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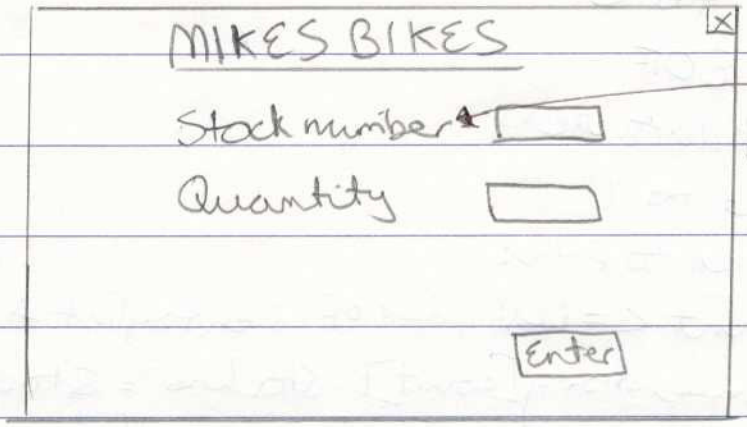
(a) 1)




Principles:
legibility - Serif fonts
consistency - fonts
• Buttons

2)

| Input | Processes | Output |
|---|---|---|
| Stocknumber | Identify Stock item. [Binary search] | Updated ~~Data~~ Inventory file. |
| Quantity | Calculate difference to quantity. | |
| | Make quantity Changes | |

(iii) BEGIN Update with Transaction file & Inventory File

```
INITIALISE
    index as integer = 0
    count as integer = 0
    found as boolean = false
END INITIALISATION

WHILE (Transaction.Stock_Number[index] <> 999)
    found = false
    WHILE (count < 999)
        IF (Transaction.Stock_Number[index] =
            Inventory.Stock_Number[count] THEN
        Inventory.Quantity[count] = Inventory.Quantity[count]
                                  + Transaction.Stock_Quantity[index]
        found = true
    END IF
    count = count + 1
END WHILE
```

```
IF (found = false)
    Error message: Stock not found!
END IF
index = index + 1
END WHILE

index = 0
WHILE (index < 999)
    IF ( Inventory.Quantity[index] < 3)
        Warning: Low Stock!
    END IF
    index = index + 1
END WHILE

END
```

N.B There has been an assumption that no more than 999999 entries exist in both files.

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b) A gantt chart is created during the problem definition and planning/design stages. It ensures that the software solution is implemented in an appropriate time frame. It outlines which tasks are completed before other tasks can be completed. For example, when building a sub-marine, it is vitally important that the engines and interiors are installed BEFORE the top is welded closed. Although re-engineering of software is not quite as costly as this, it is more efficient to get the correct tasks done in the correct order. Eg. Implementation before testing. Also gantt charts let people know the various deadlines and scheduling details for sections of the software.

A user manual is a piece of documentation vital to users and is developed in the implementation stage. It shows all the functions and operations from the users perspective and explains how to use the program efficiently. It also usually contains brief instructions on troubleshooting (sometimes included in the troubleshooting guide, another form of user documentation) and a license agreement and installation tips (sometimes seperately as an installation guide). Often sections like keyboard shortcuts, hotkeys or user tips are included in the user manual.