INFO-I543
Usability and Evaluative Methods
Indiana University, School of Informatics – IUPUI

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Midterm and Final Projects Description

Instructor's Info

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A. Midterm Project: Usability Inspection

A1. Brief
Your user experience team has been contacted by a company/institution to realize a comprehensive usability evaluation of their flagship web application in ca. 3 months. The stakeholders realize that it is now time for a thorough assessment of the quality of the site and are considering the opportunities to undertake a major redesign.

The evaluation work will consist of a systematic usability inspection (midterm) and a usability testing (final). Your team is expected to carry out a professional evaluation with the goal of characterizing and highlighting the major **usability problems**, areas of improvements and **recommendations for redesign**.

By the deadline of the **mid-term project**, your team is expected to deliver a report containing the results of the **usability inspection** of the web application.

By the class time of each week, some substantial **results of the expected weekly activity** described below must be **posted on OnCourse** in the assigned student/team project space. For example, by class time of week 3, the results of the Week 3 activities have to be posted on OnCourse. Separate documents or a unique ongoing growing document can be used to post the preliminary weekly results.

*** INSTRUCTIONS TO POST WEEKLY DELIVERABLES:

Name each weekly project deliverable file posted in your project folder as:
WK1_deliverable_name.
Each week, each student will produce individual contributions to the team deliverables. These must be properly named as well as: **Wk1_Smith_contribution_name**.

Make sure also to organize the produced project material in properly named folders (W2, Wk3, etc.).

A2. Plan of Activities and Expected Deliverables

WK: 1 by Aug. 23	**Application Selection** o In concert with your team members, choose an existing web application of adequate complexity, which features a rich and articulate set of content and/or functionality/operations. Any application domain can be selected (ecommerce, health, government, intranet, extranet, etc.). o It is highly recommended, however, that at least one member of the team is familiar with the application domain (or with the specific application, type of users, and nature of needs and requirements) as this can place the evaluation work on the right track from the beginning. o An important requirement for the selection of the application is that <u>no member of the team has designed or has been involved in the design of the application under analysis</u>.
WK: 2 by Aug. 30	**Requirements and Application Modelling** Through background research, and possibly to an interview to domain experts, or application stakeholders, identify the overall goals of the application and the key user profiles. In parallel, examine in detail the overall structure, composition and architecture of the application to

	draw a high-level model (map or abstract model) of it, that could serve as a road map for inspection.
WK: 3 by Sept. 6	**Scenario-based Inspection** Elaborate at least 4 salient scenarios for the application and start executing your usability inspection based on these scenarios. Take careful note of the findings for each scenario and characterize each usability problem in depth to identify the design flaws and potential improvement for the user experience. Within the team, it is advisable that the same scenarios are executed independently by each inspector, and then results are compared, discussed and synthesized.
WK: 4 by Sept. 13	**Scenario-based Inspection cont.** Continuation of previous activity.
WK: 5 by Sept. 20	**Heuristic Inspection** Whereas scenarios give you partial glimpses on the design aspects of the application, use heuristics to characterize a wide variety of problems related to general design issues (not necessarily dependent on or identified by the scenarios). Choose a suitable set of heuristics from the studied resources – e.g. design guidelines, MILE+, Nielsen's - or a combination of them. Heuristics should be used to discover problems and characterize them in detail in all their aspects. Do not use the heuristics as "absolute rules", but rather as discovery tools. For every anticipated usability problem, do not jump to a design solution, but first of all characterize the problem in detail. Then, elaborate and suggest a clear requirement to improve the design.
WK: 6 by Sept. 27	**Heuristic Inspection cont.** Continuation of previous activity. **Analysis and Consolidation** Collect all the data from the scenario-based and heuristics inspection and characterize the findings and the recommendations for design improvements into a consistent and cohesive picture. Map the issues found on the application model to see what areas of the applications have been covered, have shown more problems or need more attention during evaluation.
WK: 7 by Oct. 4	**Structuring and Reporting** Structure the usability evaluation results into type of problems, categories (e.g. design dimensions) or nature of the issues, and prioritize them in order to properly communicate their essence to the relevant stakeholders.
WK: 8 by Oct. 11	**Midterm Project Presentation in Class** Deliver a 15 minute class presentation to highlight the key results of your inspection. Presence and participation of each team member is required. Consider that the target audience of the presentation is diverse and includes: • Project manager of the application under analysis • Designers • Programmers
OCT 13	➔ **Midterm Project Report (Usability Inspection Report) due on OCTOBER 13.** Deliver a **usability inspection report**, which contains the following components (ca. 30 pag):

A. Cover, Table of Content, Index of Tables/Figures
B. Executive Summary
C. Overview of the Application under analysis
D. Inspection methods used
E. Inspection Results
F. Recommendations for Improvement
G. Synopsis
H. Appendixes

Consider that the target audience of the report is diverse and includes:
- Project manager
- Designers
- Programmers

Delivery Instructions:
➔ **Please upload your midterm project report file by OCTOBER 13 (as .doc and .pdf) – by midnight end of the day - in your OnCourse project folder. Use the following file name convention: "midterm_teamX".**
➔ Keep well organized your OnCourse project folder so that the turned in file is well visible at the first level of the folder.

A3. Evaluation Criteria

Coverage and completeness of the application aspects analyzed; adequate characterization of the design issues; saliency (importance) of the usability problems with respect to the complexity of the applications and its goals; proper justification and argumentation of the usability problems; methodic and systematic analysis of the findings; appropriateness and feasibility of the design recommendations suggested; quality of the communication of the findings, quality of the report.

B. Final Project: Usability Testing and Overall Evaluation

B1. Brief

Taking into account the results of the usability inspection, your team will plan and execute an extensive usability testing (with actual or potential users) of the web application.

By the deadline of the **final project**, your team is expected to deliver a report containing the results of the **usability testing**, and the **integration of these results with the ones from inspection** to provide the final outcome of your evaluation.

B2. Plan of Activities and Expected Deliverables

WK: 9 by Oct. 18	**Usability testing** On the basis of the results of the inspection, prepare the task scenarios for the usability testing. Prepare your full usability testing script, test it within the team and start recruiting potential candidate users for the usability testing. Select users possibly corresponding to the user profiles identified during inspection. You have 4 weeks to complete your usability testing with at least 10 users. Ensure to gather both qualitative (e.g. comments) and quantitative results (e.g. time on tasks, number of failures). Collect the results in form of notes, video (screen) and audio. Re-study in detail lecture notes and readings concerning these methodological aspects of usability testing.
WK: 10 by Oct. 25	Deliver your final usability testing script. Complete recruiting and START performing the usability testing with recruited participants.
WK: 11 Nov. 1	Produce evidence and initial data of usability testing in progress (at least some participants should have completed the test already at this point)
WK: 12 Nov. 8	Produce evidence of completed usability testing (videos/notes/tabulated data). All participants have completed the test by this date. You have collected all the usability testing raw data.
WK: 13 Nov. 15	**Data Analysis** Carefully examine your qualitative and quantitative usability testing data. Identify, characterize, and generalize the major usability problems resulting from the tests. Show some progress of the ongoing data analysis.
WK: 14 Nov. 22	**Data Analysis – cont.** You have completed the data analysis by this date.
WK: 15 Nov. 29	**Final Project Presentation** Deliver a 20 minute class presentation to highlight the key results of your usability tests, and the

	comparison and integration with the results from inspection. Presence and participation of each team member is required. Consider that the target audience of the presentation is diverse and includes: • Project manager of the application under analysis • Designers • Programmers **Deliverables due by this date:** Final Project Presentation Material
WK: 16 Dec. 6	**Recommendations and Overall reporting** Compare the results from the usability testing with the results from the inspection. Consolidate these two sets of results in a coherent picture and systematically compile a final set of design recommendations. **Deliverables due by this date:** Preliminary Final Report
WK: 17 **Dec. 13**	➔ **Final Project Report ("Final Usability Evaluation Report") Due on DEC. 13.** Deliver a final usability evaluation report, which contains the following components (ca. 30 pag): I. Cover, Table of Content, Index of Tables/Figures J. Executive Summary K. Instruments and Methods (participants, task scenarios, scripts) L. Results from Usability Testing M. Synthesis of the results from inspection (reference to midterm project report) N. Overall Recommendations for Improvement (integrating usability testing *and* inspection results) O. Synopsis P. Appendixes (link to usability testing videos, additional files and material) Consider that the target audience of the report is diverse and includes: • Project manager • Designers • Programmers **Delivery Instructions:** ➔ **Please upload your final project report file by Dec. 13 (as .doc and .pdf) – midnight end of the day - in your OnCourse project folder. Use the following file name convention: "final_teamX".** ➔ Keep well organized your OnCourse project folder so that the turned in file is well visible at the first level of the folder.

B3. Evaluation Criteria

Expected number of usability tests completed (at least 10), integration of the inspection and usability testing results, relevance and saliency of the usability problems, clarity and saliency of the recommendations for improvement, presentation of the results, quality of the report.