

EVALUATION AND TESTING

Course Code: CIS121

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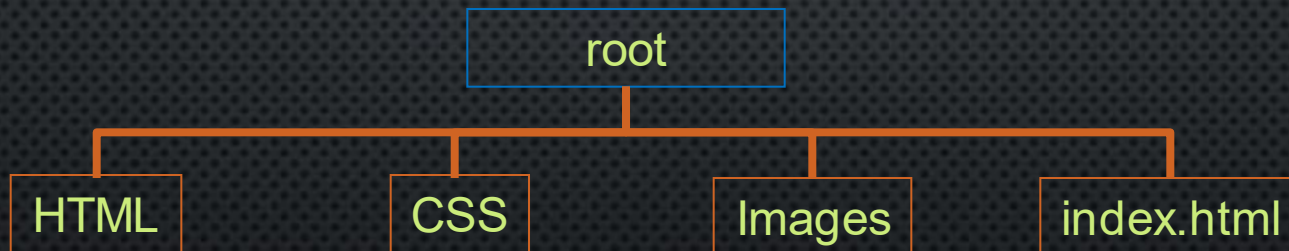
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LEARNING OUTCOMES

- BY THE END OF THIS TOPIC, STUDENTS WILL BE ABLE TO:
 - DESCRIBE THE RANGE OF TESTING THAT TAKES PLACE IN WEB DESIGN PROJECTS
 - EXPLAIN DIFFERENT APPROACHES TO TESTING (X)HTML AND CSS
 - EVALUATE WEB DESIGNS USING DESIGN PRINCIPLES
 - DESIGN AND CONDUCT A USABILITY TEST

WRITING (X)HTML AND CSS

- WEBSITES ARE TYPICALLY STRUCTURED USING THE SAME STRUCTURE AS THE PORTFOLIO YOU HAVE BEEN WORKING ON
- HOMEPAGE IS NAMED INDEX.HTML
- SEPARATE FOLDERS FOR CSS, IMAGES AND WEBPAGES



WEB DEVELOPMENT TOOLS

- ▶ IN THIS MODULE WE HAVE USED A SIMPLE TEXT EDITOR
- ▶ WHAT YOU SEE IS WHAT YOU GET (WYSIWYG) AUTHORING TOOLS
 - ▶ DREAMWEAVER, VISUAL WEB DEVELOPER
 - ▶ GENERATE HTML AND CSS
- ▶ ADVANTAGES OF WYSIWYG EDITORS:
 - ▶ FASTER
- ▶ DISADVANTAGES WYSIWYG EDITORS:
 - ▶ CAN BE EXPENSIVE
 - ▶ TAKE TIME TO CATCH UP WITH NEW TECHNOLOGIES
 - ▶ DON'T ALWAYS GENERATE VALID OR EFFICIENT HTML AND CSS

TESTING AND EVALUATION

- ▶ TESTING THE HTML AND CSS

- ▶ TESTING FOR VALID (X)HTML AND CSS

- ▶ CROSS BROWSER TESTING

- ▶ TESTING WITH MOBILE DEVICES

- ▶ TESTING ACCESSIBILITY

- ▶ TESTING THE DESIGN OF THE SITE

- ▶ CAN USERS COMPLETE TASKS QUICKLY AND EASILY?

- ▶ TESTING THE USE OF DESIGN PRINCIPLES

- ▶ USABILITY TESTING

TESTING FOR VALID OF HTML AND CSS

- A GOOD STARTING POINT FOR CREATING ACCESSIBLE WEB PAGES
 - CHECK THE PAGES USE WEB STANDARDS
 - PAGES WILL WORK IN STANDARDS COMPLIANT BROWSERS
 - ACCESSIBILITY
 - SUPPORT A RANGE OF DEVICES

CROSS BROWSER TESTING

- ▶ THE RESEARCH STAGE OF THE DESIGN PROCESS INDICATES WHICH BROWSERS SHOULD BE SUPPORTED
- ▶ APPROACHES TO CROSS BROWSER TESTING
 - ▶ INSTALL ALL POSSIBLE BROWSERS ON A TESTING MACHINE
 - ▶ A NUMBER OF TOOLS FOR BROWSER TESTING EXIST
 - ▶ CROSSBROWSERTESTING
([HTTP://CROSSBROWSERTESTING.COM/](http://crossbrowsertesting.com/))
 - ▶ BROWERSHOTS ([HTTP://BROWERSHOTS.ORG/](http://browsershots.org/))
- ▶ PRINCIPLE OF GRACEFUL DEGRADATION

TESTING WITH MOBILE DEVICES

- ▶ USING FIREFOX ADD-ONS
 - ▶ LIMITED
- ▶ EMULATORS E.G. OPERA MOBILE TESTER
 - ▶ MANY EMULATORS FOR MANY DIFFERENT DEVICES ARE AVAILABLE ONLINE
- ▶ TESTING TOOLS
 - ▶ RUNS A SERIES OF TESTS FOR MOBILE WEB GOOD PRACTICE
 - ▶ MOBIREADY ([HTTP://READY.MOBI](http://ready.mobi))
 - ▶ W3C MOBILEOK CHECKER ([HTTP://VALIDATOR.W3.ORG/MOBILE/](http://validator.w3.org/mobile/))
- ▶ TESTING ON A REAL DEVICE
 - ▶ CAN BE EXPENSIVE

TESTING ACCESSIBILITY

- TESTING WITH SCREEN READERS OR EMULATORS
 - JAWS
 - WEBANYWHERE ([HTTP://WEBANYWHERE.CS.WASHINGTON.EDU/WA.PHP](http://webanywhere.cs.washington.edu/wa.php))
 - FANGS (A FIREFOX ADD-ON)
- TESTING TOOLS
 - WAVE (WEB ACCESSIBILITY EVALUATION TOOL) ([HTTP://WAVE.WEBAIM.ORG/](http://wave.webaim.org/))
 - WEB ACCESSIBILITY INITIATIVE MAINTAINS A LIST OF EVALUATION TOOLS ([HTTP://WWW.W3.ORG/WAI/EVAL/](http://www.w3.org/WAI/EVAL/))

TESTING THE DESIGN OF THE SITE

- TESTING USING DESIGN PRINCIPLES
 - NEILSON'S 10 USABILITY HEURISTICS
 - [HTTP://TINYURL.COM/3PY4LXB](http://tinyurl.com/3py4lxb)
 - E.G. VISIBILITY OF SYSTEM STATUS
 - KRUG'S 'TRUNK TEST'
- USABILITY TESTING
 - OBSERVING USERS ATTEMPTING TO COMPLETE TASKS USING A WEBSITE

KRUG'S TRUNK TEST - 1

- TESTS TO SEE IF SITE NAVIGATION IS WELL DESIGNED
- A WELL DESIGNED PAGE SHOULD PROVIDE CLEAR ANSWERS TO THESE QUESTIONS
 - WHAT SITE IS THIS? (SITE ID)
 - WHAT PAGE AM I ON? (PAGE NAME)
 - WHAT ARE THE MAJOR SECTION OF THIS SITE? (SECTIONS)
 - WHAT ARE MY OPTIONS AT THIS LEVEL? (LOCAL NAVIGATION)

KRUG'S TRUNK TEST - 2

- ▶ WHERE AM I IN THE SCHEME OF THINGS?
("YOU ARE HERE" INDICATORS)
- ▶ HOW CAN I SEARCH?
- ▶ KRUG (2005, P.89)

▶ QUESTION:

- ▶ EVALUATE THE FOLLOWING PAGE USING
KRUG'S TRUNK TEST

KRUG'S TRUNK TEST - 3

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303 Share f t e

Icann increases web domain suffixes

A global internet body has voted to allow the creation of new website domain suffixes, the biggest change for the online world in years.

The Internet Corporation for Assigned Names and Numbers (Icann) plans to dramatically increase the number of domain endings from the current 22.


Internet address names will end with almost any word and be in any language.

Icann will begin taking applications next year, with corporations and cities expected to be among the first.

"Icann has opened the internet's addressing system to the limitless possibilities of the human imagination," said Rod Beckstrom, president and chief executive officer for Icann.

"No one can predict where this historic decision will take us."

The new domains could create addresses such as .google, .coke, or even .BBC




The move has opened up new possibilities for the internet, Icann says




Related Stories

- Last net addresses to be shared
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- Tuning in to the background hum of the net

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- Pension age change to be debated
- Nato admits Tripoli target error

Features & Analysis

-  **Quelle surprise!**
How Catherine Deneuve became a trophy wife
-  **Serving up profits**
Wimbledon eyes yet another lucrative year
-  **'Baptism of fire'**
How Antony Gormley got a 'warm welcome' in Londonderry

<http://www.bbc.co.uk/>

KRUG'S TRUNK TEST - 4

Persistent Navigation

Search

The image shows a screenshot of the BBC News website with several annotations highlighting usability elements:

- Persistent Navigation:** A box at the top right containing the text "Persistent Navigation" with an arrow pointing to the top navigation bar.
- Search:** A box at the top right containing the text "Search" with an arrow pointing to the search bar.
- Site Identity:** A box in the top navigation bar containing the text "Site Identity" with an arrow pointing to the "NEWS TECHNOLOGY" header.
- Page Name:** A box on the left side containing the text "Page Name" with an arrow pointing to the main article title "Icann increases web domain suffixes".
- Local Navigation:** A box on the left side containing the text "Local Navigation" with an arrow pointing to the "Related Stories" section.
- 'You are here' indicator:** A box in the middle right section containing the text "'You are here' indicator" with an arrow pointing to the "Top Stories" section.

The website content includes the BBC logo, a mobile version indicator, a top navigation bar with links like News, Sport, Weather, iPlayer, TV, Radio, and More. The main article is titled "Icann increases web domain suffixes" and discusses a global internet body's decision to allow new website domain suffixes. The article text is partially obscured by the "Page Name" annotation. To the right, there are sections for "Top Stories" and "Features & Analysis". The "Related Stories" section is highlighted by the "Local Navigation" annotation.

<http://www.bbc.co.uk/>

USABILITY TESTING

- USABILITY TESTING IS VERY SIMPLE
 - A USER IS SHOWN A WEBSITE AND ASKED TO COMPLETE TYPICAL TASKS
- WE CAN'T TEST THE SITE OURSELVES
 - TOO CLOSE TO THE DESIGN CHOICES THAT HAVE BEEN MADE
- OTHER TECHNIQUES HAVE LIMITED VALUE IN TESTING USABILITY
 - DIFFERENCE BETWEEN WHAT USERS SAY THEY DO AND WHAT THEY ACTUALLY DO

HOW MANY USERS TO TEST?

- USABILITY EXPERTS RECOMMEND TESTING NO MORE THAN 5 USERS!
 - TESTING ADDITIONAL USERS WILL ONLY REVEAL THE SAME PROBLEMS
- QUESTIONS:
 - WHO SHOULD THE SITE BE TESTED WITH?
 - WHEN SHOULD USABILITY TESTING BE CARRIED OUT?

WHO AND WHEN TO TEST?

- ▶ WHO SHOULD THE SITE BE TESTED WITH?

- ▶ IDEALLY MEMBERS OF THE INTENDED USER GROUP

- ▶ IN REALITY ANYONE WHO CAN LOOK AT THE SITE WITH A FRESH PERSPECTIVE

- ▶ WHEN SHOULD USABILITY TESTING BE CARRIED OUT?

- ▶ THROUGHOUT THE DESIGN PROCESS

- ▶ AS SOON AS WE HAVE A DESIGN THAT CAN BE EVALUATED

- ▶ PAPER PROTOTYPING

- ▶ WIREFRAME MODELS, PAPER BASED PAGE DESIGNS, QUICK HTML/CSS MOCK-UPS CAN ALL BE TESTED

- ▶ FIX PROBLEMS EARLY

WHAT DOES A USABILITY TEST INVOLVE? - 1

- ▶ SUBJECT (THE USER)
 - ▶ SITS IN FRONT OF THE COMPUTER
 - ▶ THE SCREEN MAY BE RECORDED
 - ▶ ATTEMPTS TO COMPLETE A TASK
 - ▶ TESTING PLAN
 - ▶ THE SUBJECT SHOULD BE INVOLVED IN THE TASK E.G. CHOOSING WHICH PRODUCT TO BUY
 - ▶ THINK ALOUD PROTOCOL

WHAT DOES A USABILITY TEST INVOLVE? - 2

- ▶ FACILITATOR (THE PERSON CONDUCTING THE TEST)
 - ▶ GIVES INSTRUCTIONS
 - ▶ OBSERVES AND TAKES NOTES
 - ▶ ASKS QUESTIONS TO FIND OUT WHAT USERS ARE THINKING
 - ▶ SHOULDN'T INFLUENCE OR ASSIST THE SUBJECT IN COMPLETING THE TASK
- ▶ MAY ALSO HAVE ADDITIONAL OBSERVERS
 - ▶ WATCHING VIDEO OF THE SCREEN

WHAT DOES A USABILITY TEST REVEAL?

- ▶ WHAT ARE WE TRYING TO FIND OUT?
 - ▶ DOES THE USER UNDERSTAND THE PURPOSE OF THE SITE?
 - ▶ CAN THE USER COMPLETE THE TASK?
 - ▶ CAN THE USER FIND THEIR WAY AROUND THE SITE?
 - ▶ DOES THE USER HESITATE, AND WHY?

USABILITY TESTING

- NOTES TAKEN DURING THE TEST ARE TYPED UP
 - EXAMPLE
 - THREE OUT OF FOUR USERS HESITATED WHEN ATTEMPTING TO ADD A PRODUCT TO THE SHOPPING BASKET
- DECISIONS ARE MADE ON THE SEVERITY OF THE PROBLEMS
- FOR EACH SIGNIFICANT PROBLEM RECOMMENDATIONS SHOULD BE MADE
 - EXAMPLE
 - THE 'ADD TO BASKET' BUTTON NEEDS TO BE MORE NOTICEABLE
- THE SITE SHOULD BE IMPROVED AND TESTED AGAIN