



NUI Galway
OÉ Gaillimh

Semester I Examinations 2018 / 2019

Exam Code(s)	3BCT121; 3BA1; 4BA1
Exam(s)	B.Sc. in Computer Science and Information Technology B.A.
Module Code(s)	CT318
Module(s)	Human Computer Interaction
Paper No.	1
Repeat Paper	
External Examiner(s)	Professor Jacob Howe
Internal Examiner (s)	Professor Michael Madden Dr. Heike Vornhagen Ms. Karen Young
Instructions:	Candidates should answer Question 1 and any two other questions. All questions carry equal marks.
Duration	2 Hours
No. of Pages	3
Requirements:	
Release in Exam Venue	
MCQ	
Handout	None
Statistical/ Log Tables	None
Cambridge Tables	None
Graph Paper	None
Log Graph Paper	None
Other Materials	None
Graphic material in colour	None

PTO

Q.1

You have been asked to design an interface for Galway City Council that will enable people living in Galway to access information about the city. The interface must be easy to use and enable navigation by a variety of means (e.g. by topic, by department, etc.).

The application must also store the users' details, greet them when they enter, store a record of their previous visits, and recommend areas for further attention.

The company has indicated that they want an initial design submission from you to include the following:

- (a) A PACT analysis for this application. (7)
- (b) A paper prototype of three of the interface screens, representing the system's functional organisation and overall "look and feel". Clearly outline your rationale for each of the design choices you make (e.g. interaction styles). (7)
- (c) An evaluation plan, clearly outlining what activities will be evaluated, when, how and by whom the evaluation activities will be undertaken, and how this may influence future designs. (6)

Q.2

- (a) List and briefly explain the 5 core principles of Design (5)
- (b) A UK right-wing online newspaper has asked you to develop a series of interactive visualisations about the UK leaving the EU (Brexit). Develop a briefing to include goals and overall outline of this project, including at least three sketches. (10)
- (c) Explain why colour is an important consideration in digital interface design. Describe what would influence your choices. (5)

PTO

Q3

(a) "What about confusing clutter? Information overload? Doesn't data have to be "boiled down" and "simplified"? These common questions miss the point, for the quantity of detail is an issue completely separate from the difficulty of reading. *Clutter and confusion are failures of design, not attributes of information.*" – Edward Tufte.

Analyse the above statement in light of your study of effective visual design, including consideration of its application to a website of choice in your answer. (10)

(b) You have been asked to design an interactive kiosk for a local bike share. Prepare a prototype design, outlining the user considerations you found relevant in solving this problem. (6)

(c) What makes something easy to use? What are the properties of an interactive system that make it easy to use for the elderly? For people with a visual disability? For children? (4)

Q.4

(a) You have been tasked with undertaking a redesign of the streaming website Netflix. Identify different categories of users and describe which data gathering techniques you would use to collect information about their respective needs. (6)

(b) You have been asked to design a *music learning environment* for children to support their development of effective music skills. Pick two interface types which would best support this and describe their key features. (8)

(c) Which interaction style would you apply to the design of each of the following and why? (6)

- A fitness tracker.
- A self-service checkout system in a supermarket.
- A language learning mobile application.

END