Value”) uses , the paragraphHeading class, is located within the <p></p> tags, and has an id for linking	15	
Paragraph 5 (“Air-popped popcorn...”) was typed correctly with no mistakes (-1 point for each mistake for max of -10) and is located in the correct location	15	

Paragraph heading (“Terminology”) uses <code></code> , the <code>paragraphHeading</code> class, is located within the <code><p></p></code> tags, and has an <code>id</code> for linking	15	
Paragraph 6 (“In the popcorn industry...”) was typed correctly with no mistakes (-1 point for each mistake for max of -10) and is located in the correct location	15	
HTML TOTAL	260	

CSS	Point Value	Score
Style Sheet is external and named <code>styles.css</code>	5	
body contains correct styles: <ul style="list-style-type: none"> background color font color font family font size 	20	
mainHeading class contains correct styles: <ul style="list-style-type: none"> fonts font size color text alignment 	20	
paragraphHeading class contains correct styles: <ul style="list-style-type: none"> bolding font size font color 	15	
centerImage class contains correct styles: <ul style="list-style-type: none"> display margins width size 	15	
The <code>a</code> selector contains correct styles: <ul style="list-style-type: none"> color 	5	
CSS TOTAL	80	

Categories	Point Value	
HTML		/ 260
CSS		/ 80
TOTAL		/ 340

APPLICATION SOLUTION

See solution files to inspect files.

index.html

```
<!doctype html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Your Contestant Number – Fundamentals of Web Design</title>
  <link href="styles.css" rel="stylesheet" type="text/css">
</head>

<body>
  <h1 class="mainHeading">All About Popcorn </h1>
  

  <p>Corn was domesticated about 10,000 years ago in what is now Mexico. Archaeologists discovered that people have known about popcorn for thousands of years. Fossil evidence from Peru suggests that corn was popped as early as 4,700 BC. Through the 19th century, popping of the kernels was achieved by hand on stove tops. Kernels were sold on the East Coast of the United States under names such as Pearls or Nonpareil. The term popped corn first appeared in John Russell Bartlett's 1848 Dictionary of Americanisms. Popcorn is an ingredient in Cracker Jack and, in the early years of the product, it was popped by hand.</p>

  <p><span class="paragraphHeading">Consumption of Popcorn:</span>Popcorn is a popular snack food at sporting events and in movie theaters, where it has been served since the 1930s. Cinemas have come under fire due to their high markup on popcorn. More information about popcorn can be found here:
    <ul>
      <li><a href="#popping">Popping Mechanism</a></li>
      <li><a href="#cooking">Cooking Methods</a></li>
      <li><a href="#nutrition">Nutritional Value</a></li>
      <li><a href="#terms">Terminology</a></li>
    </ul>
  </p>
```

```
<p><span class="paragraphHeading" id="popping">Popping Mechanism:</span>Each kernel of popcorn contains a certain amount of moisture and oil. Unlike most other grains, the outer hull of the popcorn kernel is both strong and impervious to moisture and the starch inside consists almost entirely of a hard type. As the oil and water within the kernel are heated, they turn the moisture in the kernel into pressurized steam. Under these conditions, the starch inside the kernel gelatinizes, softens, and becomes pliable. The internal pressure of the entrapped steam continues
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to increase until the breaking point of the hull is reached. Special varieties are grown to give improved popping yield. Though the kernels of some other types will pop, the cultivated strain for popcorn is *Zea mays everta*, which is a special kind of flint corn.

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Terminology: In the popcorn industry, a popped kernel of corn is known as a "flake". Two shapes of flakes are commercially important. "Butterfly" (or "snowflake") flakes are irregular in shape and have a number of protruding "wings". "Mushroom" flakes are largely ball-shaped, with few wings. Butterfly flakes are regarded as having better mouthfeel, with greater tenderness and less noticeable hulls. Mushroom flakes are less fragile than butterfly flakes and are therefore often used for packaged popcorn or confectionery, such as caramel corn. The kernels from a single cob of popcorn may form both butterfly and mushroom flakes; hybrids that produce 100% butterfly flakes or 100% mushroom flakes exist, the latter developed only as recently as 1998. Growing conditions and popping environment can also affect the butterfly-to-mushroom ratio. When referring to multiple pieces of popcorn collectively, it is acceptable to use the term "popcorn". When referring to a singular piece of popcorn, the accepted term is "kernel".

styles.css

```
body {  
  background-color: #ad0a02;  
  color: #d1d1d1;  
  font-family: Verdana, Geneva, Tahoma, sans-serif;  
  font-size: 1em;  
}  
  
.mainHeading {  
  font-family: Helvetica, Arial, Tahoma, sans-serif;  
  font-size: 4em;  
  color: #000000;  
  text-align: center;  
}  
  
.paragraphHeading {  
  font-weight: bold;  
  font-size: 14px;  
  color: white;  
}  
  
.centerImage {  
  display: block;  
  margin: auto;  
  width: 80%;  
}  
  
a {  
  color: white;  
}
```