

1. Nov/2021/Paper_11/No.4a,b,c

Francis is starting his first job as a software developer for a multinational company.

- (a)** Francis has been advised to join a professional ethical body.

Describe the benefits to Francis of joining a professional ethical body.

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..... [3]

- (b)** Francis is shown the software he will be working on. He is unfamiliar with the Integrated Development Environment (IDE) he is required to use.

- (i)** Describe the ways in which Francis can act ethically in this situation.

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..... [2]

- (ii)** A typical IDE provides debugging tools to support the testing of a program.

Identify **three** other tools or features found in a typical IDE to support the writing of the program.

1

2

3 [3]

- (c) Francis is part of a team writing a program. He finds an error in part of the program that has already been tested. He decides not to tell anyone because he is worried about the consequences.

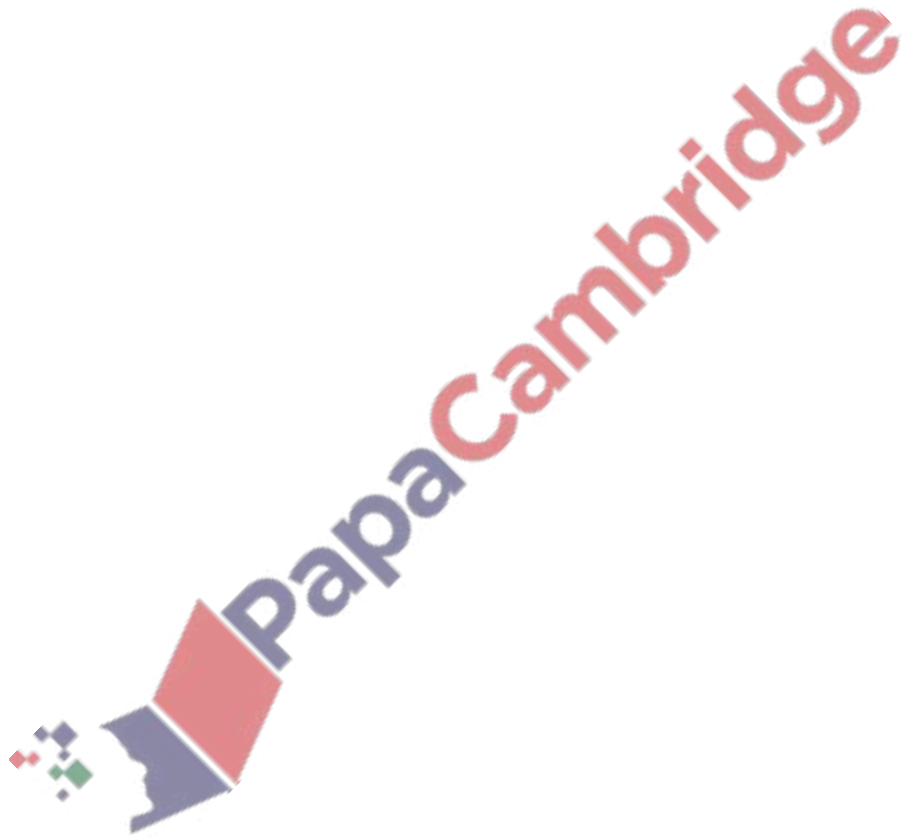
Explain the reasons why Francis acted unethically in this situation.

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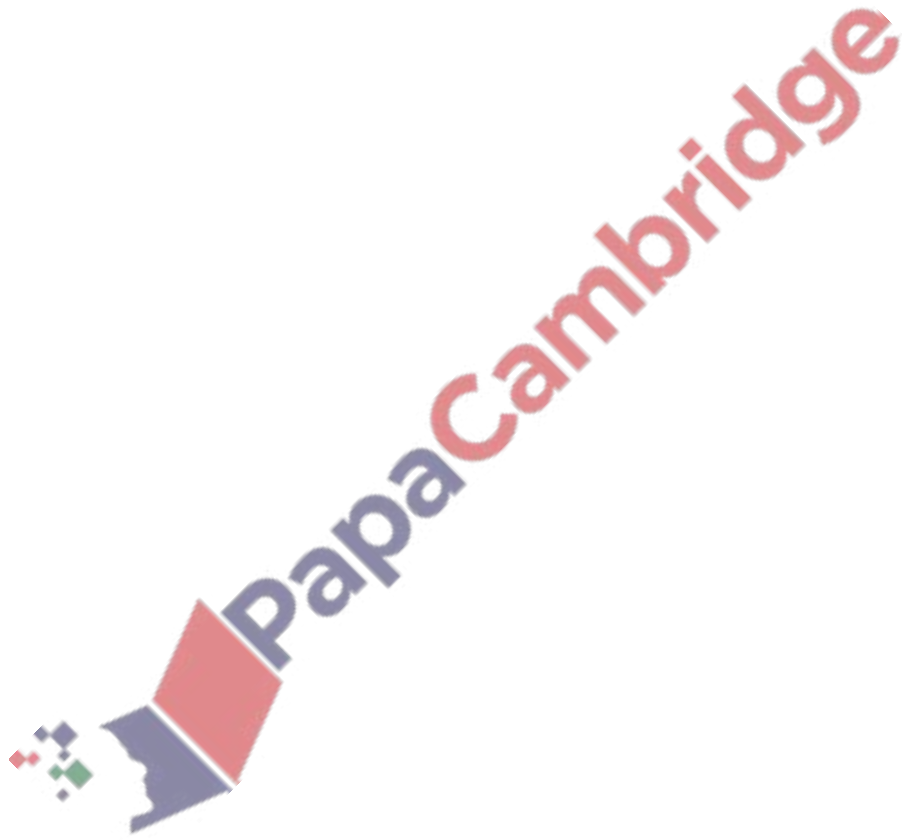
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..... [2]



Aisha manages a team of software developers.

- (a) Explain the reasons why it is important that Aisha acts ethically in relation to her team members.

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- (b) The team are developing a computer game where the user plays a board game (such as chess) against the computer.

Describe how the computer would use Artificial Intelligence (AI) to play the board game.

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- (c) The final game will be released under a licence.

Tick (✓) **one or more** boxes in each row to identify the licence(s) each statement describes.

Statement	Free Software Foundation	Open Source Initiative	Shareware	Commercial Software
The user can edit the source code				
The user must always pay before being able to use the software				
The user can redistribute the software				
The user always gets a trial period				

[4]