Practical Theory Bs

File formats

css – Cascading Style sheet
Plain text file format
Used by web pages to produce a consistent format between different web pages
Used in the presentation layer

.htm – hypertext markup (language file format)
Plain text file format
Used in the content layer
Consists of a set of markup symbols/codes
Tells the web browser how to display the page

CSV

Comma separated value
Data saved in text format
Used with spreadsheets/databases
Generic file format

Png

Portable network graphics
Raster graphics file format
Uses lossless compression
Used for storing images on the internet

Zip

Container that holds any type of data
Stored in a compressed format
Used to save storage in the computer//reduce attachment sizes on email

png
One from:
Raster/full colour digital photos
Images with a transparent background

gif
Moving/animated image

Same images saved as a GIF loads/reads faster than PNG
GIF uses limited colours (256) whereas PNG uses a bitmap of colours
GIF can have moving and static images whereas PNG only have static images
PNG can have transparent background
PNG is compressed
PNG is lossless

.txt

Two from:
Text file with very little/no formatting/used by a variety of text editors
Can be opened by any software package that reads text/generic text format
Any formatting is lost when saved

gif
Graphics Interchange Format
Supported by all web browsers
Can be animated images
Supports 8-bit colours/256 colours/limited
Features background transparency
Image quality never degrades with resaves

jpg
Joint Photographic (Experts) Group
Supports 24-bit colours/16.7 million colours//More colours
Image quality degrades slightly when a JPG is resaved.
Uses lossy compression
No background transparency
Enlarging the image can cause pixelation
Image quality is better

.pdf

Two from:
Portable document format
Makes it possible to display text and graphics in the same fixed layout on any computer screen
Reduces file size of read only document for transmission

PDF is portable document format is readable on a PDF viewer or a browser
RTF is rich text format and is readable by all word processing software

Three from:
RTF uses only basic font formatting // PDF uses full formatting.
RTF does not allow graphs // PDF does allow graphs
RTF does not allow comments // PDF does allow comments
RTF is fully editable // some PDF cannot be edited
PDF allows for digital signatures // RTF does not allow digital signatures
PDF tends to be compressed // RTF is not compressed

Generic file formats

Generic file formats are those that when files are saved in that format they can be used in different types of application software – 1 mark

Three from:

A .txt file can be imported into any text editor/ word processing/DTP package
A .csv file can be imported into any spreadsheet
A .jpg/.gif/.png file can be used in most bitmap image editing software
A .pdf can be used in any document format reader
A .rtf can be used in any word processor and retains some formatting
A .css can be opened in any text editor
A .htm can be opened by any web browser

Why needed?

Generic file formats allow the user to save files so they can be opened in other software
To create a standard so that other software can understand the contents
Example of a file saved on one type of device / software being used on another type e.g. mobile phone to a PC

The need to reduce file sizes

To save/lack of storage space/memory in the computer/storage device
Reduces the time to transmit the data
Some email systems only allow smaller attachments/too big to send as an email

Purpose of headers and footers

To display descriptive information on each page
Helps the user to navigate through the document
Used for repeatable items
Headers and footers can be on every page
Maintains consistency in the document
Saves time rather than writing the same things on each page

Corporate house style

A set of rules
House style states how all documents and written communication should be formatted
Consistency across all documents in the portfolio of the company
Used to promote the company
Controls how the colours/font style/font size/font type/position of logo/justification of text/position and style of address details to be used – **1 mark for any two items**

Why needed?

Ensures consistency across all documents
Lets people know that the stationery/documents belong to the same medical authority
To reduce the time spent in setting up and formatting documents
To reduce cost of setting up and formatting documents
To reduce the risk of errors e.g. mis-spellings, logos omitted etc.

The need for validation as well as verification

Max **three** from:

Not all errors are found by either validation or verification separately
Source document may contain errors
Verification only checks that data is copied correctly
Validation only checks if data is reasonable/sensible

Max **two** from:

Allow any correct example e.g. the mark registered for a student is incorrect on the source document and was copied
Correct appropriate explanation of an example of a validation check; e.g. number of lates for a student is 7 misread as a 1; in a range check of 1 – 10

Data may be out of range but verification does not pick it up
Data may be in the wrong format but verification does not pick it up
Data may be missing from a field but verification does not pick it up
Data may be of the wrong length but verification does not pick it up
Validation checks that the data is sensible which verification does not
Verification only checks that the data has been transferred correctly
Verification only checks that the data matches the original source document
Together they reduce the number of errors in the data

visual checking and double data entry

Visual verification – 1 mark
Re-reading the document referring to the original – 1 mark

Double data entry – 1 mark
One from:
One person types in the data again referring to the original document
A second person types in the data from the original document and the two entries are compared

Need of section breaks

When you want to apply different formatting in the same page without disrupting the formatting of the whole page.
When you want to use columns in a page, and have different amounts of columns on the same page.
When you want to use a heading across the whole page but the text below is in several columns.
When you don't want headers on pages with a title, but you do want them on other pages.
If you didn't have them, each page would have the same header.
To enable page orientation to change between 2 pages. [4]

why page, section and column breaks are used in documents.

To adjust pagination
To avoid orphans/widows
To improve layout on the page
To allow for the change of orientation of pages in the document
To enable to start a new chapter on a new page

purpose of setting gutter margins

Used as an extra margin
Adds extra space to the inside / top margin
Helps to ensure the text is not obscured by the binding

Relational and Flat file databases

Similarity
Both use a primary key
Both can create searches/reports
Both store data in records and fields in the table
Both use indexes

Differences
Flat file database is a plain text file
Flat file is a simple structure
Flat file uses one table
Relational database has linked tables/relationships
Relational database allows searches/reports to be created over multiple tables
Relational database allows cross referencing between tables
Relational database records are easier to add
Relational databases are more powerful
Relational database reduces duplicate data
Relational database uses foreign keys

Contains more than one table
Tables are linked
It uses relationships
Removes redundancy of data
Saves storage space

Advantages
Service details only need to be entered once into the database
Mistakes are less likely to happen when entering data if it already exists
Uses data redundancy
Data can be accessed using key fields
Uses data flexibility
Uses data integrity
Uses data consistency
Better security due to user level access control
Caters for future requirements

Disadvantages
Relational databases can be more complex
Requires training to set up
Harder to set up
Requires a data administrator therefore increasing the costs

Advantages
Data does not need to be entered a second time as tables are used
Records cannot be duplicated but a flat file cannot stop this
Saves time when entering data
More efficient storage as data is only stored once
Simpler to delete/modify details
Complex queries can be carried out
Complex reports can be created
Better security as some tables can be made confidential
Avoids inconsistent records
More data independence
Less inconsistency of data
More ability to cater for future requirements

Disadvantages
More complex than a flat file database as more tables are required
Takes more time to set up
More of a reduction in performance if many tables are needed
Slower extraction of data
Less robust due to broken keys and records//Each table requires a key field and relationships to other tables
Needs specialist personnel to setup the database
More processing power needed for complex queries
A relational database is more complex to understand that a flat file database

Primary key and foreign keys

Primary key holds unique data
Primary key identifies the record
Primary key can be automatically indexed
Each table has one primary key whereas a table can contain a number of foreign keys
Foreign key is used to link with the primary key of another table

Characteristics of good form design

Clear and visible labels for each field
• Font size is large enough to read
• Easy data entry
• Language used is simple to understand
• Appropriate size of data entry sections
• Good use of white space//Fills the screen
• Use of sensible error messages
• Use of navigation buttons/drop down boxes/radio buttons
• Use/location of Help buttons/instructions

formula and a function

Function
Two from:
It is a special type of formula/complex formula
Functions are built into the software/spreadsheet
Functions can be used to simplify complicated calculations
They can have built in commands
Function has a pre-defined name/reserved word

Formula
Two from:
A formula can contain a function
Formulas can be simple calculations/mathematical operation
Formulas can be typed directly into the formula bar

Named Ranges

Used if a range of cells are to be used many times
Easier to remember a name rather than the cell references
Example – a range of cells, constant value or a formula
If the range of cells moves the reference remains within the workbook
Easily refer to a group of adjoining cells
Shortens/simplifies formulae
Enables you to refer to a group of cells without having to lookup cell references
Don't have to re-set the absolute referencing manually

Absolute cell referencing

The reference of the cell does not change when replicated
Uses a $ to show the absolute reference

21 Website authoring

Content layer is used to enter the content and create the structure of a web page

Presentation layer is used to display and format elements within a web page

Behaviour layer is for a scripting language to control elements within a web page

HEAD SECTION

Document/page title
Meta data
Character set
Styles
Scripts
Default target window/frame

BODY SECTION

Defines the document's body
Contains all the elements of an HTML page
Contains the content
Contains style instructions

WHY TABLES ARE USED TO STRUCTURE ELEMENTS WITHIN A WEB PAGE

Allows greater control over page layout
Positions elements/data on the page
Conveys relationships between items
Displays data

FUNCTION OF METATAGS

TO DEFINE THE:
CHARSET
KEYWORDS FOR SEARCH ENGINES
AUTHOR OF THE WEBPAGE
A DESCRIPTION OF THE WEBPAGE
THE VIEWPORT (TO MAKE YOUR WEB PAGE DISPLAY ON ALL DEVICES)

FUNCTION OF HYPERLINK

Word/phrase/image
When clicked links to another document/page/website/top or bottom of the page

Method of accessing other resources / webpages from the current webpage
Navigation by hovering / clicking on the link
Clicking on word / phrase / image / area of page
Links one webpage to part of the same webpage

Link from an image or word
Link containing a URL//URL code
When clicked on it takes you to a web page or position in a webpage

FUNCTION OF HYPERLINK

Method of accessing/linking other resources/web pages from the current web page
Clicking on the word/phrase/image/area of page
Navigation/re-directed to another web page

HREF

An attribute
Within a hyperlink / anchor
Can be used to specify the URL of the page / resource to be used

RELATIVE AND ABSOLUTE FILEPATHS

Relative file paths only show the name or file path destination of the file//Absolute file paths gives the full web address / full path
Absolute always has the domain name//Relative does not need the domain name
Relative finds files in the current site
If you need to find files on a different website then absolute needs to be used//absolute starts from the root
Relative does not require a path only sub-folders

ANCHOR

The anchor is a link/placeholder/reference point
The anchor links with another part of the web page

An anchor is a specific location/reference point within a web page
When clicked it can move the pointer to the start/end of a page
Used on very long pages to save you having to physically scroll all the way down/up the page.
The browser will automatically jump to the corresponding heading within the page/destination anchor

BOOKMARK

Open the website
Click on the address bar/URL
Select CTRL-D/click on the bookmark/favourite icon/star/add to favourites//Drag URL to bookmarks bar
Type in/change the name
Add the bookmark

THE REASON ABSOLUTE FILE PATHS MUST NOT BE USED FOR HYPERLINKS TO LOCALLY SAVED WEB PAGES/OBJECTS

If the web pages have moved then the references refer to an old/previous file path
Hyperlinks will not work

Inline style attributes have a higher hierarchy than external stylesheets
If there is a conflict on an element then the inline style attribute will apply
It applies style attributes that do not appear in the external stylesheet
Inline style attributes apply to one single web page

CASCADING STYLE SHEET

Used to describe the presentation of a document written in HTML
Enables the separation of presentation and content
Part of the presentation layer

DIFFERENCES BETWEEN ATTACHED STYLESHEETS AND INLINE STYLE ATTRIBUTES.

Attached stylesheets are separate from the web page whereas Inline style attributes are within each web page
An attached stylesheet is edited in one file whereas Inline style attributes are edited by changing each web page
Attached stylesheet link has to go into the head section of the web page whereas Inline style attributes can be anywhere in the web page
Inline style attributes can be within HTML tags
Attached stylesheets can be applied to multiple pages whereas Inline style attributes only apply to individual web pages
Inline style attributes can be used to override the attached stylesheet

STYLE AND CLASS

A class definition name starts with a full stop
A class is used for adding or changing a style within CSS
Classes are subtypes within an element
There are a limited number of styles
Styles are pre-defined classes are user-defined
Styles are defined in the head section
Styles are used once but classes are styles saved for future use