22)

a)

Mike's Bikes

Transaction menu

Date: DD/MM/YY

Stock number [ ]

Quantity [ ]

[submit]

< Please enter values, and then click submit >

[HELP]   [MAIN MENU]

An error message will appear on the centre if Quantity on hand is < 3, and give suggestions
(s) as follows:

Quantity on hand is less than 3. Please make a smaller shipment or replace stock

[OK]

---

ii)

Input	Process	Output
• Stock number • Quantity	• Check if stock number is = "999" (EoF) • If Quantity is positive, add amount to Quantity on hand • If Quantity is negative, subtract amount from Quantity on hand • Give error message if Quantity in hand is < 3. • update inventory file from transaction file. • Validate entries (make sure these are in valid ranges)	• error message • confirmation of transaction

01/WB8

iii)

Begin mainprogram

Initialise variables

   InventoryF is a file

   TransactionF is a file
     abort is a boolean, = false
     Count is an integer, = 1
     StockNumber is an integer
     Quantity is an integer
     Finished is a character
End Initialise variables

WHILE   TransactionF. Stock.number <> 999

   print: "please enter Stock number"

   StockNumber ← User input

   print "please enter Quantity"

   Quantity ← User input

   InventoryF [StockNumber]. Quantity_at_hand ←

   InventoryF [StockNumber]. Quantity_at_hand + Quantity

   IF (InventoryF [StockNumber]. Quantity_at_hand < 5) THEN

     print: " Stock at hand is too low.

       please ship less or get more

       stock"

     abort = true

  End IF

   [continued] → . ‿

```
IF        InventoryF [stocknumber]. StockNumber = " " THEN
      print  " There  is  no     such  stock  in
              inventory "
      abort = true.
End IF
print     " Do  you    want   to   process  more ? "
Finished              ←   user input
IF      Finished =    ' Y '     THEN
          TransactionF. stocknumber = 999
End IF
IF (abort = true )      THEN
      InventoryF [StockNumber]. Quantity_at_hand ←
      InventoryF [stocknumber]. Quantity_at_hand — Quantity
End IF
END   mainprogram.
```
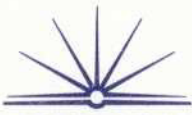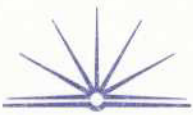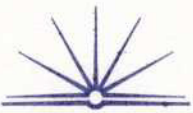
5) Process diaries or Journal entries
are used during the analysis
stage particularly as it ed documents
the milestones, pitfalls, and stages
of activity. It will record the
developers progress and it allows
them to quickly check and
review their tasks completed. It is
also allows them to monitor their
tasks if they undertake a similar
system development in future, allowing
them to avoid similar
problems encountered previously. It
also allows new-team members
to catch up by reviewing their
analysis and why it the system
was originally designed they can catch
up with all the tasks.
Another type of documentation is

that of ~~instant~~ data dictionary, developed costs in the cycle, but used greatly in the implementation stage. It keeps a track of data elements and their values throughout implementation and coding and allows developers to see what type certain data elements should be and in what specific format to allow greater accuracy and consistencies. Case Tools can be used for data dictionaries to track identifier names, add new identifier names, prevent duplication of data names and propagating changes throughout the system. This is extremely useful during implementation. It allows coding to be done more efficiently as all the used data types will be

visible to the programmer