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|  | Faculty of Computing, Engineering and Science |  |

**Assessment Cover Sheet and Feedback Form** 2019-20

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| Module Code:  IS3S665 | Module Title:  GIS and the Spatial Web | | Module Team:  Mitchel Langford, Mark Ware |
| Assessment Title and Tasks:  Set Tasks - not-time constrained 1 | | | Assessment No.  1 |
| Date Set:  11-Nov-2019 15:00 | | Submission Date:  06-Mar-2020 23:55 | Return Date:  01-Apr-2020 23:55 |

**IT IS YOUR RESPONSIBILITY TO KEEP RECORDS OF ALL WORK SUBMITTED**

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| **Marking and Assessment** |
| This assignment will be marked out of 100%  This assignment contributes to 70% of the total module marks. |
| **Learning Outcomes to be assessed** (as specified in the validated module descriptor [https://icis.southwales.ac.uk/](https://icissafe.southwales.ac.uk/studentmodules/13809/studentmodulespecifications) ):  1) To analyse and evaluate the technologies used for the consumption of spatial data resources through front-end web based clients and desktop applications.  2) To analyse the requirements and design an appropriate solution for a specified problem of defined scope using web based mapping technologies. |
| *Provisional mark only: subject to change and / or confirmation by the Assessment Board* |

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| This assignment will be marked out of 100%  This assignment contributes to 70% of the total module marks.  This assignment is bonded. Details: To pass the module students must achieve an overall module mark of at least 40%. |

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| **Marking Scheme** | **Marks Available** |
| Deliverable 1 | 30 |
| Deliverable 2 | 30 |
| Deliverable 3 | 40 |
| **Total Marks** | **100** |

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| **Assessment criteria** |
| Fail (< 40%) |
| 40% - 49% 3 deliverables attempted and submitted. 2 of the deliverables will be completed to a satisfactory standard. The work submitted demonstrates some ability to show critical judgement and an understanding of the relevant issues. |
| 50% - 59%3 deliverables attempted and submitted. 2 of the deliverables completed to a satisfactory standard. 1 of the deliverables completed to a high standard. The work submitted demonstrates a clear ability to show critical judgement and an understanding of the relevant issues. |
| 60% - 69% 3 deliverables attempted and submitted.All deliverables completed to a high standard. The work submitted demonstrates a strong ability to show high levels of critical judgement and an understanding of the relevant issues. The work produced will have gone beyond the basic requirements listed, and will include one or two advanced features. |
| 70% + 3 deliverables attempted and submitted.Alldeliverables completed to a very high standard. The work submitted demonstrates an outstanding ability to show excellent critical judgement and comprehensive understanding of the relevant issues. The work produced will include many advanced features. |

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| **Coursework requirements:** |
| This coursework is composed of **three** deliverables. Each deliverable should be submitted individually – so each student will submit 3 pieces of work. Each deliverable has a suggested hand-in date which you are strongly advised to adhere to. The official hand-in date for the coursework as a whole is 06/03/20 – all deliverables must have been submitted on or before this date.  For each deliverable you must submit a digital document (Word or PDF) providing evidence of completion in the form of screen shots and code listings. You must also include the URL of the sites you have developed. Each of the sites must be hosted on the CES-WEB2 server. Be prepared to demonstrate any of the deliverables if requested.  **Deliverable 1**  Build a web site on your student web space that demonstrates your skills in using standard web technologies (i.e. HTML 5, JavaScript and CSS) and the mapping APIs supplied by Google and Microsoft. Your site should consist of a home page linked to a series of subpages that show your maps. You are expected to include the following maps:   * *All Google and Bing maps developed as part of tutorials;* * ***At least three additional maps***, using either or both both APIs. Each map should be more than just a default ‘slippy map’, adding features that go beyond those introduced in the practical exercises. To achieve higher marks there should be evidence of: (i) customisation (e.g. modified base map styling, modified user controls, the use of personalised markers, etc.); (ii) the display of self-sourced spatial data (points, lines, polygons) to add additional thematic content. Be sure to identify your data sources; (iii) the inclusion of functions and/or features not directly covered within exercises – i.e. using code and ideas acquired from online research (again identify your sources) but adapted to your purposes.   Provide a brief (max 200 words) account of each map, drawing attention to any noteworthy features, and highlighting the specific ways you have accomplished (i), (ii) and (iii) above.  **- the ‘virtual hand-in date’ for this deliverable is 09/Dec/2019 - advice from staff concerning this deliverable will become limited after this date**  **Deliverable 2**  Build a web site on your student web space to showcase your skills and expertise in using standard web technologies (i.e. HTML 5, JavaScript and CSS) and the OpenLayers and Leaflet APIs. You may choose between developing a single web map, or a web site that includes multiple maps. You are expected to make use of both local data and remote data (i.e. data that is delivered using a suitable web map service). You should aim to demonstrate the use of both Leaflet and OpenLayers, but can give more attention to one API rather than the other if you so wish.  **- the ‘virtual hand-in date’ for this deliverable is 10/Feb/2019**  **- advice from staff concerning this deliverable will become limited after this date**  **Deliverable 3**  Develop a full web mapping application. There are three stages to consider:   1. Data sourcing, preparation and storage: Expect to seek out your own data sources and to perform (and document) any necessary data preparation tasks (e.g. document editing, generalisation, simplification, reclassification, spatial and/or attribute sub-setting, re-projection, etc.), prior to deployment in your web mapping project. 2. Geoserver: Using data prepared in stage (a) and any other sources that may be supplied to you by the teaching team, create and share at least **three** Geoserver web map services. You should the USW-supplied Geoserver installation for this activity. 3. Develop a web site on your student web space to use web map services created in stage (b). Choose any appropriate web mapping API to help you achieve this objective.   Finally, drawing upon your experiences gain through practical work associated with this module, provide a brief (max 1 side A4) reflective evaluation of web mapping technologies as covered in this module (proprietary mapping APIs, OpenLayers/Leaflet, and GeoServer) discussing scenarios in which they may/may not be the most appropriate choice.  For each deliverable you must submit a digital document (Word or PDF) providing evidence of completion in the form of screen shots and code listings. You must also include the URL of the sites you have developed. Each of the sites must be hosted on the CES-WEB2 server. Be prepared to demonstrate any of the deliverables if requested.  **– the final hand-in date (for all deliverables 1-3) is 06/Mar/2020** |

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| Feedback from this assessment to help you to improve future assessments: |
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