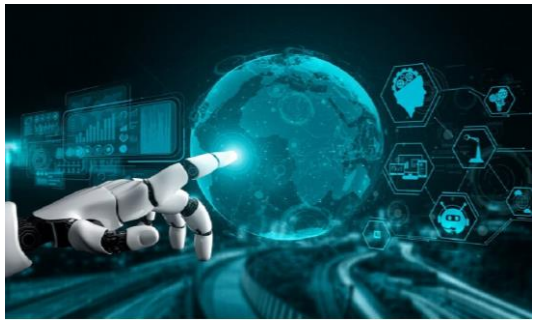
CM1102 COURSEWORK

Dr. Daniela Tsaneva

OUTLINE

- Coursework part 1
- Coursework part 2
- Online test
- Support



OVERVIEW

This assessment consists of two parts:

1. to create a static website (using HTML and CSS) on an aspect of the history of computing and the Internet

2. to create a dynamic website (using HTML, CSS and CGI) to compute Easter dates

Although both parts have the same formal deadline (Friday 8th December) we strongly encourage you to submit part 1 before Friday 1st December. In that way, we will be able to mark and provide feedback on part 1 during the lab sessions of Friday 1st December. This feedback can be useful when working on part 2.

OVERVIEW

This assignment is worth 40% of the total marks available for this module. If coursework is submitted late (and where there are no extenuating circumstances):

1. If the assessment is submitted no later than 24 hours after the deadline, the mark for the assessment will be capped at the minimum pass mark;

2. If the assessment is submitted more than 24 hours after the deadline, a mark of 0 will be given for the assessment.

Extensions to the coursework submission date can only be requested using the Extenuating Circumstances procedure. Only students with approved extenuating circumstances may use the extenuating circumstances submission deadline. Any coursework submitted after the initial submission deadline without approved extenuating circumstances will be treated as late.

COURSEWORK PART 1

:Create a static website (using HTML and CSS) on an aspect of the history of computing and the Internet

Using only HTML and CSS, create a website consisting of at least three web pages dedicated to either a person or a technology central to the development of computers or the Internet.

If the website is about a particular person, then it should contain separate pages about:

1. Information about the person (e.g. his or her personal background).
2. A discussion about the technological contribution he or she has made.
3. A discussion on why this technological contribution is still relevant today.

If the website is about a technology, then it should contain separate pages about:

1. The functionality it provides: what does it do and what is it for?
2. Some of the relevant technical details.
3. An overview of its history.

COURSEWORK PART 1

- Suggested persons to choose from are: Charles Babbage, Terry Davis, Grace Hopper, Ada Lovelace, Dennis Ritchie, Clive Sinclair, Richard Stallman, Ken Thompson, Linus Torvalds, Jack Tramiel, Konrad Zuse, or anyone else of a similar importance. Suggested technologies to choose from are: ADSL, C (programming language), Graphical User Interfaces, Java, Python, SMTP, SSH, Wi-Fi, or any other technology of similar importance.
- Each of the web pages should include a navigational menu that allows the user to move to each of the other pages on the website.

COURSEWORK PART 1

Include a table (with at least 2 columns and 3 rows) to provide a historical overview (e.g. year of birth, education, main achievements, and death if your website is about a person; years of main developments if your website is about a technology). Also include a picture, such that clicking on it brings the user to a related external page (for example to a Wikipedia page).

All pages of the website must be subject to CSS styling that is controlled by an external style sheet.

The website should be written entirely by hand using only HTML and CSS (that is, you are not allowed to use any kind of HTML/CSS code generators).

COURSEWORK PART 2

Create a dynamic website (using HTML, CSS and CGI) to compute Easter dates

Create a website that interacts with a Python program via CGI (Common Gateway Interface) to inform the user of the day and month on which Easter falls in a given year that the user inputs. The website must use a form to allow the user to input the year, and radio buttons to specify how they want the output to be formatted. The user should be able to select between the following formats:

1. Numerically, as dd/mm/year (for example: 12/04/2020).

2. Verbosely, with the full name of the month as day of named_month year (for example: 12th April 2020).

3. Both of these formats.

COURSEWORK PART 2

Note that for option 2 some credit (1 mark) will be awarded for qualifying the date with a superscript of either st, nd, rd or th ,according to the day.

Both the form and the program output should be formatted using CSS from an external stylesheet located on the server.

The website should be written entirely by hand using only HTML, CSS and CGI with Python (that is, you must not use any kind of code generator). The website must be placed on the COMSC web server, in line with the instructions below, with the HTML code in the project directory and the Python code in the cgi-bin subdirectory.

HINTS

Data items from a form, when accessed in CGI with Python, are returned by the form.getvalue() function as a string. Therefore, you will need to convert them to integers using the function int() before you can process them with your procedure to compute the Easter date. In your Python script, to determine the value of the radio buttons form controls, compare the variable containing the value returned by form.getvalue() with a string containing the respective item of text, that is the value of the value attribute of the corresponding form control.

SUBMISSION INSTRUCTIONS

Part 1 and part 2 should be submitted separately, no later than Friday 8th December 2023 at 9.30am.

As for part 1, submission should be done both via Learning Central and via the school's web server:

- Via Learning Central (the entry for part 1)
  - A single .zip archive that includes the complete source code of your website, with the same structure as needed for deployment on the project server, including all required resources such as images.
  - A plain text file named readme.txt that includes: your name, student number, e-mail address, and the URL of the website on the project server.
- Via the school's web server

  Uploading your website should be done to websites.cs.cf.ac.uk using the CIFS protocol. Please make sure that you place your website in the project directory, which has been created for you. Once you have uploaded your website, you can access it at http:// project .cs.cf.ac.uk/<yourmailname>

  Do not upload the .zip archive to the web server – upload the individual files instead!

SUBMISSION INSTRUCTIONS

As for part 2, submission should be done both via Learning Central and via the school's web server:

- Via Learning Central (the entry for part 2)
  - A single .zip archive that includes the complete source code of your website, with the same structure as needed for deployment on the project server, including all required resources such as images.
  - A plain text file named readme.txt that includes: your name, student number, e-mail address, and the URL of the website on the project server.
- Via the school's web server

Uploading your website should be done to websites.cs.cf.ac.uk using the CIFS protocol. Please make sure that you place your website in the project directory (scripts should go into the cgi-bin subdirectory) which has been created for you. Once you have uploaded yourwebsite, you can access it at http:// project .cs.cf.ac.uk/<yourmailname>

Do not upload the .zip archive to the web server – upload the individual files instead!

No changes are allowed (on Learning Central or on the web server) after the deadline of Friday 8th December at 9.30am. Also, non-compliance with the above instructions can lead to some (or even all) marks being deducted.

FEEDBACK AND SUGGESTIONS FOR FURTHER LEARNING

Your work will be marked during the online marking and feedback sessions. A lab assistant will test and evaluate your website (using screen share) and provide marks and feedback while doing so. The marking sessions will be held at the following dates:

- marking and feedback session for part 1:

Friday 1st December

- marking and feedback session for part 2:

Friday 8th December

The feedback you receive during the online marking and feedback sessions can be useful for the next piece of courserwork, which will be handed out during the spring semester.

If you miss the marking sessions, your work will still be marked, but you will not receive any feedback, nor will you be able to ask any questions about the mark you received.

MARKING CRITERIA PART 1

As for part 1, marks will be given for the following aspects:

Criterion	Marks
at least three web pages of HTML code	2
navigation with a menu on each page that provides access to each other page	2
a table that has at least two columns and three rows, containing information relevant to the website	2
An external style sheet that includes rules that at least set the font family, size and colour of text	2
Informative content about a key person or a technology, including a clickable picture. To obtain the full mark for content there should be a clear explanation of the nature of the contribution, aimed at a reader who has little or no prior knowledge of the subject. At least two of the pages should include informative content (at least three reasonable sized paragraphs per page). It should be written entirely or mostly in your own words. References should be listed, and any items of text quoted directly from another source must be placed in quotes and should be clearly acknowledged, with details of the source.	2

MARKING CRITERIA PART 2

As for part 2, marks will be given for the following aspects:

Criterion	Marks
an HTML web page with a form that accepts user input of both the year and the option for formatting the output	1
the above page is styled with an external CSS style sheet	1
python + CGI program at least echoes (prints out) the year that the user has input into the form, as a HTML/CSS web page	2
Python + CGI processing of user input to generate and output (in HTML/CSS) the date of Easter for the year that the user has entered	3
Correct implementation of the user options for formatting the date as both "dd/mm/year" and "day named_month year"	2
The superscript for the day (st, nd, rd, or th) is correctly computed and displayed	1

The examiners will have the discretion to award partial marks when a component is only partially implemented or is not fully working.

ONLINE TEST

In **week 12 (January 8-12)** there will be the online test on **Friday January 12 at 11:10am**. This test contributes **10%** to your overall mark for Web Applications. The test consists of 5 questions, randomly selected from a pre-defined set of questions. Once the test is started, you will have 30 minutes to finish it. Make sure you have a stable internet connection, as the test will auto-submit once the 30 minutes are finished.

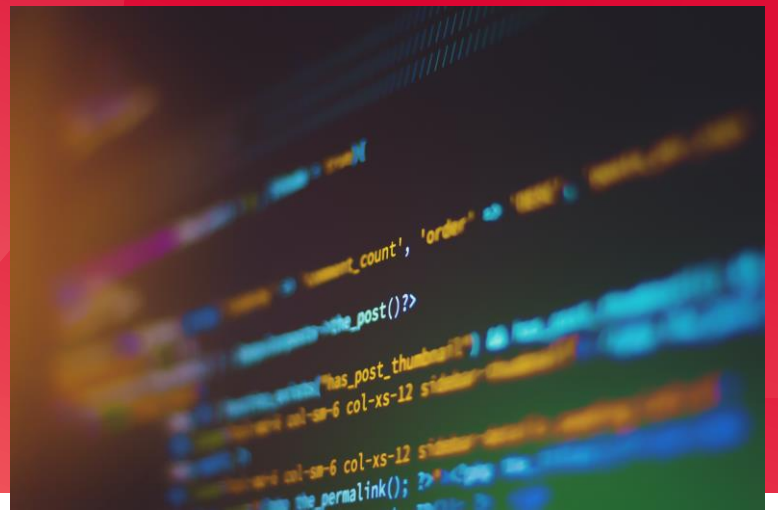
This test is about the following topics:

- *text file formats (as discussed in week 5)*
- *image formats (as discussed in week 6)*
- *UNIX/Linux (as discussed in week 10)*
- *search engines (as discussed in week 11)*

ONLINE TEST

- As for week 5, the entire presentation on text file format is relevant, except the part on HTML. As for week 6, only the part of the presentation that is about image formats is relevant (that is, only the slide on "Image File Formats" and associated explanation in the lecture). As for week 10, the entire presentation on UNIX/Linux is relevant, except for the last three slides (slides 19, 20 and 21). As for week 11, the entire presentation on Search Engines is relevant (we will not ask you to generate any numbers for PageRank, though). Please be aware that we won't ask any questions about HTML, CSS or form processing, as these topics were already covered by the coursework. We will also not ask any questions on the history of the Internet and the Web (which was discussed during week 5), on Web usability and accessibility (which was discussed in week 9) or on the topic that was discussed during the optional lecture of week 11.

ONLINE TEST



- Although it is allowed to refer to the source material during the test, the timing (only 30 minutes for 5 questions) doesn't make it feasible to do this for each and every question. If all is well, you should have revised, so answering the questions (basically by dragging the right answer to each question, similar to what you did in the mock online test of week 11) should be straightforward.

- There will be an online Question and Answer session on Monday January 8 at 11:10am. Attendance to this session is optional.

ONLINE TEST

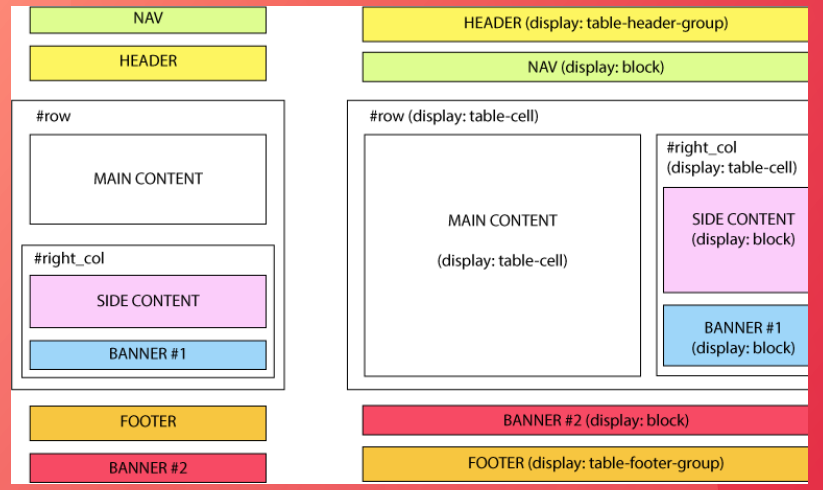
- This online test counts towards 10% of the module mark. It aims to assess Learning Outcome 3 ("Understand some of the main standards, techniques, tools, and other aspects that are relevant for modern web development"),
- **5 of 10 questions in this pool are displayed randomly to students, 2 points for each question**
- **Due date** 12/01/2024, 12:00 (GMT)
- **Marking Points 10 maximum points**
- **Time limit 30 minutes**
- **Attempts allowed 1 attempt**

MOCK ONILINE TEST

- This is a mock online test that does not count towards your module mark. It is not compulsory to do this test. However, doing it will help you to do the real online test, which you'll have to take in week 12.
- **2 of 2 questions in this pool are displayed randomly to students, 5 points for each question**
- Due date 15/12/2023, 13:00 (GMT) Prohibit late submissions
- Formative Assessment
- Marking Points 10 maximum points
- Attempts allowed 1 attempt

SUPPORT

- Questions can be asked at the School's Stackoverflow forum: https://stackoverflow.com/c/comsc/ (don't forget to tag your question with CM1102).
- In addition, questions regarding the coursework will be answered during our online and in-person sessions.



CSS LAYOUT

The reading for this topic will begin to show you how to combine the structure of HTML with the presentation rules provided by CSS to style and layout your webpages.

Learn to Code HTML + CSS https://learn.shayhowe.com/html-css/

- this is a great introduction to combining HTML and CSS to create styled web pages. It is fairly in depth, and some of it will not be needed at this point, but you should be comfortable with all of this within the first few weeks of the course.

Learn CSS layout https://learnlayout.com/

- this is a solid introduction to some basic CSS layout techniques. Later on we'll look at more advanced techniques, but the basic techniques covered in this tutorial will be fine for now.

All about Grid systems –

https://webdesign.tutsplus.com/all-about-grid-systems--webdesign-14471a

don't confuse this with CSS-Grid, which is a new CSS technology that makes implementing Grids easier. This is about the general design concept of using a Grid to layout content.

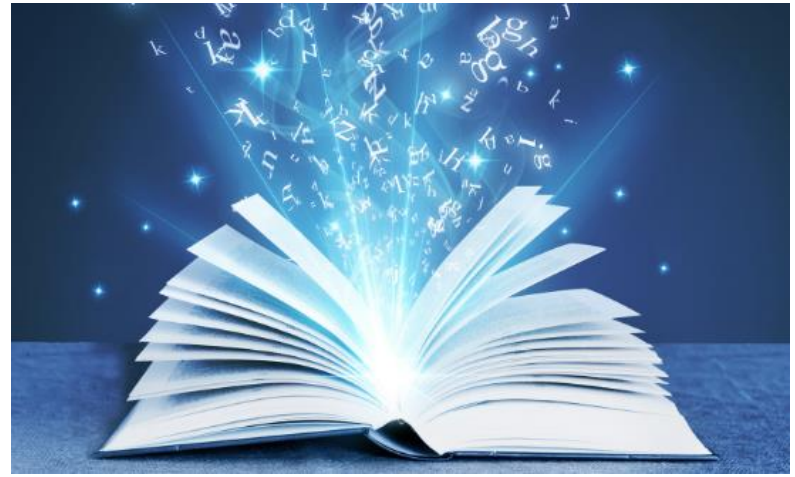
EXERCISE. CSS LAYOUT WORKING IN GROUPS OF 5

- The task in this exercise is to produce a website with a fairly complex layout. You should look at a website you visit often,and attempt to recreate that website layout using the HTML and CSS we have looked at to date.
- While working on your website, you should make a note of the things that work, the things that don't work, what is easy to accomplish, and what has been tricky to do.

EXERCISE 2

- **Note:** you do not have to recreate any functionality - this is just about getting a feel for grouping content together and positioning it on the page. You can use real content or fake content (see below) - but if you use real content, please remember to reference the source.
- Remember that you can use the developer tools in the browser to view the source code of the website you are visiting. For many websites, this code will be very complicated, and it may not be easy to understand how this all fits together. A better approach might be to look at the layout of the website you are attempting to recreate and think about how it is structured in terms of boxes of content, and how those boxes can be grouped together into larger boxes. This will allow you to think about how you might structure your HTML so that elements are grouped together inside other elements that can be positioned as a single unit.

RESOURCES



While working on your website you may find the following resources useful:

- -https://www.lipsum.com/ allows you to generate filler 'Lorem Ipsum' text to use to pad out your website content while working on layout and design.
- http://lorempixel.com/ - allows you to generate placeholder images to use on your website while working on layout and design.

Before you finish for the day, we will have a Show and Tell from each group to show their website to the rest of the class.

THANK YOU!

Dr Daniela Tsaneva

Email Address
TsanevaD1@cardiff.ac.uk