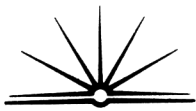


Q 22

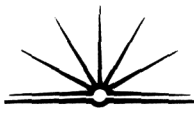
a) i. Outsourcing involves ~~an~~ an entity (usually a company) hiring software engineers outside of their own company to come and create their software for them. ~~The~~ The company who requires work done contacts the software company they are going to outsource, and together they sign a contract indicating what is to be done, by when and how much. etc.

ii. Outsourcing is cheaper for the company because they don't need to hire full time software developers inside their own company. When the software for the bank's network is done, the ~~software~~ software developers who have been outsourced ~~simply~~ simply leave and ~~or~~ no longer interact or work for the bank. That said, the developers ~~are~~ are never 'employed' by the bank, they are employed by the outsourced company. ~~that~~ The implications of outsourcing are quite severe in the software industry.







Because there are no ~~4~~ positions to fill in large corporations, highly skilled developers are often left without a job. When companies such as this bank need work done, they simply call ~~the~~ ~~outs~~ the external company - they don't hire their own. If a developer manages to get a job within one of these 'external' companies who other companies outsource, then it is simple for them to get projects, seeing as ~~ed~~ many corporations outsource. ~~Apart from the lack of jobs, and~~ ~~it~~ In the end, however, it is money that prevails, and because these companies such as the bank don't need to continue paying the developers once the work is done - outsourcing is widely used.

iii. The ~~de~~ systems analyst must ensure that the needs of the new internal network are known precisely. To do this, time must be spent watching the users using the existing system to determine what tasks are done and at what times.



Surveys, interviews and questionnaires should also be given to the users to ensure their perspective is taken into account in the development process. Input must also be taken into account from the bank managers - who understand the needs and objectives of the new system. Continual interaction between these three groups is vital for the new internal system to be reliable.

b) i.  An open circle with an arrow represents data that is being passed along through the modules. In this example, the Customer Number  symbol represents the number of the customer being passed from the "Accept card details" ~~sub~~ module, to the main module "Automated Management System."

 A closed circle with an arrow represents a flag. For example  Validated indicates whether or not ~~the~~ the password has been validated or not. In this example, the "Validate Password" module validates ~~the~~ (or invalidates) the password, and

sends this boolean value, the flag, back up to the main module, which can then pass it on to calling modules.

ii. — Next book. Sorry.

iii. BEGIN Accept And Validate Password (Stored Password, Validated)

Tries = 0

Password = ""

WHILE Tries < 3

~~Input ~~key~~ password // user input password~~

Set password to User Input

IF password = StoredPassword THEN

Validated = TRUE

~~ELSE~~

Tries = Tries + 1

Password = ""

ENDIF

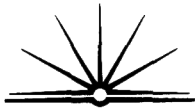
ENDWHILE

~~IF~~ Validated = FALSE

PRINT "You have exceeded the limits of entering a wrong password. Sorry"

ENDIF

END



Q 22.

b) ii. The program does not shut down. There is no line to indicate whether the system has been turned off.

"System_on = TRUE" is not complimented with "System_on = FALSE". This would result in the system being ~~turned~~ left on continuously. To modify this, code would need to be written to constantly check whether or not the system had been turned off.

~~Q 22~~

b) ii. The code on line A would cause a problem. ~~It~~ ~~is~~ System_on = TRUE has been used in the initialisation, however "Switched_on" has been used in the main loop. To rectify this, line A needs to be changed to:

A "WHILE System_on"

This would allow the program to function correctly.