

June 18 (9608/21) Question 5

5 A golf club holds information about its members. When a member completes a round of golf, their score is stored along with their membership number and the date of the round.

(a) Explain why the club stores these data in a file rather than an array.

.....  
.....[1]

(b) Editing functions such as cut, copy and paste are features provided by an Integrated Development Environment (IDE).

Give **two** additional features of an IDE that are helpful when **coding** a program.

Feature 1 .....

Feature 2 .....

[2]

(c) The information is stored in a text file, `ScoreDetails.txt`. The format of each line of the text file is as follows:

`<MembershipNumber><Date><Score>`

- `MembershipNumber` is a four-digit numeric string.
- `Date` is a six-digit numeric string in the format DDMMYY
- `Score` is a two-digit numeric string in the range "50" to "99".

A procedure, `AddNewScores()`, is being developed. This will allow the user to enter scores for several members on a particular date.

The procedure, `AddNewScores()`, will perform the following actions:

1. Prompt for the date of the scores.
2. Input the date of the scores.
3. Prompt for the membership number.
4. Input the membership number.
5. If the membership number is an empty string then end the procedure.
6. Prompt for the score.
7. Input the score.
8. Validate the score.
9. If the validation fails then repeat from step 6.
10. Form a text string from the data and write this to the `ScoreDetails.txt` file.
11. Repeat from step 3.



Mark scheme

Question	Answer	Marks
5(c)	<p>'Pseudocode' solution included here for development and clarification of mark scheme. Programming language solutions appear in the Appendix.</p> <pre> PROCEDURE AddNewScores()      DECLARE FileData : STRING     DECLARE ScoreDate : STRING     DECLARE MembershipNumber : STRING     DECLARE Score : STRING      OUTPUT "Input the date for the scores"     INPUT ScoreDate      OPENFILE "ScoreDetails.txt" FOR APPEND      OUTPUT "Input the Membership number"     INPUT MembershipNumber      WHILE NOT MembershipNumber = ""         OUPUT "Input the score"         INPUT Score         WHILE (INT(SCORE) &lt; 50) OR (INT(SCORE) &gt; 99)             OUTPUT "Input a valid score from 50 to 99"             INPUT Score         ENDWHILE         FileData = MembershipNumber &amp; ScoreDate &amp; Score         WRITEFILE "ScoreDetails.txt", FileData         OUTPUT "Input the Membership number"         INPUT MembershipNumber      ENDWHILE      CLOSEFILE("ScoreDetails.txt")  ENDPROCEDURE </pre> <p>1 mark for each of the following:</p> <ol style="list-style-type: none"> <li>1 <b>Declare</b> MembershipNumber <b>as</b> STRING <b>and</b> Score <b>as</b> INTEGER / STRING (commented in Python)</li> <li>2 <b>Prompt and Input of</b> ScoreDate</li> <li>3 <b>Open</b> ScoreDetails.txt <b>in</b> APPEND mode</li> <li>4 <b>Prompt and Input of</b> MembershipNumber <b>in a loop</b></li> <li>5 (Outer) loop <b>terminated when</b> MembershipNumber = ""</li> <li>6 <b>Input</b> Score <b>and</b> loop until valid</li> <li>7 <b>Form</b> the text string from the three variables</li> <li>8 <b>Write</b> the text string to the file</li> <li>9 <b>Close</b> the file</li> </ol>	9