BOARD OF STUDIES
NEW SOUTH WALES

Centre Number: ..... Student Number: .....

Software Design Section 2 Question 21

(21)

a) i) ~~Train 0 Desk Check (assume X = 5 and Y = 3)~~

	Displays	Desired
X	Error	No action
y	Error	No action

~~for number of trains = 0 there would be an error~~

Train Desk Check

Number of trains	Result	Desired Result
0	Error and number-of trains never ends	No action
1	No action taken	Train to be displayed
2	No trains displayed	Both trains displayed

ii) There are several errors in the program. The first is that if number of trains is 0 then the variable is incremented indefinately and eventually an error will result. Locations will obviously never exist for these trains and that may lead to an error also. Also if there is only one train, nothing happens as the while loop in DisplayTrain is never run. According to the desk check the train should have been displayed. If there are 2 trains, no trains are displayed because of the DisplayTrainID procedure.

iii) I would modify lines -

(4) to read WHILE Train < NumberofTrains and ~~Train~~
NumberofTrains > 0

so that if there are 0 or 1 trains the while loop will run correctly.

(18) - I would insert two lines before this one reading -

X = Location X

Y = Location Y

because X and Y haven't been declared.

2(b)i) There are several ethical issues involved. Firstly the person infringes copyright and hence plagiarises the other companies code. They do not ask permission for the code use or even acknowledge the other companies development of the code. Hence it further infringes copyright. Testing of this code may not have been performed hence viruses could be contained inside the run time component. It also infringes on a developers rights to entitlements for the code ~~generation~~ contained inside the component. The original author did not give permission and hence does not recieve any entitlements to which they are entitled to.

21b.ii) Management could ensure the team carry out their responsibilities in a number of ways:

- Thorough Documentation:- Documenting all code generation so that ~~copy~~ ~~plagiro~~ plaguarising someone else's work does not occur.

- Communication with the team - constant communication is vital to ensuring the programmers are on schedule, fulfilling needs and seeing they carry out their responsibilities properly.

- Seeking Permission & Acknowledging sources if external code is used - this is vitally important as it ensures no plaguarism occurs and also so that the original author recieves credit for their work.