"Investing in Africa's future"

COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

NCSC 113: WEB DEVELOPMENT

END OF FIRST SEMESTER EXAMINATIONS
NOVEMBER 2022
LECTURER: Ms Blessing Gavaza
DURATION: 3 HOURS

INSTRUCTIONS

Answer the questions in Section A and any three from Section B

Start **each** question on a new page on your answer sheet.

The marks allocated to **each** question are shown at the end of the section.

SECTION A (Answer all questions in this section)

QUESTION 1

a. What is the difference between Web designing and Web development ?   **(6 marks)**
b. Write at least three latest programming languages/tools used for each.   **(6 marks)**
c. When talking about responsive web design, what are the differences between the Mobile First and the Desktop First approaches? Mention the pros and cons of each approach.   **(8 marks)**

QUESTION 2

a. Write the HTML and CSS code that will produce the webpage below and save the file as index.html   **(20 marks)**
   On your desktop , you'll find a folder with the following resources :
   - student.jpg
   - tags.png
   - class.png
   - check.png
   - instructor.png

   Use the link below to use the Montserrat font family
   https://fonts.googleapis.com/css?family=Montserrat

Use #ffffff, #f2f2f2, #666666 and #000000 as your colour palette to achieve the desired look.

STUDY NCSC113 AT AU

Do you want to be a webdeveloper and love creating websites?

Learn More

About the Course

</>

Understand the key concepts of visual design, Know the basics of HTML, understanding CSS

(group icon)

Learn the foundation of UX design and familiarize yourself with UI design

(checkmark icon)

Understanding layout patterns, the fundamentals behind responsive web design.

Know your Instructor

Web design is part artistry and part science, tapping into both the creative and analytical sides of a person's mind.

I am a Web developers who specializes in back-end development and I often work using languages such as HTML5, CSS3 and PHP. I can also use the Python framework - Django, write Java code and manage SQL databases to make sure that servers, applications, and databases are all working together.

Learn More

SECTION B (Answer any 3 questions in this section)

QUESTION 3

    a. Draw the three-tier architecture of web applications and explain each of the
          components briefly.   **(12 marks)**
    b. What are the components of a CSS Style?   **(4 Marks)**
    c.   Explain with an example what is a
        i. Class selector
        ii. Id selector   **(4marks)**

QUESTION 4

    a. Write HTML and CSS code for the following form and save it as login.html   **(15 marks)**

Login Form

    b. List FIVE of the top ten web application security issues.   **(5 marks)**

QUESTION 5

a. Explain the 5 stages in a HTTP transaction.   **(5 marks)**

b. You have been tasked to place a summary of the UK's most famous punk bands on an Entertainment website you're working on in the form of a table. Your finished table should look like the image in Fig 1.2   **(15 marks)**

Follow these guidelines for styling:

1. Add padding of 0.3em to the table headings and data and align them at the top of their cells.
2. Align headings and data for columns containing numbers right and those containing text left.
3. Add a 1px top and bottom solid border with the HEX color #999999, plus a 1px solid border of the same color above the footer.
4. Remove the default spacing between the table elements borders to get the expected result.
5. Stripe every odd row of the main table with the hex color #eeeeee

Fig 1.2

A summary of the UK's most famous punk bands			
Band	**Year formed**	**No. of Albums**	**Most famous song**
Buzzcocks	1976	9	Ever fallen in love (with someone you shouldn't've)
The Clash	1976	6	London Calling
The Damned	1976	10	Smash it up
Sex Pistols	1975	1	Anarchy in the UK
Sham 69	1976	13	If the kids are united
Siouxsie and the Banshees	1976	11	Hong Kong Garden
Stiff Little Fingers	1977	10	Suspect Device
The Stranglers	1974	17	No More Heroes
Total albums	**77**		

QUESTION 6

a. You are a Web Developer consulting at a Web development company. What is your advice for designing an effective, user-friendly website? **(10 marks)**

b. The following HTML example has several errors in it. Rewrite this code and do your best to improve it. **(5 marks)**

```html
<!DOCTYPE html>
<html>

  <body>
  <head>
    <meta charset="utf-8">
    <title>Document</title>
  </head>

    <h2>HTML debugging examples<h2>

    <hr>

    <p>What causes errors in HTML?

    <ul>
        </li>Broken elements: This can happen easily when you're typing quickly or the
autocomplete feature in your text editor gets ahead of you.</li>
        <li>Unclosed elements: If an element is <strong>not closed properly, then its
effect can spread to areas you didn't intend.

        <li>Badly nested elements: Nesting elements properly is also very important for
code behaving correctly. <strong>strong <em>strong emphasised?</strong> what is this?
</em>
        </ul>

    <div id="footer">
        <a href="mica-web.github.io/gd-431/02/debugging-html>Instructions</a> for this
activity.
    </div>
```

c. Before we can access data in the MySQL database, you need to be able to connect to the server. Write the PHP code to connect to a MySQL database. **(5 marks)**

END OF PAPER