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## Gottit!

Whenever you are working for exams, be they GCE, CSE, BEC, TEC, the driving test or simply first-form geography, it is always useful to have a friend to help test your knowledge. The Electron can remember dozens of questions and their answers. It fires the questions at you in random order, so that you never know exactly what it is going to ask you next. It keeps a score of your successes and helps you when you go wrong.

### Using the program

The program consists of two sections. One is for use in setting the questions; you type in the questions for the Electron to ask you later. You also type in the correct answers. At this stage you are using your books and notes to make certain that the answers are correct. The other section of the program is that in which the computer chooses questions in random order from those you have typed in and then asks you to key in the answers. At this stage you have put your books and notes away and hope to be able to recall the correct answers from memory to match those in the computer.

When the program is first run, you are asked 'SET QUESTIONS OR ANSWER THEM?'. Key in 'S' or 'A', according to which section of the program you want to use. If you type 'S' to set the questions, the screen becomes blue and you are then asked 'TOPIC?'. Respond to this by typing a name (up to 7 characters) which indicates what the questions will be about. Examples of names are 'MAPS', 'PHYSICS', 'BKKPING', 'DRTEST', and 'LSAVING'.

The computer then asks you to type in each question, and then its answer. The program holds up to 150 questions. Each question and answer may be up to 238 characters long (almost six lines on the screen). The Electron beeps when you try to key in questions that are too long. However, if you were to make all the questions and answers

as long as this, the Electron would run out of memory. The average length of questions and answers should be about 45 characters (a little more than one screen line). Actually you may need to make the questions a little longer than this, and the answers rather shorter. It is best to keep the answers as short as possible, to make it easier for the computer to match the stored answer against the one you type in later. Single-word answers are the best of all. Answers can also be equations (e.g.  $V = IR$ ) or chemical formulae (e.g.  $H_2SO_4$ ). One very important point - *do not use commas* when typing questions or answers.

If answers are to be as short as possible, the questions must be designed to be correctly answered by one-word or few-word answers. The task of designing questions to cover your topic fully, and working out the best short answers for typing into the computer is, in itself, a tremendous aid to learning. It demands mental activity and is far more effective than simply reading through a textbook or a set of notes. You will probably find that, by the time you have worked out the questions and answers, you have already learnt almost all you need to know about the topic. How useful your computer stored questions and answers will be for revision!

After you have typed in each question and its answer, you are asked 'MORE?' If you have more questions to type in, key 'Y'. Provided that you have not already typed in 150 questions, you will then be asked to key in the next question and its answer.

When you have finished typing questions and answers, key 'N'. The message 'RECORD' then 'RETURN' appears on the screen. This is for you to save the questions and answers on tape, so that the computer can test you in a few days' time. Place a tape in the recorder and fast-forward or rewind it to a suitable place. Press RECORD and PLAY on the recorder. Then press RETURN on the Electron. If you have typed many long questions, saving may take up to five minutes.

When saving is complete, you are asked if you require a backup copy. If so, key 'Y' and repeat the procedure above. If not, key 'N' and the program ends.

When you run the program to test your knowledge, key 'A'. In answer to the question 'SET QUESTIONS OR ANSWER THEM?' The screen changes to white, with red text. As in the other section of the program, you will be asked 'TOPIC?' Put the tape for this topic in the recorder. It might be one you have just recorded, or perhaps one recorded several days or weeks ago. It is a good idea to make these tapes while you are working on a course and keep them ready for revision just before the exams.

When you have keyed in the name of the topic, press RETURN. Fast-forward or rewind the tape to the place where the recording begins. Then press PLAY on the recorder. After a period of up to five minutes, depending on how many questions there are, the screen clears and the first question is displayed. Above it, you will see your score, which is up-dated each time a question is asked. To begin with it says ' YOUR SCORE IS 0 OUT OF 0' .

Read the question, then type in the answer. *Do not use commas* in your answers. If your answer is exact(y correct, the message ' CORRECT' appears and your score is incremented by 2. The Electron will only count an answer as correct if it is typed exactly the same as the answer you typed in when setting the questions. However, if you type in an answer that is partly correct, the computer may still be able to give you a single mark for a good attempt. It displays the message ' ALMOST RIGHT - THE EXACT ANSWER IS:' followed by the exact answer. If you are not sure of the whole answer, but think you know part of it, type in the part which you are sure about. A single word may score a mark for you. It is possible to cheat by typing in one or two letters, but remember you are cheating yourself, not the computer!

If the Electron cannot match your answer against any part of the correct answer, and cannot match any part of your answer against the correct answer, it displays the message ' WRONG THE CORRECT ANSWER IS:' followed by the correct answer.

After each question has been set and the answer assessed by the computer, you are asked ' MORE QUESTIONS?' If you key ' Y' the computer asks you another question. If you key ' N' you are asked if you want another topic. This gives you the chance to load another tape. If you do not choose this option, the program ends.

## Keying in

The only point about keying in this program is to type the correct number of ' ticks' after each ' PRINT' and ' INPUT' .

## Program design

- 20-40 Initialising and setting variables.
- 50-70 Setting or answering?

- 80-160 Setting questions and answers.
- 170-280 Saving questions and answers.
- 290-380 Loading questions and answers.
- 390-500 Asking random questions and receiving user' s answers.
- 510-550 Option to load another tape.
- 560-580 PROCyn to get Y/N responses.

## The program

```

10 REM ** GOTIT! **
20 MODE4
30 DIM Q$(150,1):N=1
40 VDU 20
50 CLS:PRINT'"SET QUESTIONS OR ANSWER THEM? (S/A)"
60 REPEAT:KEY$=GET$:UNTIL KEY$="S" OR KEY$="A"
70 IF KEY$="A" THEN 290
80 VDU 19,0,4,0,0,0
90 INPUT'"TOPIC "T$:T$=LEFT$(T$,7)
100 CLS:PRINT'"QUESTION NO. ";N;": "
110 INPUT'Q$(N,0)
120 PRINT'"ANSWER: "
130 INPUT'Q$(N,1)
140 PRINT'"MORE?"
150 PROCyn
160 IF KEY$="Y" THEN N=N+1:IF N<151 THEN 100
170 X=OPENOUT T$
180 PRINT#X,N
190 FOR J=1 TO N
200 FOR K=0 TO 1
210 PRINT#X,Q$(J,K)
220 NEXT:NEXT
230 CLOSE#X
240 PRINT'"BACK-UP? (Y/N)"
250 REPEAT:KEY$=GET$:UNTIL KEY$="Y" OR KEY$="N"
260 IF KEY$="Y" THEN 170
270 PRINT'"RECORDING FINISHED"
280 END
290 NC=0:NQ=0

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```

300 VDU 19,1,1,0,0,0:VDU 19,0,7,0,0,0
310 INPUT'"TOPIC "T$
320 X=OPENIN T$
330 INPUT#X,N
340   FOR J=1 TO N
350     FOR K=0 TO 1
360       INPUT#X,Q$(J,K)
370     NEXT:NEXT
380   CLOSE#X
390   CLS:PRINT'"YOUR SCORE IS ";NQ
400   NQ=NQ+2:PRINT'"QUESTION ";NQ
410   R=INT(RND(1)*N)+1:PRINT"';Q$(R,0)
420   PRINT'"ANSWER?"
430   INPUT'"answer$
440   IF answer$=Q$(R,1) THEN PRINT'"CO
RECT":NC=NC+2:GOTO 480
450   IF INSTR(answer$,Q$(R,1)) OR INST
R(Q$(R,1),answer$) THEN PRINT'"ALMOST RI
GHT - THE EXACT ANSWER IS:":NC=NC+1:GOTO
470
460   PRINT'"WRONG - THE CORRECT ANSWER
IS:"
470   PRINT'"Q$(R,1)
480   PRINT'"MORE QUESTIONS? (Y/N)"
490   PROCyn
500   IF KEY$="Y" THEN 390
510   CLS:PRINT'"ANOTHER TOPIC? (Y/N)"
520   PROCyn
530   IF KEY$="Y" THEN 290
540   PRINT'"'"GOTTIT! FINISHED"
550   END
560   DEF PROCyn
570   REPEAT:KEY$=GET$:UNTIL KEY$="Y" OR
KEY$="N"
580   ENDPROC

```

## Variations

You may prefer a strict test of your knowledge with no 'almostcorrect' answers allowed. If so, delete line 450. Another variation is for the computer to let you have another attempt at answering the question when you succeed in typing a partly correct answer. You might then

gradually work out what the correct answer is by making successive attempts at it. If you would prefer the program to operate in this way, substitute this line for line 450:

```
450 IF INSTR(answer$,Q$(R,1)) OR INSTR(Q$(R,1),answer$)  
THEN PRINT "ALMOST RIGHT - TRY AGAIN!":GOTO 430
```