

Hipertekst i Hipermedia

Laboratorium

Podstawy HTML i CSS

1. Na dysku wskazanym przez prowadzącego stworzyć katalog nazwany własnym imieniem i nazwiskiem. Umieścić w nim szkielet strony ściągnięty z Moodla. Do pracy z plikami można użyć środowiska Visual lub zwykłego notatnika.
2. Zapoznać się ze ściągniętymi plikami. Przeanalizować plik `index.html`, zwrócić uwagę na strukturę dokumentu, wykorzystane znaczniki. Odszukać, w którym miejscu znajduje się sekcja zawierająca nagłówek, stopkę, menu oraz treść strony. Uruchomić plik `index.html` w przeglądarce, zobaczyć efekt przetworzenia pliku `index.html` przez przeglądarkę. Jak łatwo zauważyć informacje wyświetlane na stronie nie są formatowane. Na początku zajmiemy się uzupełnianiem treści i funkcjonalności na stronie a w dalszej kolejności wyglądem strony. Docelowy wygląd stron znajduje się na rysunkach 1, 2 oraz 3.
3. **(0,5pkt)** W sekcji `footer` należy wpisać swoje imię i nazwisko, numer grupy oraz bieżącą datę. Odświeżyć stronę w przeglądarce.
4. **(1pkt)** W `<div id="content">` w odpowiednich sekcjach `section` umieścić treść pobraną z pliku `text.doc` (osobne sekcje dla Vannewara Buscha i Tima Bernersa). Nagłówki sekcji umieścić w znacznikach `<h2>`. Treść dotyczącą Vannewara Busha podzielić na dwa akapity wykorzystując znacznik `<p>`. Wykorzystując znaczniki logiczne wyróżnić odpowiednio elementy strony (pogrubienie i pochylenie). Odświeżyć stronę w przeglądarce.
5. **(0,5pkt)** W sekcji `section` umieścić obraz z Vannewar-em Bush-em. Wykorzystać znacznik ``. Analogicznie w sekcji dla Tima Bernersa-Lee umieścić jego zdjęcie.
6. **(0,5pkt)** W pliku `course.html` umieścić cztery sekcje (znacznik `section`) dotyczące kolejno wykładu, laboratorium, projektu i informacji dodatkowych. Każda sekcja powinna mieć własny nagłówek (znaczniki `h2` lub `h3` ...).
7. **(0,5pkt)** W pliku `course.html` w części dotyczącej laboratorium dodać listę numerowaną i umieścić na niej tematy trzech laboratoriów.
8. **Poprosić prowadzącego o sprawdzenie pracy**
9. Zapoznać się z plikiem `style.css`. Zwrócić uwagę na style przypisane poszczególnym znacznikom, utworzone klasy, identyfikatory, pseudoklasy. W pliku `indeks.html` dodać dowiązanie do pliku `style.css` (znacznik `link` w sekcji `head`). Uruchomić stronę w przeglądarce, zwrócić uwagę na zmiany w wyglądzie strony. Zwrócić również uwagę na responsywność strony oraz reguły, które są za to odpowiedzialne.
10. **(0,5pkt)** W pliku `style.css` zmienić kolor tła na wybrany przez siebie. Zmienić kolor czcionki dla użytych znaczników nagłówków (`h1`, `h2`, ...). Dodać reguły dla znaczników `<h1>`, `<h2>` (`np. text-align, padding, ...`), aby uzyskać formatowanie zbliżone do przedstawionego na rysunku.
11. **(0,5pkt)** Obrazek z Vannewar-em Bush-em powinien zostać umieszczony po lewej stronie w sekcji `section`. Należy stworzyć klasę (`.left`) w pliku `style.css` oraz odpowiednio ją wykorzystać.

12. (0,5pkt) Wykorzystując pseudoklasę `hover` uzyskać efekt zmiany przezroczystości obrazka z Vannewar-em Bush-em po najechaniu na niego kursorem. Po najechaniu na obrazek kursor powinien zmieniać się na inny niż default (właściwość `cursor`).
13. (0,5pkt) Zauważ, że klasa `active` zdefiniowana w pliku `style.css` służy do wyróżnienia pozycji menu, która jest aktualnie wybrana. Ustaw klasę `active` w odpowiednich miejscach dla pozostałych podstron, analogicznie jak zostało to zrobione dla strony głównej w pliku `index.html`
14. **Poprosić prowadzącego o sprawdzenie pracy**
15. (1pkt) Na stronie w części dotyczącej projektu należy umieścić poniższą tabelę (w pliku `course.html`). W pliku `style.css` należy odpowiednio sformatować komórki tabeli. (np. `border: 1px solid;`)

Title of the project	Score
HTML, XML, XML Schema	25
XSLT	15
Sum: 40	

16. (0,5pkt) W pliku `index.html` dodać po prawej stronie na dole tekst „go to the top of the page”, który będzie pozwalał użytkownikowi przenieść się na początek strony. Wykorzystać znacznik `<a>`. Stworzyć klasę do umieszczenia tekstu w odpowiednim miejscu strony i wykorzystać ją.
17. (0,5 pkt) Dla małych ekranów tabela nie ma być wyświetlana (właściwość `display:none`)(uzupełnij reguły dla stron responsywnych w pliku `style.css`).
18. (0,5pkt) W pliku `course.html`, w części dotyczącej informacji dodatkowych, dodać linki do dwóch stron („HTML w3schools” oraz „XML w3schools”). Strony powinny otwierać się w nowym oknie (atrybut `target`).
19. **Poprosić prowadzącego o sprawdzenie pracy**
20. (2pkt) Analogicznie jak poprzednie dokumenty przygotować plik `contact.html`. W pliku stworzyć formularz, który będzie zawierał text box, radio button, check box oraz będzie pozwalał na wysłanie i wyczyszczenie formularza. Stworzyć nowy plik css i sformatować odpowiednio utworzoną podstronę. Szczegółowe wymagania dla tego punktu dotyczące liczby kontrolek, ich rodzajów, stylu, mogą zostać podane indywidualnie przez prowadzącego na zajęciach.
21. (0,5pkt) Dokonać walidacji wszystkich plików. Jeśli pojawią się błędy (errors), należy je poprawić, ostrzeżenia (warnings) są dopuszczalne.
https://validator.w3.org/#validate_by_upload
22. **Poprosić prowadzącego o sprawdzenie pracy**

Hypertext & hypermedia

Vannevar Bush



Vannevar Bush (1890-1974) is normally considered the "grandfather" of hypertext, since he proposed a system we would now describe as a hypertext system as long ago as 1945. This system, the Memex ("memory extender"), was never implemented, however, but was only described in theory in Bush's papers. Bush actually developed some of his ideas for the Memex in 1932 and 1933 and finally wrote a draft paper on it in 1939. For various reasons [Nyce and Kahn 1989, 1991] this manuscript was not published until 1945, when it appeared in the Atlantic Monthly under the title "As We May Think." Bush described the Memex as "a sort of mechanized private file and library" and as "a device in which an individual stores his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility." The Memex would store this information on microfilm, which would be kept in the user's desk. This desk was intended to have several microfilm projection positions to enable the user to compare different microfilms, in a manner very similar to the windows that became popular on personal computers more than forty years later. The Memex would have a scanner to enable the user to input new material, and it would also allow the user to make handwritten marginal notes and comments. But Bush envisaged that most of the Memex contents are purchased on microfilm ready for insertion. Books of all sorts, pictures, current periodicals, newspapers, are thus obtained and dropped into place. Business correspondence takes the same path. Actually we have not yet reached the state of hypertext development where there is a significant amount of preprocessed information for sale that can be integrated with a user's existing hypertext structure. The main reason Vannevar Bush developed his proposal for the Memex was that he was worried about the explosion of scientific information which made it impossible even for specialists to follow developments in a discipline. Of course, this situation is much worse now, but even in 1945 Bush discussed the need to allow people to find information more easily than was possible on paper. After having described his various ideas for microfilm and projection equipment, he stated that. All this is conventional, except for the projection forward of present-day mechanisms and gadgetry. It affords an immediate step, however, to associative indexing, the basic idea of which is a provision whereby any item may be caused at will to select immediately and automatically another. This is the essential feature of the memex. The process of tying two items together is the important thing.

Hypertext, in other words!

In addition to the establishment of individual links, Bush wanted the Memex to support the building of trails through the material in the form of a set of links that would combine information of relevance for a specific perspective on a specific topic. He even forecast the establishment of a new profession of "trail blazers," "who find delight in the task of establishing useful trails through the enormous mass of the common record." In current terminology, these trail blazers would be people who add value to publishing collections of text and other information by providing a web of hypertext links to supplement the basic information. But since we do not even have a market for basic hypertexts yet, we unfortunately have to do without professional trail blazers. Amateur trail blazers have come into existence in recent years in the form of people who list WWW sites they find interesting on their home page. The building of trails would also be an activity for the ordinary Memex user, and using his microfilm ideas, Bush assumed that such a user might want to photograph a whole trail for friends to put in their Memexes. Again we should note that current technology is not up to Bush's vision, since it is almost impossible to transfer selected subsets of a hypertext structure to another hypertext, especially if the two hypertexts are based on different systems. Vannevar Bush was a famous scientist in his days and was the science advisor to President Roosevelt during the Second World War, when science-based issues like inventing nuclear weapons were of great importance. After "As We May Think" ran in the Atlantic Monthly, it caused considerable discussion, and both Time and Life ran stories on the Memex. Life even had an artist draw up illustrations of how the Memex would look and a scenario of its projection positions as the user was completing a link. Doug Engelbart, who later became a pioneer in the development of interactive computing and invented the mouse, got part of his inspiration by reading Bush's article while waiting for a ship home from the Philippines in 1945. In spite of all this early interest surrounding the Memex it never got built. As hinted above, our current computer technology is still not able to support Bush's vision in its entirety. We do have computers with most of the Memex functionality but they are based on a completely different technology from the microfilm discussed by Bush. It is interesting to recall that Bush was one of the pioneering scientists in the development of computer hardware and was famous for such inventions as the MIT Differential Analyzer in 1931. Alan Kay from Apple has suggested that the areas about which we know most may be those where we are most in accurate in predicting the future, since we see all the problems inherent in them. Therefore Bush could gladly dream about impossible advances in microfilm technology but he would have been reluctant to publish an article about personal computing since he "knew" that computers were huge things costing millions of dollars.

Jakob Nielsen's book "Multimedia and Hypertext: The Internet and Beyond"

Sir Tim Berners-Lee



Sir Tim Berners-Lee is a British computer scientist. He was born in London, and his parents were early computer scientists, working on one of the earliest computers. After graduating from Oxford University, Berners-Lee became a software engineer at CERN, the large particle physics laboratory near Geneva, Switzerland. Scientists come from all over the world to use its accelerators, but Sir Tim noticed that they were having difficulty sharing information. In March 1989, Tim laid out his vision for what would become the web in a document called "Information Management: A Proposal. Believe it or not, Tim's initial proposal was not immediately accepted. In fact, his boss at the time, Mike Sendall, noted the words "Vague but exciting" on the cover. The web was never an official CERN project, but Mike managed to give Tim time to work on it in September 1990. He began work using a NeXT computer, one of Steve Jobs' early products. By October of 1990, Tim had written the three fundamental technologies that remain the foundation of today's web (and which you may have seen appear on parts of your web browser): HTML: HyperText Markup Language. The markup (formatting) language for the web. URI: Uniform Resource Identifier. A kind of "address" that is unique and used to identify to each resource on the web. It is also commonly called a URL. HTTP: Hypertext Transfer Protocol. Allows for the retrieval of linked resources from across the web. Tim also wrote the first web page editor/browser ("WorldWideWeb.app") and the first web server ("httpd"). By the end of 1990, the first web page was served on the open internet, and in 1991, people outside of CERN were invited to join this new web community. As the web began to grow, Tim realised that its true potential would only be unleashed if anyone, anywhere could use it without paying a fee or having to ask for permission. He explains: "Had the technology been proprietary, and in my total control, it would probably not have taken off. You can't propose that something be a universal space and at the same time keep control of it." So, Tim and others advocated to ensure that CERN would agree to make the underlying code available on a royalty-free basis, forever. This decision was announced in April 1993, and sparked a global wave of creativity, collaboration and innovation never seen before. In 2003, the companies developing new web standards committed to a Royalty Free Policy for their work. In 2014, the year we celebrated the web's 25th birthday, almost two in five people around the world were using it. Tim moved from CERN to the Massachusetts Institute of Technology in 1994 to found the World Wide Web Consortium (W3C), an international community devoted to developing open web standards. He remains the Director of W3C to this day.

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"Hypertext & hypermedia" course

Lecture

Information about the lecture.

Laboratory

Information about the laboratory.

1. HTML + CSS
 - structure of the page
 - links
 - forms
 - css
2. XML + XML Schema
 - correctly formed XML file
 - creating a hierarchy
 - defining elements, attributes
 - creating types
 - validating XML file
3. XSLT
 - XML -> HTML transformation
 - XML -> XML transformation

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Additional information about HTML and XML

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- [XML w3schools](#)

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