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Question 22

a) A structured development approach would be most suited for this system. The structured approach would make sure that each part of the system is running correctly and to the requirements of the system. This is the most expensive approach, however it would be worth the costs as any errors in the system could greatly inconvinence people. Errors could be from miscalculation of ticket prices to displaying train delays when they aren't any. These are important factors, so the system needs to be carefully constructed with much attention to detail.

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b) Two key factors in the technical feasibility would be: can the ~~touchscreen~~ computers display all the information with only a touch screen as input and will there be enough ~~their~~ technical staff to supply maintenance to the system.

By using only touch screens, it limits the abilities of the user. They are unable to enter words unless a keyboard is displayed on screen, defeating the purpose of a touch screen. If a traveller wishes to make an inquiry about travel to a certain place, they would need to go through all the place names rather than being able to enter the name and have the system search for it. Will the touch screen be an advantage or an inconvienance?

If a computer terminal breaks down, will there be ~~accurate~~ someone with the ability to fix it before many people are inconvinenced? By using technology it is harder to fix once broken, as opposed to replacing a tired employee. The computer may never break down on its own, however vandals may decide to break it. Will the existing staff have the capabilities to quickly fix the problem?

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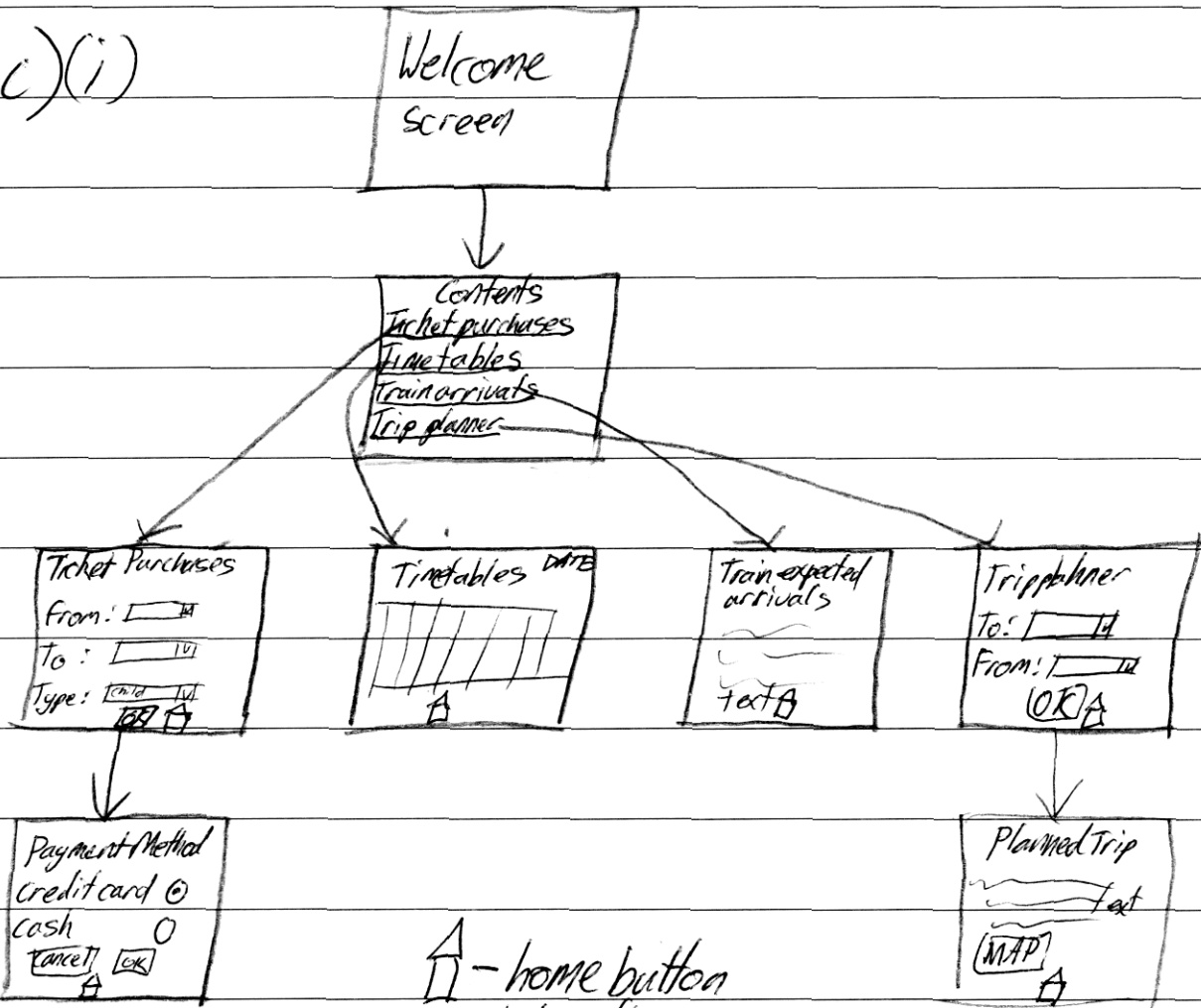
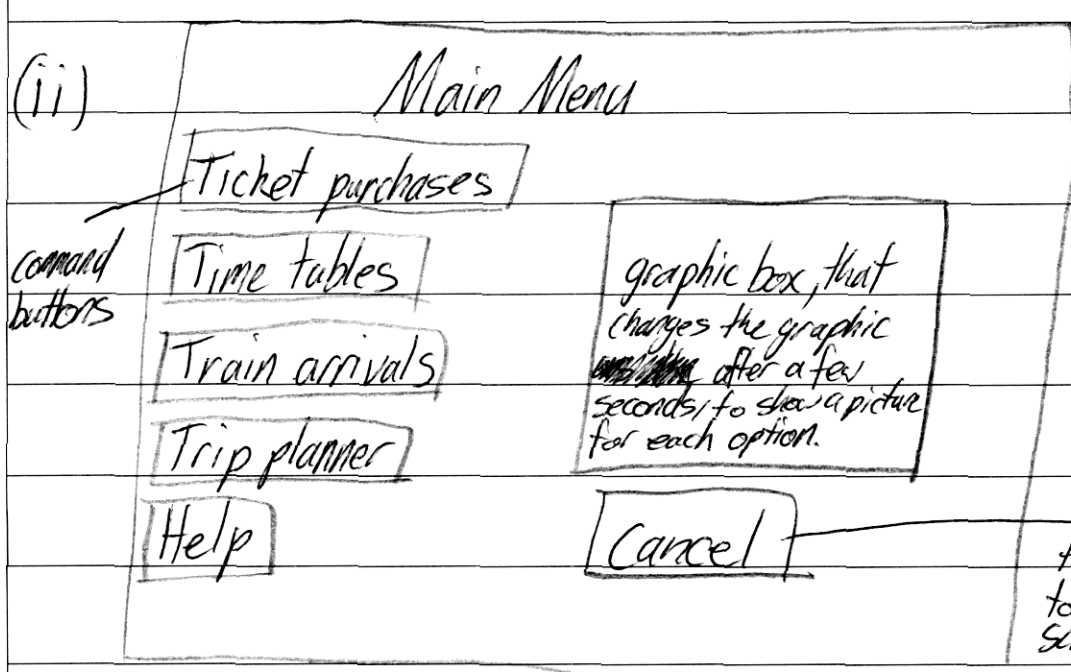
c)(i)



A - home button takes the users back to the contents page.

(ii)



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d) Blind people or visually impared people would have trouble using the system. This could be resolved by using design consistance and placing a raised OK and CANCEL button in the same place on every screen. Also the text on the screen could have an option to be read aloud. The staff could assist the person using the system and the next time they would know what to do.

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e) BEGIN MAINPROGRAM

Input UserDest

NumSingle

NumReturn

FOR index = 1 to 100

IF UserDest = destination(index).Station

BEGIN MAINPROGRAM

Find ~~Station~~ Destination

Calculate fare

END MAINPROGRAM

BEGIN SUBPROGRAM FindDestination

Input UserDest

For index = 1 to 100

indent → IF UserDest = destination(index).station THEN

~~index~~ count = index

ENDIF

Increment index

END FOR

END SUBPROGRAM FindDestination

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BEGIN SUB PROGRAM calculatefare

Singletickets = NumSingle * destination(count).full single

Fulltickets = NumFull return * destination(count).full return

Totat fare = Singletickets + fulltickets

Print Fotal fare

END SUBPROGRAM calculatefare