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| **COURSEWORK ASSESSMENT SPECIFICATION** |

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| **Module Title:** | *Web Technology* |
| **Module Number:** | *KF4009* |
| **Module Tutor Name(s):** | *Garry Elvin* |
| **Academic Year:** | *2016-2017* |
| **% Weighting (to overall module):** | *55%* |
| **Coursework Title:** | *Assignment Part B Requirements* |

**Dates and Mechanisms for Assessment Submission and Feedback**

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| **Date of Handout to Students:**  Week commencing the 13th February 2017. |
| **Mechanism for Handout to Students:**  The assignment is available via Blackboard. |
| **Date and Time of Submission by Student:**  Tuesday the 2nd of May 2017 before 4pm. |
| **Mechanism for Submission of Work by Student:**  **Submission instructions**  This assignment **must** be submitted electronically in two ways as follows, see below.   * 1. newnumyspace - you are required to FTP ALL of the files (e.g. HTML, graphics, CSS, php, pdf etc.) that you use to implement this part of the assignment (part B) to your newnumyspace account by **Tuesday the 2nd of May 2017 before 4pm** (your files should not be altered after that time).   Your web solution MUST be designed to work on your newnumyspace web space. You should test your web solution to ensure that it is working prior to the specified hand-in date/time.  ***If you fail to FTP your files to newnumyspace correctly or do not make the web pages accessible via a web address on newnumyspace by the specified deadline it will not be possible to mark your work.***   * 1. Blackboard - your submission for the assignment will need to be **one** zip file (this MUST be a zip file and not an alternative like a rar file) containing a **zipped** copy of all of the files (e.g. html, graphics, CSS, php, pdf etc.) that you have used to complete the assignment using the link provided under **Assignment Part B Submission** in the Assessment area on blackboard for this module by **Tuesday the 2nd of May 2017 before 4pm**.   **Instructions for submitting your assignment solution via blackboard**   1. In blackboard go to Assessment > Assignment Part B Submission 2. In **Assignment Part B Submission** section click on the **Browse My Computer** button and navigate to the required zip file 3. In the **Add Comments** box, specify the **EXACT** web address of the home page for your solution to the Assignment.  ***You MUST do this. If you don’t it will not be possible to mark your work*** 4. Click **Submit** (note that it must be Submit and not Save as Draft)   You must only submit only **ONE** zip file that contains all of the files you used to complete the assignment. Do NOT submit lots of files individually.*The zipped copy of the files that you submit using via blackboard must be* ***identical*** *to the files you uploaded to your newnumyspace account.*  *Hints:*   * *Make sure all links, images etc. use relative web addresses to avoid problems* * *It is best to have all file names in lower case, and not to have gaps in file names* |
| **Date by which Work, Feedback and Marks will be returned to Students:**  Within four working weeks of the submission date. |
| **Mechanism for return of assignment work, feedback and marks to students:**  Students will receive written feedback on their work from their tutor via the electronic learning portal (Blackboard). |

**Further Information**

**Learning Outcomes tested in this assessment (from the Module Descriptor):**

1. Demonstrate knowledge of standards compliant web-based applications, including key web accessibility and web design principles
2. Apply an awareness of security issues and associated techniques in relation to web design
3. Apply appropriate tools, methods and technologies to solve a given web development problem, considering user needs
4. Communicate and reference the results of research into a relevant topic in relation to web development

**Assignment Outline and Tasks Required**

This part of the assignment, part B, is worth 55% of the marks available for the module. This is an individual assessment. In this document the tasks that you need to complete for this part of the assignment are provided (*make sure that you read carefully*).

You are required to complete the development of the “Arts and Events” web site. Your design you should consider the information provided in the Assignment Outline section that is provided in the KF4009\_assignment outline and part A specification 2016\_17 document (available in the Assessment area for the module on Blackboard).

**Good design practice**

Good design practice should be considered when creating the web pages. The following, in particular should always be considered:

* The overall appropriateness of the design for the purpose outlined
* Accessibility (e.g. the appropriate use of colours, access keys, alt and lists)
* HTML standards and CSS standards compliance – it is expected that: HTML code is standards compliant and validates, without errors, and conforms to the module’s ‘house standards’ on coding style *(outlined in appendix I)*; your CSS code will be valid
* Semantic structuring of the content of the web pages appropriately using features such as sectioning elements (e.g. nav. etc.), headings, paragraphs and lists
* Use a range of appropriate HTML tags
* Appropriate use of repetition, contrast (e.g. colour), proximity, and alignment
* Appropriate use of a range of CSS (located in a style sheet that is used for all of the web pages in the site, including the ones generated by PHP)
* Page layout design (Note: use CSS for layout rather than tables)
* Appropriate use of images
* The readability of text
* Provision of an appropriate layout to implement a fluid design that resizes according to viewport size (without horizontal scroll bars ever appearing)
* Cross browser compatibility
* Appropriate and consistent navigation

*Note that the information provided on the pages does not need to be accurate – you may just make it up, but it should still be relevant to the case study.*

**Assignment Part B Development Tasks**

*Pre-task – home page*

If you have previously completed part A of the assignment, you should have already made a home page. Otherwise, you will need to create a basic one now (named index.html). Keep it very simple as if you did not create the home page for assignment part A it will not be marked for this part of the assignment. It just needs to include a navigation area with 5 links: “home”, “view events”, “admin”, “credits” and “wireframe”.

Note that if you did not create the wireframe pdf as part of assignment part A, you do NOT need to create a wireframe now - no marks will be awarded for it for this part of the assignment if you do. The wireframe link should be only a “dummy” one, i.e. link only to the home page itself.

*Task 1 pre-task -* download the an sql file and set-up the required database tables

An SQL script, artsEnts.sql, has been provided on Blackboard in the Assessment section that contains the SQL statements required to create three database tables called ‘AE\_category’, ‘AE\_events’, and ‘AE\_venue’ and to add a number of records to them in MySQL. You will need these tables and records for various tasks.

1. Download the file artsEnts.sql from Blackboard
2. Import it using phpMyAdmin to create the MySQL database tables referred to above*.*

Task 1 - view events page

On this page details of all of the events will be displayed to view. To achieve this write a PHP script. This script should:

* Query the contents of the database records and dynamically create a web page which displays a listing of all of the events currently held in the AE\_events table. Full details of each event should be shown
* Order records on title and display the category description and venue name
* Format and style the listing (its layout etc.) in an appropriate way using HTML and CSS. For full marks divs or a table should be used in an appropriate way. The page needs to be completely accessible and to fit aesthetically with the rest of the design
* Produce web output that validates as HTML5 compliant and conforms to the module’s ‘house standards’ on coding style *(outlined in appendix I)*
* Be commented appropriately (we expect the PHP code to be commented).
* Not display system type attributes to the user, they’re of no interest to the user, so make sure you don’t display any of the ids used in the SQL tables, e.g. eventID, catID and venueID. Check you don’t.

*Note that any PHP code that you include MUST be written by hand and not generated by a software tool and must use the methods covered in the module.*

# Task 2 – ‘admin’ page

This page will provide links to pages that allow an administrator of the site to edit details of the events currently listed and to add new events to a MySQL database.

*Note that in a real system you would probably want to restrict access to an admin pages. However, you are not required to do that for this assessment.*

Task 3 - add a new event page

On this page a form should be supplied to allow the administrator to enter the details of a new event. Upon submission the form should activate a PHP server-script script (program) located on your newnumyspace web server space that adds the details entered by the user in the form as a new record in a database table **AE\_events** (note that you do not need to add anything to the other tables) and generates a **custom** page that will be displayed within the browser to confirm the user has entered a new event.

The form should provide appropriate components to allow the user to:

* Enter event title, description, start date, end date, and price
* Select an event category. It should only be possible to choose one from Carnival, Theatre, Comedy, Exhibition, Festival, Family, Music, Sport, and Dance.
* Select a venue. It should only be possible to choose one from Theatre Royal, BALTIC Centre for Contemporary Art, Laing Art Gallery, The Biscuit Factory, Discovery Museum, HMS Calliope, Metro Radio Arena, Mill Volvo Tyne Theatre, PLAYHOUSE Whitley Bay, Shipley Art Gallery, and Seven Stories.
* Submit the form

*Notes*

* *it has not been specified what type of form components to use for the user input. It is for you to choose the components, but your choices should be appropriate and marks will be awarded for these choices*
* *For best marks the categories and venues to choose would be created dynamically from the database records using PHP*

Other form features:

* The form should contain appropriate accessibility features and guidance for users on how to fill out the form, including specifying which fields that are required, i.e. where you want the user to always enter data / make a choice (those that you don’t consider optional). *Note that the guidance should indicate that at least two appropriate fields must be completed*
* The form should be styled appropriately using CSS.

# Task 4 - Server-side script to process the ‘Add a new event’ page form input

# Write a PHP server-side script, which processes the information sent from the ‘Add a new event’ form and adds the details entered in the form as a new record in the AE\_events database table and produces a confirmation page. *Note that any PHP code that you include MUST be written by hand and not generated by a software tool, must use the methods covered in the module and should be commented appropriately.*

The PHP script should:

* Handle certain information security and validation issues – see task 6 for more details on the requirements for this
* Insert the user input from the form created in task 3 as a new record to the **AE\_events** table in the MySQL database
* Produce feedback on the request to ‘add a new event’ as a confirmation page that is displayed in the browser using HTML. It should:
  + Display the event title, description, start date, end date, price, category and venue
  + Include image that is relevant to the choice of category
  + Be formatted and styled appropriately using CSS. This needs to be completely accessible and fit aesthetically with the rest of the design
  + Consist of web output that validates as HTML5 compliant and conforms to the module’s ‘house standards’ on coding style *(outlined in appendix I)*

Task 5 – facility to edit/update details of a record

Create a facility that allows the administrator of the site to edit details of an event currently held in the database. It should have the following components:

* *Choose an event to edit:* the administrator should be able to choose an event from a list (for best marks created dynamically from the database records using PHP) of all the current events in the database. The list should be formatted in an appropriate way. For full marks divs or a table should be used rather than a select list and records should be ordered on title
* *Edit details of an event:* after choosing an event to edit, the user should be able to edit the details of that event using a form and the event’s details should be amended in the MySQL database.

Ideally the form should initially display the current values for the event title, description, start date, end date, price, category and venue – with the category and venue as the default values in pre-defined lists that are dynamically generated from database content with one option for each of the categories and venues, respectively, in the database. You should program this functionality without generating duplicate entries in the list.

*Notes*

* *Any PHP code that you include MUST be written by hand and not generated by a software tool, must use the methods covered in the module and should be commented appropriately*
* *It is expected that any web output generated by PHP should*
  + *validate as HTML5 compliant and conform to the module’s ‘house standards’ on coding style (outlined in appendix I)*
  + be formatted and styled appropriately using CSS. This needs to be completely accessible and fit aesthetically with the rest of the design
* *You should not display system type attributes to the user.*

Task 6 - information security and validation issue*s*

For all areas of functionality that involve the user entering /selecting data (such as the admin add a new event and edit an event), use appropriate server-side code (i.e. PHP and the methods covered in the module) to:

* Prevent undefined index error notice messages following submission of the form
* Prompt the user to enter data / make a choice if they do not do so for a required field
* Escape any special characters that may have been entered by the users

Task 7 – credits page

In this page give your own name, id and email address. Also if you have used source material from anywhere (text, graphics, or anything which is not your own work) you should acknowledge (reference) the source here with enough information for the source to be easily found (e.g. web addresses, book titles and authors, software names and publishers). If you created any of your own graphics you should also state this on your credits page. Note that the Harvard style of referencing should be used – see the Northumbria Skills Plus material provided by the library at <http://nuweb.northumbria.ac.uk/library/skillsplus/topics.html?l3-1>

Security considerations

The management at Arts and Events would like you to make them aware of any security considerations related to their web site for both them and their users and what steps you recommend that they could take to minimise any potential security risks.

Add a sub-heading to your credits page called “Security considerations”. Under that heading, in no more than two paragraphs, discuss the security considerations related to the web site and what steps you recommend that they could take to minimise any potential security risks. Within your discussion you should consider, for example, data protection and privacy, legal issues and any other relevant security matters. You should acknowledge (reference) any sources that you have read to help inform the discussion using the Harvard style of referencing.

***Important notes***

* *Test your html code (including any generated using PHP) to ensure that is HTML5 compliant and validates using the W3C Markup Validation Service (this is available at* [*http://validator.w3.org/*](http://validator.w3.org/)*) or using Validator.nu (this is available at* [*https://validator.nu/*](https://validator.nu/)*) if validating inside the University if http://validator.w3.org is not working. In addition, ensure that it conforms to the module’s ‘house standards’ on coding style (outlined in appendix I)*

### *Test that any CSS code that you use is valid using the W3C CSS Validation Service (this is available at* [*http://jigsaw.w3.org/css-validator/*](http://jigsaw.w3.org/css-validator/)*)*

* *The use of HTML generation tools such as Adobe Dreamweaver (other than in Code view - and even then the use of Dreamweaver layouts is not permitted), or other templates or files for either html or css not authored by you, is* ***NOT PERMITTED****. Anyone who is found to have done so will receive 0 marks for this part of the assignment. You have been warned. We expect you to generate your HTML by hand, e.g. using PHPStorm or Dreamweaver in Code view*
* *You should test your web page using web browsers (e.g. Internet Explorer and Firefox) and at different screen resolutions to make sure that it displays as you would expect it to.*

**Assessment Criteria/Mark Scheme:**

This part of the assignment is worth up to 55% of the total marks available for the module.

**Marking Scheme**

Marks will be awarded in the following categories:

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| **Component** | **Marks** |
| **Display all records**   * Display a listing of the user requests for more info. using the database records * Format and style of the listing | 4  3 |
| **Administrator** - add an event form   * Functionality (general) * Functionality (accessibility features) * Styling (use of appropriate CSS styles for the appearance and layout of the form) | 6  2  2 |
| **Administrator functionality** - add a new record   * Confirmation page   + Display the event title, description, start date, end date, price, category and venue   + Include image that is relevant to the choice of category * Adding a record to the **AE\_events** table in the MySQL database   + Data can be entered for all fields except **eventID**   + Record is added to the database | 3  2  1  4 |
| **Administrator functionality -** edit/update details of a record   * + A dynamically generated list (from db content) to allow the user to choose a record to edit   + Edit form fields are populated with existing data (all fields should be editable)   + Record is actually updated | 4  4  3 |
| **Information security and validation issues**   * Prevention of undefined index error notice messages * Prompting to enter data / make a choice for a required field if necessary * Escape any special characters that may have been entered by the user | 2  2  1 |
| **Discussion of security considerations, including referencing** | 7 |
| Site page content - relevance of content for the purpose of the site, including use of images and the clarity of the purpose of the site | 5 |
| **Total** | **55** |

**Nature of the Submission Required:** Electronic (as specified earlier)

**Referencing Style:** Harvard

**Academic Integrity Statement:** You must adhere to the university regulations on academic conduct. Formal inquiry proceedings will be instigated if there is any suspicion of plagiarism or any other form of misconduct in your work. Refer to the University’s Assessment Regulations for Taught Awards if you are unclear as to the meaning of these terms. The latest copy is available on the University website.

<https://www.northumbria.ac.uk/sd/central/ar/qualitysupport/asspolicies/>

**Failure to submit:** The University requires all students to submit assessed coursework by the deadline stated in the assessment brief. Where coursework is submitted without approval after the published hand-in deadline, penalties will be applied as defined in the University Policy on the Late Submission of Work. <https://www.northumbria.ac.uk/static/5007/arpdf/lateappr>

**Appendix I**

## html5 House Standards

1. All tags must close or have a self-close (as you need for: <img />, <br /> and <link /> for instance)
2. All attribute values must be quoted
3. All attributes must have values, except where that value is the same as the attribute name
4. Inline elements can't contain block elements and inline elements must be inside a block element (the W3 spec also describes inline and block as 'text-level' and 'grouping' in the [html5 specifications](http://www.w3.org/TR/html5/Overview.html#contents))
5. All tags must be written in lower-case
6. There should only be one heading 1 per page and headings should be nested appropriately