SOLUTION NOTES

Human–Computer Interaction 2001 Paper 9 Question 4 (AFB)

First part:
* 1 mark for each method named. Unless some very good reason is provided for an alternative, the expected answers would be a) KLM, b) Cognitive Dimensions, c) Cognitive Walkthrough. [3 marks]
* 1 mark for each coherent description of why this method is appropriate to that situation. [3 marks]

Possible total: 6 marks

Second part:
* 1 mark for each screen sketched. They should at least demonstrate that the candidate has understood the problem, and has anticipated some aspect of the users likely interaction with the system. [3 marks]
* 1 mark for each evaluation activity described (e.g. constructing paper prototype, recording verbal transcript). [3 marks]
* 1 mark for each advantage or disadvantage identified for the Cognitive Walkthrough method. [3 marks]
* 1 mark per procedural step in Cognitive Walkthrough (typical steps include identifying user knowledge, identifying immediate goal, evaluating match between goal and interface etc.) [5 marks]

Possible total: 14 marks

PAPER 9, HCI 1/4
SIMPLE ANSWER

QUESTION 9 PART 1

p9q4
AfB

a) KEYSTROKE LEVEL MODELLING IS MOST APPROPRIATE, BECAUSE IT PREDICTS THE TIME OF PHYSICAL MOVEMENTS AS IMMEDIATE DECISIONS FOR A USER WHO ALREADY KNOWS WHAT ACTIONS WILL BE REQUIRED ✓

b) COGNITIVE DIMENSIONS OF NOTATIONS IS MOST APPROPRIATE, BECAUSE IT DESCRIBES THE NOTATIONAL REQUIREMENTS OF ACTIVITIES SUCH AS EXPLORATORY DESIGN ✓

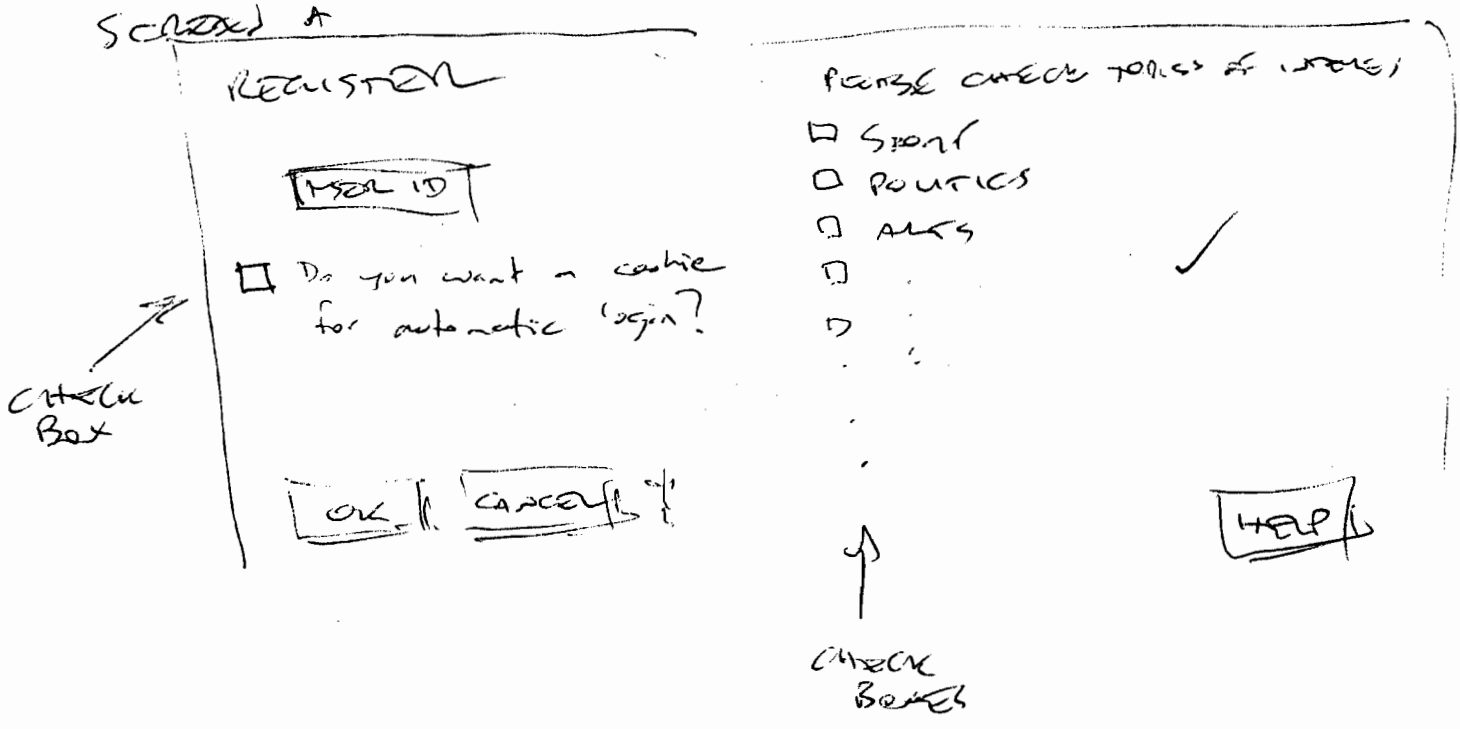
c) COGNITIVE WALKTHROUGH IS MOST APPROPRIATE, BECAUSE IT APPLIES A THEORY OF LEARNING TO ANALYSE THE REQUIREMENTS OF A USER WHO IS LEARNING WHILE USING A SYSTEM ✓

[4 : 0 MKS]

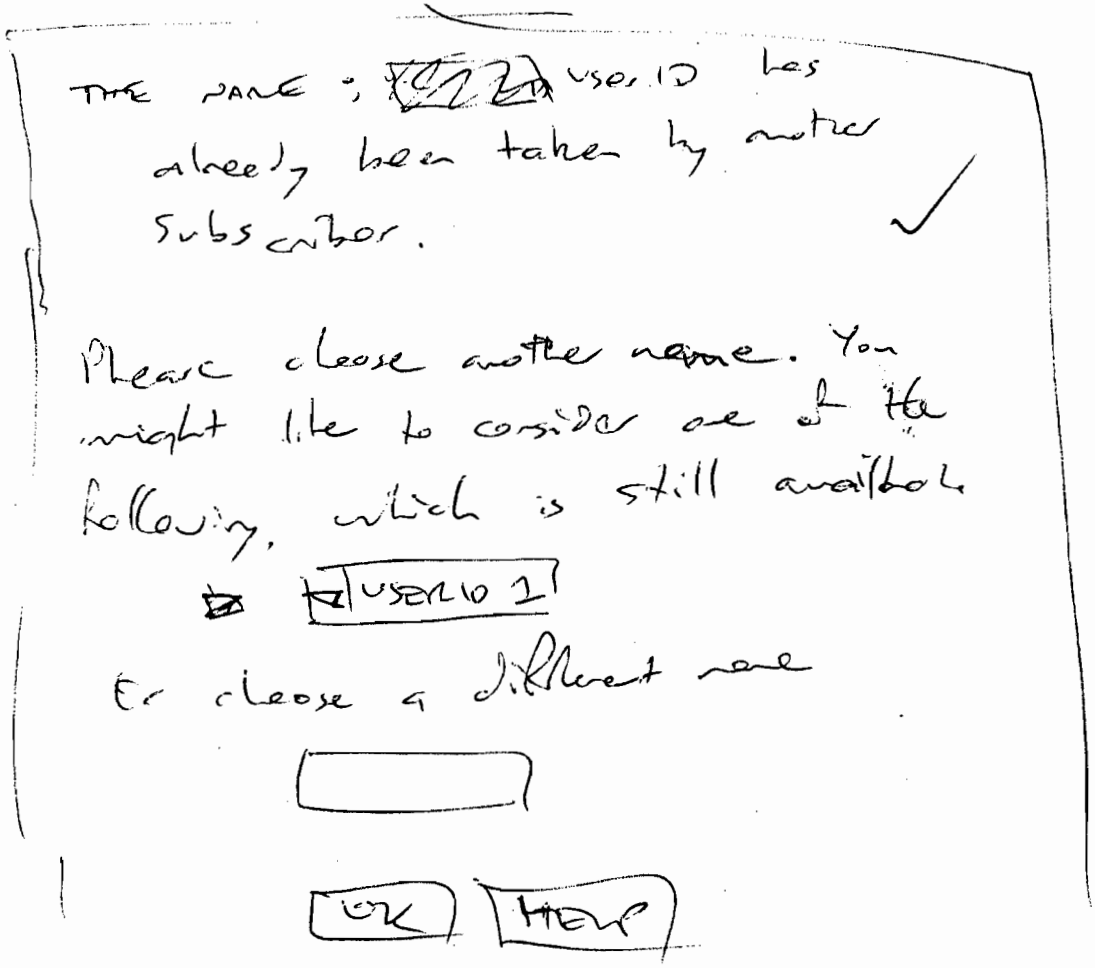
QUESTION PART 2

P8/9

SCREEN A

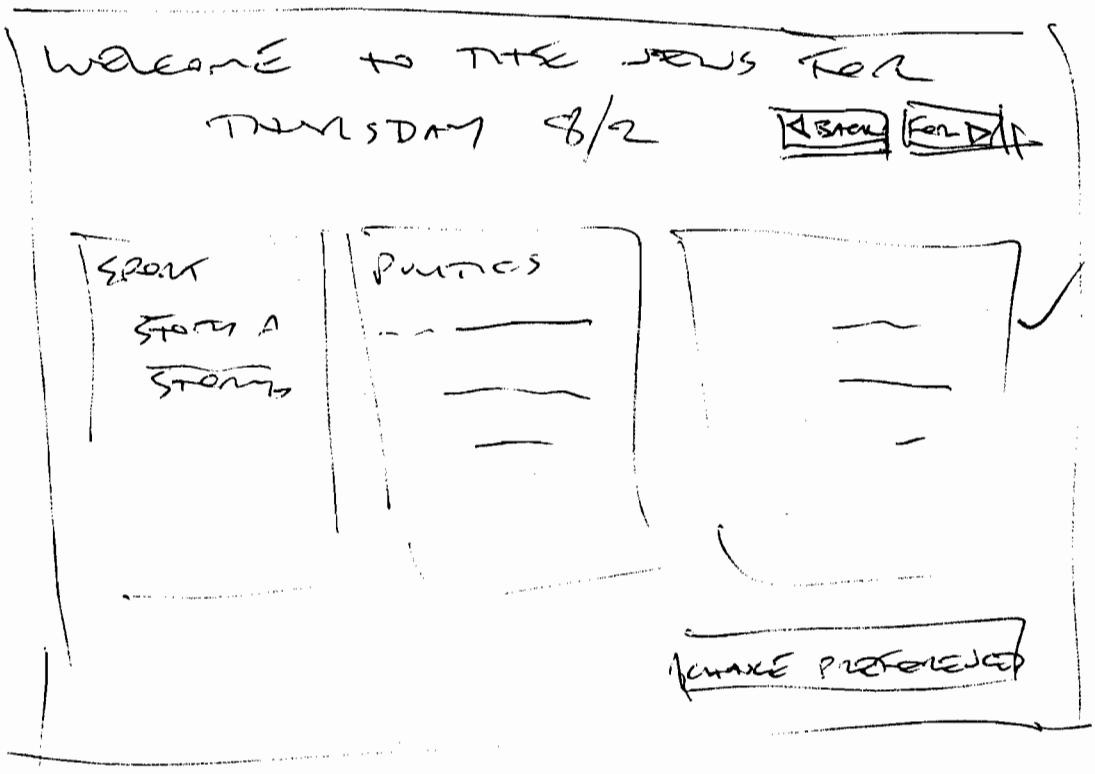


SCREEN B



QUESTION P9/1

SCREEN C



a) A DEVELOPER TEAM COULD TEST THIS PROTOTYPE BY TAKING ELEMENTS FROM THE ABOVE SKETCHES AND MAKING A "LOW FIDELITY PROTOTYPE" OUT OF PAPER. IN RESPONSE TO USER ACTIONS, A "WIZARD OF OZ" OPERATOR WOULD MOVE NEW SCREENS INTO POSITION AS APPROPRIATE. A VERBAL PROTOCOL COULD BE RECORDED TO CAPTURE ANY USABILITY PROBLEMS FROM THE USERS COMMENTS

b) A COGNITIVE WALKTHROUGH EVALUATION WOULD ENLIST A PANEL OF EXPERTS, IDEALLY INCLUDING A PSYCHOLOGIST WHO COULD ANTICIPATE THE GOALS THAT THE USER WILL HAVE, AND EVALUATE WHETHER THE SYSTEM MAKES IT CLEAR HOW TO ACHIEVE THEM. THIS COULD ACCOUNT FOR A GREATER RANGE OF POTENTIAL BEHAVIOURS THAN OBSERVING ONE OR TWO USERS WITH A PROTOTYPE, BUT IS LESS LIKELY TO ANTICIPATE ~~SOME~~ SURPRISING USABILITY PROBLEMS

c) ~~ANALYSE~~ THE PRIOR KNOWLEDGE OF THE USER WOULD BE EXACTLY DEFINED, AND THE TYPE OF USER IDENTIFIED. THE USER TASK TO ACHIEVE A GOAL WOULD BE BROKEN DOWN INTO A SEQUENCE OF "CORRECT" ACTIONS. THE EVALUATION TEAM WOULD ASSESS, FOR EACH ACTION, WHETHER THE DISPLAY MATCHES WHAT THE USER MIGHT BE LOOKING FOR. THEN THE FEEDBACK AFTER THE ACTION HAS BEEN TAKEN WOULD BE ASSESSED TO SEE WHETHER THE USER WOULD RECOGNISE IT. [20 MINS TOTAL]