Gold INGOT Unit 2 : Web Software (ITQ WS)

Relevant LINKS

BACK TO ITQ UNITS **[1]**

Handbook home page **[2]**

Overview

The candidate will select and use a wide range of website software tools and techniques to produce multiple-page websites. Any aspect that is unfamiliar may require support and advice from others. Website software tools and techniques will be defined as 'intermediate' because the software tools and functions involved will at times be non-routine or unfamiliar. The choice and use of development techniques will need to take account of a number of factors or elements and the candidate will take some responsibility for planning the website, creating or altering the template, inputting, manipulating, linking and uploading the content.

Examples of context: Create a multiple page e-portfolio linking to external sources to reference and support their work.

Activities supporting the assessment of this unit **[3]**

Example of work at this level **[4]**

Useful Guide using Google Sites **[5]**

Assessor's guide to interpreting the criteria

General Information

QCF general description for Level 2 qualifications

- Achievement at QCF level 2 (EQF Level 3) reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.
- Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems. Interpret relevant information and ideas. Be aware of the types of information that are relevant to the area of study or work.
- Complete well-defined, generally routine tasks and address straightforward problems. Select and use relevant skills and procedures. Identify, gather and use relevant information to inform actions. Identify how effective actions have been.
- Take responsibility for completing tasks and procedures subject to direction or guidance as needed.

Requirements

- Standards must be confirmed by a trained Gold Level Assessor or higher
- Assessors must at a minimum record assessment judgements as entries in the on-line mark book on the INGOTs.org certification site.
- Routine evidence of work used for judging assessment outcomes in the candidates' records of their day to day work will be available from their e-portfolios and on-line work. Assessors should ensure that relevant web pages are available to their Account Manager on request by supply of the URL.
- When the candidate provides evidence of matching all the criteria to the specification subject to the guidance below, the assessor can request the award using the link on the certification site. The Account Manager will request a random sample of evidence from candidates' work that verifies the assessor's judgement.
- When the Account Manager is satisfied that the evidence is sufficient to safely make an award, the candidate's success will be confirmed and the unit certificate will be printable from the web site.
- This unit should take an average level 2 learner 40 hours of work to complete.

Assessment Method

Assessors can score each of the criteria N, L, S or H. N indicates no evidence. L indicates some capability but some help still required. S indicates that the candidate can match the criterion to its required specification. H indicates performance that goes beyond the expected in at least some aspects. Candidates are required to achieve at least a S on all the criteria to achieve the full award.

Expansion of the assessment criteria

1.1 I can describe what web site content and layout will be needed for each page

Candidates should provide evidence of planning that includes a description of the content required in each of several web pages.
Evidence: Evidence through web pages produced and their content.

Additional information and guidance
They should understand why using web pages to record and display their work has advantages over a paper file. For example, when constructing an e-portfolio they can make a link from the first index page to a planning page where they describe the content they will display on several pages of their work. Links between pages enable them to build references and relationships between a wide range of their work. On the planning page they might also provide outline details of the layout e.g. Page 1, Subject title - Top Centre, Heading 1 style, graphic image aligned left, 150x150 pixels with caption, text providing brief introduction of the subject. The planning page itself might contain images scanned from drawings or sketches produced in the planning process. This is distinguished from Level 1 work by being multiple page, descriptive of the content and self-sufficiently maintained.

1.2 I can plan and create web page templates for a layout
Candidates should provide evidence that they can create pages to a pre-determined template described in their planning.

Evidence: Consistent formats and layout for several web pages e.g. in an e-portfolio.

Additional information and guidance

This might be based on a theme with a basic layout to which they will add content. It is generally a good idea to keep the basic layout simple. There is no need to make the template complex. Since HTML defines the layout of the page in conjunction with CSS in the Drupal environment and editing the CSS is beyond level 2, we are mainly interested in the layout over which the user has control. One way to make a page template would be to edit the page using CK editor in Drupal and then switch to the plain text editor and cut and paste the HTML there into a plain text editor and save it. This file can then at a later date be pasted into any web page editor to reproduce the page layout. Candidates can use web page editors such as Dreamweaver or Wix. Using Googlesites [6] is another possibility. Please discourage candidates from designing web pages in the wrong tools (MS Word or Publisher). While many of these can edit HTML, they usually produce very inefficient code and we want candidates to choose appropriate tools not just things that happen to be familiar.

1.3 I can select and use web site features and structures to help the user navigate round web pages with the site

Candidates' web pages should include a minimum of lists, icons, links and help text to enable a user to navigate through the information they provide.
Evidence: Web pages with features and structures to aid navigation.

Additional information and guidance
They should be able to show multiple pages of content similar to that in a school exercise book or file but with links and help for navigation. Drupal has a book page feature and it would be a good idea to use this. Books provide the facility to add "child pages" which link automatically to the Book. This provides a set of logical links for the book.

1.4 I can create select and use styles to keep the appearance of web pages consistent and make them easy to understand
Candidates should be familiar with pre-defined styles that are available such as h1, h2 etc. They should use these elements consistently across pages to create an overall style.

Evidence: Web pages exhibiting consistent styles

Additional information and guidance
They should be familiar with the concept of cascading style sheets and how some simple styles are defined. Evidence from implementation of styles and content in web pages they create.

1.5 I can explain how copyright and other constraints may affect the web site

Candidates should be able to explain how copyright and licensing work together.

Evidence: Evidence from content of web pages and optional knowledge based tests.
Additional information and guidance
When they originate new work they own the copyright and they can specify how their work can be used by licensing it. They can also assign the copyright to someone else. This is the case with the INGOT community resources site. candidates assign copyright to The Learning Machine who then license it for sharing. If each person licensed their work in different ways it would make it almost impossible to re-use any of the material because anyone doing so would have to try and trace the originator and ask permission or at least find the license conditions. By transferring copyright to one entity it is far easier to give permission to reuse content through a single license and all materials on the INGOT community resource site is intended to be licensed Creative Commons Share Alike. Any work that is not original should be referenced, not just because plagiarism is grounds for disqualification in gaining qualifications but also because the owner can sue the person using their work without permission.
Fair use means that short extracts can be used from acknowledged work. The digital age has made copyright and publishing very "hot" topics because it is so easy to copy digital information without

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loss of quality. Candidates need to check all content they use to make sure the appropriate permissions are in place and that work other than their own is properly referenced. One of the big advantages of using Open Source software is that the risk of inadvertently breaking the law is much reduced since you are encouraged to share the work. For this reason copyright licensing that is designed to encourage sharing is sometimes referred to as copyleft. Copyleft work is licensed so that if you re-use it by adding to it, the subsequent work also has to be licensed in the same way. The intention is that the benefits of sharing are then passed on to subsequent work built on the original. The GNU/Linux operating system and associated applications are a good example of copyleft in action as is Wikipedia for content. In summary, candidates should NOT have any copyright material in their pages that is not licensed to share or originated by themselves. They should demonstrate a clear understanding of what is and is not legal to use based on its license.

Other constraints are the need to interoperate with other people so all content should conform to open standards. Avoid having proprietary files such as .ppt or .pub for download. For usability ensure colours have sufficient contrast to be viewable by colour blind people and that there are text descriptions with graphics for accessibility by blind people.

1.6 I can describe access issues that might need to be taken into account

Candidates should know that web sites should employ open standards that are universally supported across as many web browsers as possible. They should understand the need for putting alternative text with graphics for the sight-impaired and that choice of colours is important.

Evidence: Evidence from content of web pages and optional test on accessibility and open standards.

Additional information and guidance

They should realise that if a web page only displays in one browser, no matter how popular, they are cutting out part of the potential audience for their work. They should avoid using proprietary data files for making data available for download. The safest files to use are those that have ISO standards associate with them. Partially sighted people might not be able to see graphic images and so when inserting a graphic always put in the alternative text. There are programs that can read this text to tell a blind person about the images they can't see. If links are made directly from images, provide a text based alternative. Be careful with colours, particularly for text. Generally, theme colours will be chosen to give sufficient contrast or differences so they can be seen by colour blind people. At this level the most important issues are to make the site compliant with standards and suitable for the sight impaired. There are many other issues and more can be learnt at http://www-03.ibm.com/able/access_ibm/disability.html [7] and http://www.anybrowser.org/campaign/abdesign.html [8].

1.7 I can describe what file types to use for saving content

Candidates should be able to describe at least the following file types as open standards related to the web. HTML, .txt, pdf, .jpg, .png, .svg, .mpg .mp3. (Note .mp3 is an ISO standard but there are a number of patent issues associated with it. Worth mentioning .ogg as an up and coming fully open alternative). There are too many possible file types to include each in detail.
Evidence: Evidence through documentation in web pages and optional test

Additional information and guidance

Why are we not including .doc, .xls, .ppt? While these file formats are very widely used they are often misused. Take a training session where a presentation is used to convey information to an audience of 100 people. In most cases this presentation will be a simple slide set in PowerPoint and it will make no use of PowerPoint's more advanced features. Distributing the file to delegates means each one has to manage that file individually and in practice the files will probably be lost. Furthermore, if the information in the presentation can be referenced to other information the use of a desktop file based program makes this much less likely. Any update to the information presented in a web page is immediately shared with everyone. We want learners to think more critically (PLTS) about how they use information rather than simply choosing an application that happens to be

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popular.
A presentation could be simply a set of linked web pages. To provide that to the audience simply means making the URL available. The information can be linked to any other information. All that is needed to access it is a web browser e.g. on a Smartphone. No need to buy any expensive software or have a more powerful computer. If greater organisation of slides is needed, there are free on-line presentation applications such as Google Docs which can exchange presentations with PowerPoint if there is no internet connection available. Make the presentation in Google Docs for sharing, export to PowerPoint or OpenOffice Impress for giving the presentation away from the internet. This of course requires different attitudes and different ways of working which is difficult for older people but the trend is to move to the web so for young people they will find an increasing range of free software tools on the internet to support this type of work.

We are focusing on the open formats because in terms of transfer of technological skills and knowledge they have a specific importance. They enable wider sharing of information with greater inclusion and there is a global trend to open standards. Learners should be discouraged from attaching files to pages when the information can easily be presented in the page itself. While a word processor or desktop publisher will enable more sophisticated layout options and producing pdf files will preserve these, it is quicker and cleaner to just present the information in a standard web page, perhaps with the option to produce pdf if needed. It is better for the environment to reduce printing to paper and the main reason for producing pdf is to print to paper not for viewing on a screen. Most information on web sites is simply viewed, especially by the younger generation, let's not encourage the use of file formats designed for paper when paper is generally unnecessary. We can produce pdf files from web pages in any case if it really is necessary to put the content on paper.

Candidates should always consider the purpose and audience of their work (PLTS). They should understand that attaching files in proprietary formats is considered by some people to be anti-social because it is saying to users that if they don't have or can't afford some particular software application they can't access the information. Here is an element related to inclusion and equality of opportunity. Although some proprietary format providers will provide readers free of charge there is always a future possibility that once a monopoly is established they could change their policy. It is therefore much safer in the long term to support fully open standards where they exist and the trend in the industry is to do so as applications mature.
An example of a typical "grey" area is audio. Thomson Consumer Electronics and the Fraunhofer Society both claim patents related to .mp3 files. Although no royalty is currently collected simply for using the format, Fraunhofer were cited as making 100 million Euros from companies making mp3 players (all of which of course is passed on to consumers) .ogg files are a similar technology but fully open. More players are being produced that can play .ogg files because there is no royalty to pay and even if .ogg never becomes as popular as .mp3 it serves a valuable purpose because it makes it very unlikely that the owners of .mp3 could successfully levy further charges e.g. for the use of .mp3. Currently the confusing range of video formats presents similar problems. Each company is trying to establish a monopoly by making its format the standard. If any were to succeed they could charge every time anyone watches any film or video clip. Fortunately, the presence of open standards such as .mpeg and no absolutely dominant player results in an impasse where in nearly all cases video playback software is free of charge and is often cross-platform.

In short, having an open standard breaks the monopoly helping keep costs down and development standards high by promoting competition. Candidates should be able to describe text, graphics, audio and video formats suitable for use on the web and appreciate the basic problems of proprietary formats and monopolies.

Use web site software tools to prepare content for websites

1.8 I can store and retrieve files effectively, in line with local guidelines and conventions where available

Candidates' should be able to show that they can store files, either locally or in the cloud, and be able to retrieve them for use or link to them as required..

Evidence: Web pages and assessor observations.

Additional information and guidance
If local conventions require files to be saved with certain details, then this should be evidenced in the candidate's work where possible. In general, candidates could not produce any work unless they know how to store and retrieve files so the evidence should be self-evident.

2. The candidate will use web site software tools to prepare content for websites

2.1 I can prepare content for my web pages so that it is ready for editing and formatting

Candidates should demonstrate the practical capability of sourcing content including using their initiative to find out about and exploit the potential of new ICT tools and information sources.
Evidence: Evidence from web page content.

Additional information and guidance
Preparing content will be a combination of originating it themselves by typing text directly into a page editor in eg Drupal on the INGOT learning site, taking text from a text editor or word processor or an HTML editor. They should appreciate that text taken from a Word Processor might include formatting information that they had not anticipated and that HTML exports from Word Processors and Desktop Publishers are notorious for producing inefficient HTML. It is better to export the text into a text editor or as a plain text file and add the HTML tags in a tool designed for the purpose.

In general, this criterion should not be awarded a "S" if there is general dumping of inefficiently tagged content exported from inappropriate applications. Candidates should have the opportunity to try out more than one application. For example, the Amaya project is developing a free reference application for W3C standards that can be used to view and edit web pages, Wikipedia uses Wikimedia software to do a similar job and the CK editor embedded in the INGOT learner site is similar. Access to these is free and web based and so it is easy to develop transferable skills across them.

Candidates should give consideration to size and type of video and audio files. e.g. it is often better to make a link to a video on a site like School Tube designed for delivering video than it is to upload the video file to a general purpose site. Evidence from the nature of the content on their web pages. We expect graphics to be reasonable size and in .jpg or .png formats. A graphic 1200 pixels across will not fit on some screens and a 4 meg file is almost certainly capable of being reduced in size for better downloading. HTML should not be full of redundant tags - Don't use MS Publisher! Attention to detail produces higher quality and we want aspiration to quality.

2.2 I can organise and combine information needed for web pages including across different software

Candidates should be able to select and combine information from a range of sources to produce coherent and informative pages.

Evidence: Evidence from web pages.

Additional information and guidance
This does not mean that they have to be overly complex. Clear consistent styles and layout are better than complexity for the sake of it. They should be encouraged to use appropriate tools and check value, accuracy, plausibility and bias in information.

Any appropriate tools are acceptable but there should be some diversity in the tools used. In the interests of inclusion assessors should keep in mind that there are free and open source tools available suitable for all the tasks required and that candidates can download and use these freely at home. As long as open standards are employed all information should be usable across all software whether open or closed source and pages should be usable across all web browsers. Open source

tools for supporting combining and organising information include: Inkscape, a free and open source editor for .svg with .png export. .svg is the ISO web standard for vector graphics and .png the web standard that supercedes .gif. GIMP is a Free and Open Source editor for most raster formats such as .jpg, .bmp, .png etc. Together these provide for all the 2-D web graphic design anyone is ever likely to need. Blender is a very powerful tool for 3-D but probably requires a course in its own right, it was used in support of films like Spiderman 2. Audacity is a free and open source editor for audio files. Avidemux will edit video. It is Less feature rich than Adobe Premier, but supports a good range of video file formats and does most of the things anyone is likely to need for a web site. There is a more comprehensive list of Open Source applications on the Wikipedia site with links to further information.

2.3 I can select and use appropriate editing and formatting techniques to aid both clarity and navigation

The candidate should show that they can choose appropriate tools for editing and formatting their web page content. Outcomes should be web pages that are clear and easy to navigate.
Evidence: Evidence from web pages and appropriately edited content.

Additional information and guidance
Candidates should provide evidence that they can edit 2-D graphics to suitable sizes and resolutions. They should avoid putting information on pages that will cause the page to open very slowly (Flash animations and such like should be avoided unless they really are necessary). Break information up into manageable linked pages rather than produce excessively large pages that will take a long time to load. Use thumbnail graphics linked to larger higher resolution images. Use anchors in pages to more precisely position the user when moving to particular information on the page. Overall, their pages should provide information that is easy to interpret, presented in forms that suit the intended audience and purpose of the content.

2.4 I can select and use appropriate development techniques to link information across pages

Candidates should provide evidence in their work of linking their own pages and to pages on other sites, linking to resources (e.g. video) on other sites and using anchors to make links to specific texts or objects on a page.
Evidence: From web pages

Additional information and guidance
This could enhance the way information is related through different subject contexts that are relevant and interesting to them.

2.5 I can change the file formats of documents appropriately for content

Candidates should show that they can export files to suitable formats for use with their web pages.

Evidence: Evidence from the use of appropriate file formats with their work.

Additional information and guidance
egs include converting WP, DTP text to plain text (possibly HTML but beware of inefficient export and redundant tags!), proprietary graphics to either .jpg or .png for web pages. With .jpg files candidates should show that they can make good decisions about the trade off between file size and image quality.

2.6 I can check that my web pages meet needs using IT tools and making corrections as necessary

Pages should be free from most obvious errors and checked for validity at http://validator.w3.org/ [9]. They should sample peers and or the target audience for feedback. Link to the IPU unit.
Evidence: Error free pages that are fit for purpose.

Additional information and guidance

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They should spell check text (either directly in their browser or copying it to a WP for checking). They should reference their sources of information and check that information is accurate using search engines. Get peers and other third parties to check and acting on advice, make suitable amendments.

3. The candidate will publish web pages to the internet or an intranet

3.1 I select and use appropriate testing methods to check that all the elements in my web site work as planned

The candidate should provide evidence that they have checked their pages in at least two major web browsers.

Evidence: Description of methods used documented in web pages.
Additional information and guidance
Internet Explorer and Firefox are good choices but if possible using others such as Google Chrome, Opera and Konqueror will increase confidence that work is accessible to the widest audience. They should get external opinions and feedback from potential users and use the evidence to make modifications. (e.g. to grammar, layout, quality of graphics etc). If it is difficult to install an alternative browser on a particular computer it is possible to set up and run a Linux live CD. Most Linux distributions include at least two web browsers. Another alternative is to install Portable Firefox on a USB memory stick. Increasingly smart phones include a fully capable browser and so checking pages using a mobile phone is another method and will help remove stereotype views of computers as exclusively desktop machines and laptops.

3.2 I can identify any quality problems with web sites and how to respond to them

The candidate should review several web sites and identify quality issues documenting possible solutions.
Evidence: Documentation in web pages

Additional information and guidance
The candidate should be able to independently explore, develop and interpret increasingly complex web based information systems with a view to solving problems. They should consider how they would deliver the message for improvement to the web site owner to avoid conflict and maximise the chance that any problems will be fixed. They do not necessarily have to make contact with the web site owner but they should consider how such a task might be approached. Issues might include colour contrast for visual impairment, access restricted to one particular browser, slow to load and superfluous animations and introductions, inaccurate or misleading information, files presented for download in proprietary formats or that could be simply provided as information direct to web pages, lack of contact details or difficult to find. Note that formatting problems could be the web browser particularly older versions of Internet Explorer.

3.3 I can select and use appropriate tools to upload and publish the web site

The candidate should have created a multiple page site that is published on-line and should be able to replicate a similar site and publish it self-sufficiently.

Evidence: Successfully published web pages.
Additional information and guidance

3.4 I can respond appropriately to problems with multiple page web sites

Candidates should be able to record URLs so that pages with problems can be identified. They should demonstrate the capacity to navigate to particular pages edit and save them back to the site as appropriate.

Evidence: From evaluation and documentation of their work in developing their web pages.

Additional information and guidance
Some problems might be technically too complex for this level and in such cases an appropriate response could be to contact someone with more knowledge and experience. Generally, candidates should be able to identify and fix broken links.

Moderation/verification

The assessor should keep a record of assessment judgements made for each candidate and make notes of any significant issues for any candidate. They must be prepared to enter into dialog with their Account Manager and provide their assessment records to the Account Manager through the on-line mark book. They should be prepared to provide evidence as a basis for their judgements through reference to candidate e-portfolios and through signed witness statements associated with the criteria matching marks in the on-line markbook. Before authorizing certification, the Account Manager must be satisfied that the assessors judgements are sound.

Source URL: https://theingots.org/community/SIL2U2X

Links
[1] http://theingots.org/community/ITQ_unit_development
[2] http://theingots.org/community/handbook2
[3] http://ttp://theingots.org/community/how_to_build_website_using_Google_sites
[4] https://theingots.org/community/sites/default/files/uploads/user4/PupilFNC7.pdf
[5] https://theingots.org/community/how_to_build_website_using_Google_sites
[6] http://theingots.org/community/how_to_build_website_using_Google_sites/#website_plan
[7] http://www-03.ibm.com/able/access_ibm/disability.html
[8] http://www.anybrowser.org/campaign/abdesign.html
[9] http://validator.w3.org/