University of Glasgow | School of Computing Science

Assessed Coursework

Course Name	**Interactive Systems (H)**			
Coursework Number	**3 (of 5) – AE1-3 Plan Evaluation**			
Deadline	**Time:**	**09.30**	**Date:**	**5 November 2021**
% Contribution to final course mark	**5**		**This should take at most this many hours:**	**5**
Solo or Group ✓	**Solo**		**Group**	
Submission Instructions	**Via Moodle – see last page**			
Who Will Mark This? ✓	**Lecturer ✓**	**Tutor**	**Other**	
Feedback Type? ✓	**Written**	**Oral ✓**	**Both**	
Individual or Generic? ✓	**Generic ✓**	**Individual**	**Both**	
Other Feedback Notes				

Code of Assessment Rules for Coursework Submission

Deadlines for the submission of coursework which is to be formally assessed will be published in course documentation, and work which is submitted later than the deadline will be subject to penalty as set out below. The primary grade and secondary band awarded for coursework which is submitted after the published deadline will be calculated as follows:

(i) in respect of work submitted not more than five working days after the deadline
   a. the work will be assessed in the usual way;
   b. the primary grade and secondary band so determined will then be reduced by two secondary bands for each working day (or part of a working day) the work was submitted late.

(ii) work submitted more than five working days after the deadline will be awarded Grade H.

Penalties for late submission of coursework will not be imposed if good cause is established for the late submission. You should submit documents supporting good cause via MyCampus.

Penalty for non-adherence to Submission Instructions is 2 bands

Marking Criteria
See Next Page

Interactive Systems (H)

AE1-3: Plan Evaluation (5%)

Assessed Exercise 1

AE1 for IS(H) will involve working round the Human-Centred Design Cycle, as presented in Lecture 1. In your lab groups, you will select an existing product to assess, conduct a usability study, design an improved system, and plan a user study evaluation of your creation, before finally performing and writing up the evaluation. You will receive separate instruction sheets for each stage from AE1-1 to AE1-4.

AE1 will be composed of 4 parts worth 5% each, meaning overall it is worth 20% of the course grade. It is a practical exercise that you can work on in teams in your lab sessions (in both live and online weeks) and each of the parts of the assessment AE1-1 to AE1-4 will be marked out of 4. After AE1-4, you will all rate the overall contribution of each team member.

Plan Evaluation

So far in the exercise, you have assessed an existing product for usability issues, and then created an interactive prototype that redesigns this product. For this stage, AE1-3, you will now submit a plan for an evaluation of your prototype.

This week is planning and you are **not actually conducting the evaluation** at this stage, but you will be in the coming weeks – during AE1-4. At that stage, you will be contacted in Teams with details of other class members who will be the participants in your study. In turn, you yourselves will act as participants for another team's evaluation.

As in the previous stages of AE1, you have a good deal of flexibility, and there are many types of evaluation you can choose between. You will need to decide **a)** what precisely you would like to assess about your prototype – what is your research question (or questions) for this evaluation? **b)** What methods you will employ/data you will gather to answer this.

Important: You do not have to perform a huge, comprehensive evaluation for this task that assesses every possible aspect of your system. A small, well-planned study will be better than a sprawling set of tasks that you do not have time to conduct properly. **Do not** try to measure many different types of data; limit any surveys to 5-10 questions; assign users only up to 5 or 6 tasks (fewer if they are asked to do them under multiple conditions). Keep it focussed and limited to a specific area of interest. As mentioned below, plan to take no more than 30 minutes of a participant's time. Discuss your plan with your tutor if you are unsure.

What should we evaluate?
Try to think of something that you are genuinely interested in discovering about your prototype, or the success of your redesign. You might like to (but should not feel restricted to) base your evaluation around the main focus of your redesign. So if you concentrated on a new visual design, or a new navigation flow, you could evaluate that; if you concentrated on fixing usability issues, you could base the evaluation around that in some way.

Your evaluation might be comparative between different products, or versions of a product, or might be standalone evaluations of your prototype. For example, you might

- ask users to compare your product with the original version
- compare desktop and mobile versions of your prototype
- do no comparisons, but evaluate only your prototype or one particular aspect of (for example) the visual design, navigation or usability

Formulate your area of interest into a precise research question that you can try to answer with your evaluation.

How should we conduct the evaluation?
Lectures have mentioned many forms of evaluation, and you are free to select between them, or you can use any other form you know of that you feel would be appropriate.

Some examples of approaches you could take in your evaluation are:

- design a questionnaire to give users after they have used your product
- design an experiment with independent and dependent variables, and measure user performance in some way
- interview participants
- conduct a focus group with participants
- screen record users using your prototype and/or get them to perform a think-aloud
- etc.

Do not perform another usability study based on Nielsen's heuristics as in AE1-1 – try something else!

We understand that you are evaluating with only a few users, and some forms of analysis, data presentation and conclusions that can be drawn will be limited. This is inevitable in trying to conduct an evaluation quickly as part of a coursework exercise, and you obviously will not be penalised for using a small sample size, or any shortcomings in your study that result from this. Note that as a result of this limitation, it is not recommended that you perform a detailed comparative statistical analysis of results, or look to prove statistical significance. Try to think instead of what you could show with smaller amounts of data. You can for example calculate and chart simple stats such as means and standard deviations.

Whatever you select, be mindful that this is a real evaluation that you will conduct with another team, and you might have to do it remotely. Therefore be realistic in your ambitions. For example, you will be unable to perform a gaze tracking evaluation that requires specialist equipment. Your evaluation should also not be very time consuming for your participants. You should plan to **take at most 30 minutes of any participant's time**.

What do we need to plan to conduct the evaluation?
Depending on the choices above, different preparation work will be required and/or documents produced. You might need to design a series of tasks that you will give a user to perform, work out technical procedures for screensharing and/or screen recording, write questionnaires, interview questions, introduction scripts etc.

Important: One thing you are likely to need is an ethics checklist form. See http://www.dcs.gla.ac.uk/ethics/ to ensure that your planned evaluation meets the criteria outlined, and then you will likely need to sign this form:
http://www.dcs.gla.ac.uk/ethics/assessment-form.pdf

Ensure that the prototype is functional for the intended tasks – **run a pilot study** (even just among yourselves) and make sure the system does all that it needs to, that instructions are clear, that technical procedures are all in place to allow users to run the prototype, and that the correct data is being recorded.

Your tutor can discuss these or any other issues with you if you are unsure about any parts of your plans. As long as you are following any established practices as outlined in lectures or textbooks, you are not taking too much participant time, and you have run a pilot and ensured everything works, then your plan is probably fine!

Covid restrictions etc: You will be free to arrange how you conduct the evaluation, in-person or remotely. Be aware that for numerous reasons, some participants might not be able to physically attend the lab. It might be easier if you base your plans assuming a remote setup. However, you will not be penalised if you write this plan assuming an in-person evaluation, which it later turns out you actually need to conduct (at least parts of) remotely.

Report
For this week's submission, produce a PDF document containing

- Your team ID (You should be able to see this in the name of the Teams Chat)
- The URL for your interactive Figma prototype
- The primary research question(s) that you are investigating
- The type of evaluation you plan to conduct
- A description of the method that you will follow. This will be different depending on the type of evaluation you have chosen to conduct, but could include descriptions of how the evaluation will be conducted (e.g. are you directly observing via screen sharing, can participants do it in their own time?), independent/dependent variables (if any), potential confounding variables (if any), information on how participants will be briefed, precise instructions of tasks they will be asked to perform (if any), the type(s) of data being recorded and how data will be captured, how questionnaires (if any) will be deployed, how data will be analysed, and how you intend to present results.
- **And also**, upload sheets or instructions you will show to participants, e.g. briefing sheets, descriptions of tasks to perform, questionnaires, ethics forms, debriefing materials. Note**:** The particular evaluation you choose to conduct might not require all of these.

How to submit
One member of the team should submit a pdf document **via the "Evaluation Plan" submission icon in Week 6 of the Moodle page** for the course. Decide or nominate one person to upload the pdf to moodle, but **make sure that somebody submits!** If you have used any external sources, be sure to acknowledge them in your submission. For reference, the School's plagiarism policy is contained in Appendix A of the Undergraduate Class Guide (available at https://moodle.gla.ac.uk/course/view.php?id=21505).

This work is worth 5% of the overall assessment of the course. You can work on it prior to and during your lab session on 29th of October and submit it any time after that. The absolute deadline for submission is **Friday 5 November at 09.30**.