

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.

Write **program code** for the `AddNewScores()` procedure.

Visual Basic and Pascal: You should include the declaration statements for variables.

Python: You should show a comment statement for each variable used with its data type.

Programming language

Program code

.....[9]

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) < 50) OR (INT(SCORE) > 99) OUTPUT "Input a valid score from 50 to 99" INPUT Score ENDWHILE FileData = MembershipNumber & ScoreDate & 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"> 1 Declare MembershipNumber as STRING and Score as INTEGER / STRING (commented in Python) 2 Prompt and Input of ScoreDate 3 Open ScoreDetails.txt in APPEND mode 4 Prompt and Input of MembershipNumber in a loop 5 (Outer) loop terminated when MembershipNumber = "" 6 Input Score and loop until valid 7 Form the text string from the three variables 8 Write the text string to the file 9 Close the file 	9