BIRMINGHAM CITY
University

Coursework Assignment Brief
Assessment - Postgraduate

Academic Year 2023-24

Module Title:	Accessibility and Assistive Technology	
Module Code:	CMP7219	
Assessment Title:	Designing An Accessible Online Experience	
Assessment Type:	CWRK	Weighting: 100 %
College:	College of Computing	
Module Co-ordinator:	CHRIS CREED	
Hand in deadline date:	Wednesday 15th May 2024 (15:00)	
Support available for students required to submit a re-assessment:	Timetabled revision sessions will be arranged for the period immediately preceding the hand in date.	
NOTE:	At the first assessment attempt, the full range of marks is available. At the re-assessment attempt the mark is capped and the maximum mark that can be achieved is 50%.	
Assessment Summary	Designing An Accessible Online Experience (Coursework – Report – 100%).	

IMPORTANT STATEMENTS

Standard Postgraduate Regulations

Your studies will be governed by the BCU Academic Regulations on Assessment, Progression and Awards. Copies of regulations can be found at   https://www.bcu.ac.uk/student-info/student-contract

Cheating and Plagiarism

Both cheating and plagiarism are totally unacceptable and the University maintains a strict policy against them. It is YOUR responsibility to be aware of this policy and to act accordingly. Please refer to the Academic Registry Guidance at https://icity.bcu.ac.uk/Academic-Services/Information-for-Students/Assessment/Avoiding-Allegations-of-Cheating

The basic principles are:
- Don't pass off anyone else's work as your own, including work from "essay banks". This is plagiarism and is viewed extremely seriously by the University.
- Don't submit a piece of work in whole or in part that has already been submitted for assessment elsewhere. This is called duplication and, like plagiarism, is viewed extremely seriously by the University.
- Always acknowledge all of the sources that you have used in your coursework assignment or project.
- If you are using the exact words of another person, always put them in quotation marks.
- Check that you know whether the coursework is to be produced individually or whether you can work with others.
- If you are doing group work, be sure about what you are supposed to do on your own.
- Never make up or falsify data to prove your point.
- Never allow others to copy your work.
- Never lend disks, memory sticks or copies of your coursework to any other student in the University; this may lead you being accused of collusion.
- AI tools cannot be used to write assignments as these have to be your own work. Please refer to: FAQ link

By submitting coursework, either physically or electronically, you are confirming that it is your own work (or, in the case of a group submission, that it is the result of joint work undertaken by members of the group that you represent) and that you have read and understand the University's guidance on plagiarism and cheating.

You should be aware that coursework may be submitted to an electronic detection system in order to help ascertain if any plagiarised material is present. You may check your own work prior to submission using Turnitin at the Formative Moodle Site. If you have queries about what constitutes plagiarism, please speak to your module tutor or the Centre for Academic Success.

Electronic Submission of Work

It is your responsibility to ensure that work submitted in electronic format can be opened on a faculty computer and to check that any electronic submissions have been successfully uploaded. If it cannot be opened it will not be marked. Any required file formats will be specified in the assignment brief and failure to comply with these submission requirements will result in work not being marked. You must retain a copy of all electronic work you have submitted and re-submit if requested.

Learning Outcomes to be Assessed:

1 Critically appraise theoretical topics associated with "disability" and how these influence the design and evaluation of interactive systems.

2 Evaluate how different types of impairments can influence interactions with systems, as well as the type of assistive technologies that are utilised.

3 Analyse the accessibility of systems across different platforms and identify key barriers that may exclude disabled users.

4 Independently design, develop, and evaluate an assistive solution that supports an identified requirement when interacting with systems.

Re-Assessment Details:

Title: Designing An Accessible Online Experience

Style: Report

Rationale: This assignment will focus on combining theoretical concepts around disability and assistive technology with practical "hands-on" approaches to create assistive solutions for disabled people. You will learn about different forms of disability, the barriers disabled people can experience, inclusive and universal design, the role of assistive technologies in enabling access, and best practices in creating accessible user experiences. The skills and knowledge you will develop through the assignment are increasingly essential within the UX field and will enable you to create an interesting/novel prototype that can be added to your portfolio of work.

Description: You are required to write a 4000 word report around your experiences in designing and evaluating an accessible online experience. In particular, you need to produce four personas representing users who have different forms of impairment (i.e. physical, visual, cognitive, and hearing). You will then use these personas to inform the design of an accessible (desktop) online experience using best practice techniques to provide an inclusive design.

Additional information: This will be demonstrated through the use of paper prototypes and a high-fidelity design which can be created using either interactive prototyping applications (e.g. Figma and Adobe XD) or through developing it yourself (e.g. via HTML, CSS, and JavaScript – or an appropriate framework). You will also need to produce some example screenshots of your design on touch devices (i.e. across phone and tablet platforms) and highlight how you have made your application accessible for multi-touch interactions.

You are free to choose the theme around your online experience – this can range from a standard website focused around a particular topic or a web application (e.g. an online word processor, coding environment, game, video/audio streaming service, social networking

platform). Your prototype can contain resources in the form of articles, videos, or audio (whichever is most relevant for your chosen theme), although you must ensure it is broad enough in scope to be able to demonstrate best practice around inclusive design.

Report Structure

Your report should use the following structure to provide evidence of the work you have completed:

- *Introduction*: Briefly highlight the core focus of your website/application and the key features incorporated into the prototype.

- *Disability Analysis*: Provide a critical discussion around the importance of accessibility and highlight the relevance of theoretical work (e.g. social/medical/deficit models of disability) to the design of interactive products. Furthermore, highlight research investigating disabled users' experiences in using assistive technologies, their perceptions of different applications, and the barriers they can experience in using digital systems/software.

- *User Requirements (Personas and Scenarios)*: Screenshots of four personas with each one focused around a different form of impairment (i.e. physical, visual, hearing, and cognitive). Four scenarios focused around the personas developed using your website/application.

- *Paper Prototypes*: Photos or scans of multiple interface/concept ideas along with annotated sketches for all tasks/pages required as part of your scenarios.

- *High Fidelity Prototype*: A high-fidelity interactive (desktop) prototype that builds on your paper prototypes - this can be developed using code or through industry standard interactive prototyping applications (e.g. Figma and Adobe XD). Demonstrate how accessibility best practice has been incorporated into your design (e.g. in terms of colour, form design, use of animation, keyboard interaction, visual focus, etc.) - link key points back to your personas.

- *Multi-Platform Accessibility*: Provide example screenshots of how your design will work on phones and tablets with a particular emphasis on highlighting how your concept will be made accessible for touch interactions on different devices.

- *Evaluation*: Details of a usability test on your prototype where appropriate data/feedback has been collected and analysed. Extra credit can be achieved through recruiting and working with disabled participants (although this is not a requirement).

- *Updated Designs*: Highlight how your approach has been updated based on feedback received and how any issues raised during the testing have been addressed (through a combination of discussion and screenshots clearly highlighting updates).

Your evidence for each of the above areas can be provided through scans/photos, screenshots, tabulated data from test participants (e.g. task completion times), and participants' feedback.

Important: You need to ensure that academic literature (e.g. conference papers, journal articles, textbooks) and other relevant resources (e.g. WCAG) are used to support key points within the report (including the rationale behind design decisions).

The module reading list can be found at: https://bcu.keylinks.org/#/list/8068.

For advice on writing style, referencing and academic skills, please make use of the Centre for Academic Success: Centre for Academic Success - student support | Birmingham City University (bcu.ac.uk)

Workload: This assessment is equivalent to 4000 words and a typical student would be expected to take 40 hours to pass this assessment.

Transferable skills: The assignment will provide experience in writing formal reports to disseminate and articulate the work you have undertaken. You will also develop skills around design work, conducting evaluations of prototypes, and analysing data you have collected.

Marking Criteria:

Table of Assessment Criteria and Associated Grading Criteria

Assessment Criteria →	1. Analysis of Disability & AT	2. Accessibility Solution	3. Multi-Platform Accessibility	4. Report
Learning Outcomes	**LO1 & LO2**	**LO4**	**LO3**	**LO1 – LO4**
Weighting:	**15%**	**60%**	**15%**	**10%**
Grading Criteria **0 – 29%** **F**	Major shortcomings in evidence of understanding around theoretical topics related to disability/AT.	Major shortcomings in description and evidence for producing an accessible online experience.	Major shortcomings in analysis and evidence provided around multi-platform accessibility.	Major shortcomings in report structure and no references used.
30 – 39% **E**	Report lacking evidence of understanding around theoretical topics related to disability/AT. Significant shortcomings with personas/scenarios - substantial improvements are required.	Lacking details and evidence for designing/evaluating an accessible online experience. Significant improvement of key assignment requirements is needed.	Lacks sufficient discussion around analysis and evidence related to multi-platform accessibility.	Structure OK, but no references are provided.
40 – 49% **D**	Partial understanding around theoretical topics related to disability/AT, but lacks detail and missing key points. Some personas/scenarios provided, but lack sufficient detail.	Partial aspects of an accessible online experience are described, but lacks all key requirements or is deficient in certain aspects of the assignment.	Some discussion and evidence provided around multi-platform accessibility supported with some basic examples (i.e. screenshots of mobile and/or tablet designs), but further clarity and rigour required.	Structure OK, but inappropriate references are used.
50 – 59% **C**	Reasonable analysis of theoretical topics related to disability/AT (as well as their relevance to UX design), although further rigour in places was required. Reasonable personas and scenarios included, although would have benefitted from further understanding of key disability knowledge.	Reasonable description and evidence provided for an accessible online experience (with key accessibility design decisions highlighted), but further detail required in places (e.g. more literature supporting design decisions).	Reasonable discussion and evidence provided around multi-platform accessibility supported with some examples of mobile and tablet designs, but lacks some key details (e.g. discussion of key accessibility issues).	Structure and language are reasonable, along with a good set of references.
60 – 69% **B**	Good analysis of theoretical topics related to disability/AT, as well as discussion around their relevance to UX design. At least four personas and scenarios were developed which contain the main key required aspects, although some areas require a little further detail in places.	Good description and evidence for an accessible online experience. Most of the key aspects associated with the assignment have been addressed, although some areas require a little more rigour (e.g. use of literature to support key design decisions).	Good analysis and evidence of multi-platform design work provided including screenshots of mobile and tablet designs highlighting accessibility design issues, along with some discussion of the pros/cons of different design approaches used.	Structure and language are good, along with a good set of references correctly presented in Harvard format.

70 – 79% **A**	Very good analysis of theoretical topics related to disability/AT, as well as discussion around their relevance to UX design. All personas and scenarios were developed to a very good standard, demonstrating a clear understanding of key areas.	Very good description and evidence for an accessible online experience. All key design decisions have been highlighted, discussed, and evaluated – as well as appropriately supported with relevant academic literature.	Very good analysis and evidence of multi-platform design work provided including screenshots of mobile and tablet designs addressing all key accessibility concerns. Pros/cons of different approaches highlighted with strong rationale for chosen solutions.	Structure and language are very good, along with a good set of reference correctly presented in Harvard format.
80 – 89% **A+**	Excellent analysis of theoretical topics related to disability/AT, as well as clear discussion around their relevance to UX Design. All key aspects of assignment have been addressed, along with additional contributions (e.g. further personas/scenarios, thorough research (e.g. focus groups) used to inform design of personas, etc.).	Excellent description and evidence for an accessible online experience. All key aspects of the assignment have been addressed, along with additional contributions (e.g. in terms of multiple novel solutions, designing and evaluating multiple accessible interface approaches, evaluating with disabled participants, etc.).	Excellent analysis and evidence of multi-platform design provided with strong and clear rationale for solutions. Some re-design/re-evaluation work completed to address user feedback. Pros/cons of other evaluation approaches/solutions highlighted with very strong discussion and rationale.	Excellent structure, language, and use of references (appropriately presented).
90 – 100% **A***	Outstanding analysis of theoretical topics related to disability/AT, as well as strong discussion around their relevance to UX design. All key aspects of the assignment have been thoroughly addressed. Significant additional work has been completed to a professional standard (e.g. highly detailed discussion around social/medical models of disability supported with rich variety of academic material, personas informed through user research and validated with target audience, etc.).	Outstanding description and evidence for an accessible online experience. All key aspects of the assignment have been thoroughly addressed. Significant additional work has been completed to a professional standard (e.g. creating multiple accessibility solutions, novel interaction techniques of publishable standard, multiple rounds of evaluation work with disabled participants, etc.).	Outstanding analysis of multi-platform design provided with strong and clear rationale for solutions. Substantial levels of re-design/re-evaluation work completed to a professional standard. Pros/cons of other possible approaches/solutions identified with highly rigorous discussion and rationale.	Outstanding structure, language, and use of references (appropriately presented) providing substantial coverage of the field.

Submission Details:

Format: The completed report needs to be uploaded as a PDF document via the link provided under the "Assessment" section in Moodle.

Regulations:

- Re-sit marks are capped at 50%

Full academic regulations are available for download using the link provided above in the IMPORTANT STATEMENTS section

Late Penalties
- **If you submit a <u>re-assessment</u> late, then it will be deemed as a fail and returned to you unmarked.**

Feedback:

The timetabled classes in this module provide time for you to receive feedback on your coursework. You are also encouraged to email your tutor if you would like any further feedback or clarification around particular aspects of the assignment.

Marks and Feedback on your work will normally be provided within 20 working days of the submission deadline.

Where to get help:

Feedback and assistance will be provided during the scheduled teaching sessions. You can also contact the module leader via email to meet for further help and guidance.

Students can get additional support from the library support for searching for information and finding academic sources. See their iCity page for more information: http://libanswers.bcu.ac.uk/

The Centre for Academic Success offers 1:1 advice and feedback on academic writing, referencing, study skills and maths/statistics/computing. See their iCity page for more information: https://icity.bcu.ac.uk/celt/centre-for-academic-success

Fit to Submit:

Are you ready to submit your assignment – review this assignment brief and consider whether you have met the criteria.

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Submission Checklist:

1. Ensure evidence for all key areas of the project in your report are included:

Personas (four personas with each one focused around a different form of impairment – physical, visual, cognitive, and hearing).

Scenarios (four scenarios focused around the personas using your online experience).

Paper Prototype (screenshots or scans of annotated sketches demonstrating your concept and design ideas).

High-Fidelity Prototype (screenshots of an interactive prototype based on your paper sketches - provide discussion and evidence for each of your key accessibility design solutions).

Multi-Platform Design (screenshots and discussion around how you have addressed accessibility design issues on mobile and tablet devices).

Usability Testing and Iterative Work (details of a usability test on your prototype where appropriate data/feedback has been collected and analysed – highlight some updates to your accessibility design work based on feedback collected).

2. Make sure that your report uses the structure highlighted above.

3. Use academic literature and relevant resources (e.g. WCAG) to support your discussion of key points and the rationale behind your design decisions.

4. Ensure your report is no more than 4000 words (excluding references).

5. Submit a PDF version of your final 4000 word report.