BOARD OF STUDIES
NEW SOUTH WALES

a) (i)

```
┌─────────────────────────────────────────────┐
│ x □ :│        MIKES   BIKES                   │
├─────────────────────────────────────────────┤
│                                               │
│   Stock Number    [    1    ] [▼]             │
│                                               │
│   Quantity    [        ]                      │
│                                               │
│                                               │
│                                               │
│                                               │
│                                               │
└─────────────────────────────────────────────┘
```

(ii)

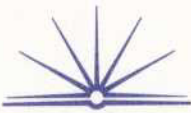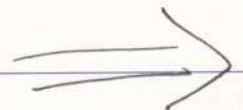| INPUT	PROCESS	OUTPUT
Stock number	~~int~~ identify Item description	display item description
Quanity	Quanity ~~at~~ on hand − Quanity	updated quanity on hand

01WB4

(11)

```
 _____                 _____              _____
/        \               |                   |            /        \
|   |    | * stock       |  * identify       |            | * display |
|   |    |     number    |  item description |            | all updated| O
|   |    |               |                   |            | information|
| 1 |    | * Quanity     |  * Calculate quanity|          | in inventory|
|   |    | Quanity       |                   |            | file .    |
|   |    | oh hand       |  on hand          |            |           |
_____/  ———→         |_____|   ——       _____/
```

(iii)

```
              ┌──────────────┐
              │    BEGIN     │
              └──────┬───────┘
                     │
              ┌──────┴───────┐
              │ Read         │
              │ Transaction  │
              │ File         │
              └──────┬───────┘
              ┌──────┴───────┐
              │ Read         │
              │ Inventory    │
              │ File         │
              └──────┬───────┘
                     │
                    ╱ ╲
                   ╱   ╲  transaction
  ┌─────────┐FALSE╱ stock number = ╲
  │ PRINT   ├────╱  inventory stock ╲
  │"Match not│   ╲     number      ╱
  │ Found"  │    ╲               ╱
  └─────────┘     ╲             ╱
                     │ TRUE
              ┌──────┴───────┐
              │ Quantity on  │
              │ hand - Quantity│
              │ = RESULT     │
              └──────┬───────┘
                     │
                    ╱ ╲
                   ╱   ╲  TRUE   ┌──────────────┐
                  ╱RESULT<3╲─────┤ PRINT        │
                  ╲       ╱      │"Quantity in  │
                   ╲     ╱       │hand less than3"│
                    ╲   ╱        └──────────────┘
                     │ FALSE
              ┌──────┴───────┐
              │ RESULT =     │
              │ Quantity in  │
              │ hand         │
              └──────┬───────┘
                     │
              ┌──────┴───────┐
              │    END       │
              └──────────────┘
```
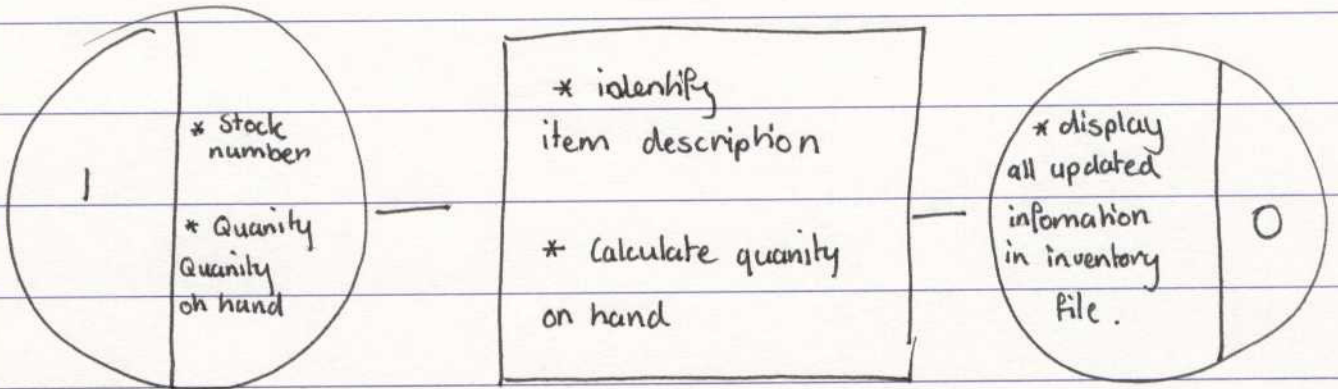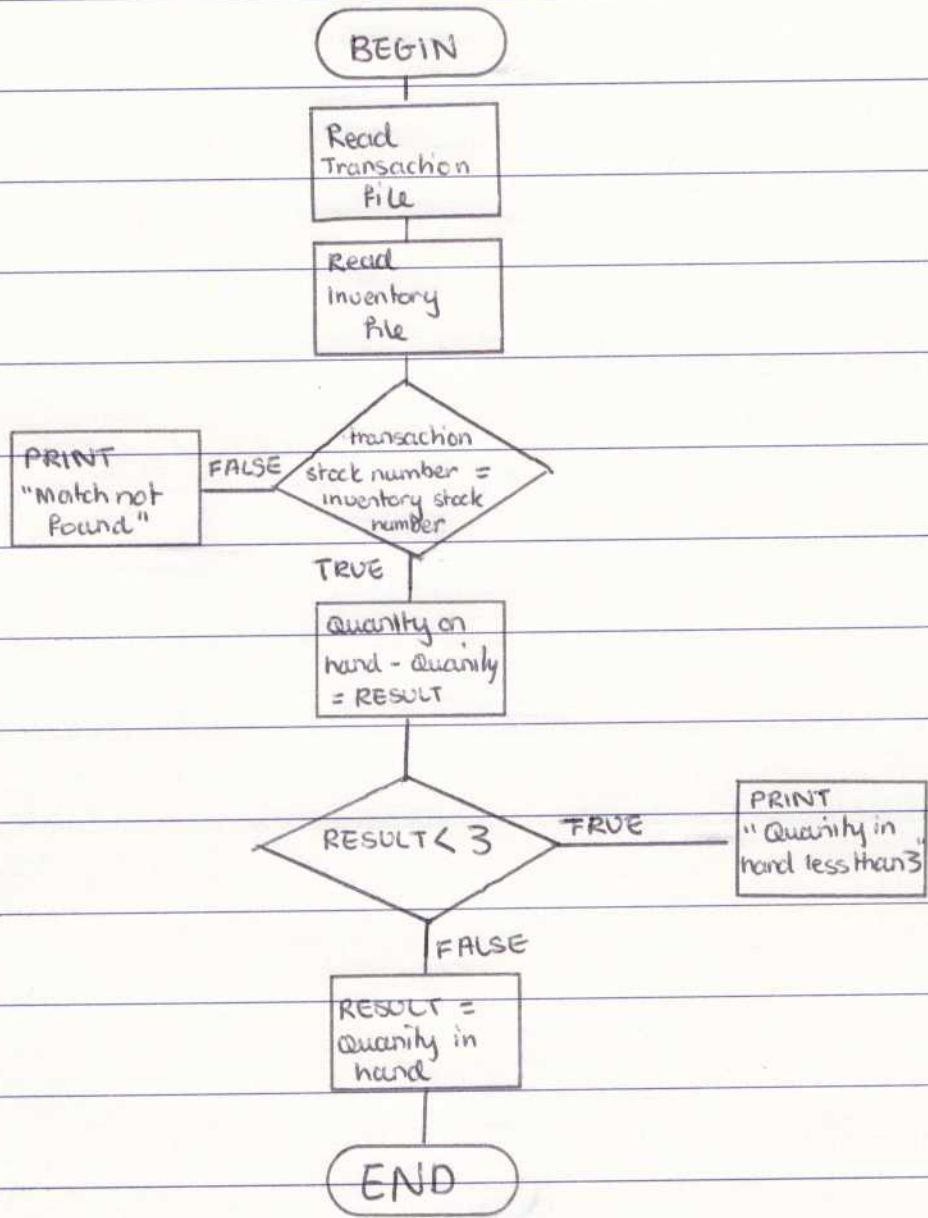
b) A flowchart is documentation used during planning and designing of the solution. The flowchart is used to help understand the problem and plan a solution. It also helps to make sure that the solution being developed is feasible and logical, meaning it functions. A flowchart is a tool which represents a problem diagramatically making it easier for developers to understand the over all jist of the problem and also the structure of the solution. Using a flow chart to diagramatically represent the updating process, showed that the structure of the solution contains many boolean data types and no sequence or repetition data types.
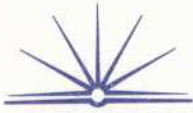
b)   Another type of documentation used is
a data dichionary. Because this is a data
base it is important to be aware of the
data types to be used, it is also important
to assign appropriate data types to feilds.
A data dichionary is mainly used in the
Planning and designing stage where the developer
is determining the most appropriate data
type for the solution. IT also helps to
organize each input / data items and
understand the nature of the
proposed solution, making it easier for
the developer to provide a sucessful
working, feasible solution.