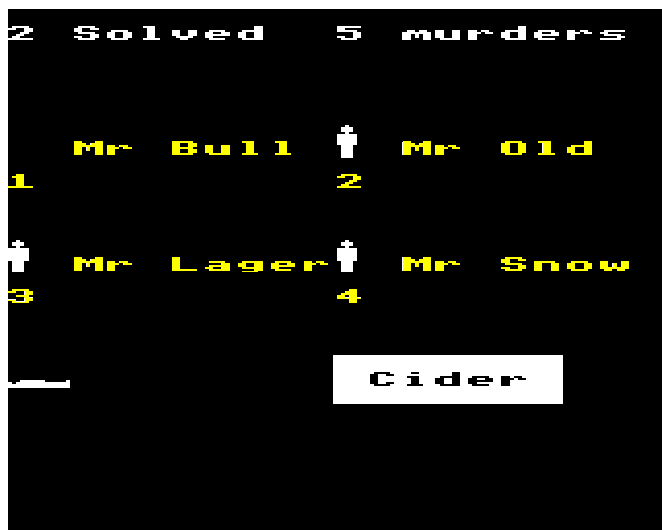# WHO DUNNIT

Looking through the window you see him standing in his study. Then you hear a gun shot and he falls to the ground. You walk into the house and go into his study.

There are four men there. You know their names. You find a note which the victim must have written as he died. This is a clue to his murderer. You must decide which of the four men is the murderer before they slip out of the room.

How to play

The victim's note is by the man lying down. You must work out which of the names of the other men has some connection with this word. For example, in the screen show above, Mr Lager is the murderer as Lager and

Cider are both drinks. Alternatively words that are related may have the same or opposite meanings. For example, Big and Large, also Hot and Cold are related.

Key in the number below the suspected murderer before the fourth man disappears off the screen.

If you're right, you hear police sirens as their cars approach. If you're wrong or too late, you don't. The score is given on the top line. Press RETURN to play again.

Programming hints

This program illustrates how the ENVELOPE statement can be used to create sound effects. This allows the pitch of the amplitude (volume) of a note to be continuously varied in a short time or both. As a gun shot has a constant pitch the three pitch parameters of the ENVELOPE statement in line 410 are zero. As a gun shot has a sharp attack phase and a slower delay the volume initially shoots up to a maximum 126 before going down more slowly. This is the 126 after the 10. ENVELOPE statements are quite tricky but you can find the ENVELOPE statement you require with limited knowledge by trial and error.

If you want to add more words to the game, add some more DATA statements at the end of the program. Put in sets of three words that are related. Read the other words in lines 740 and 760 for ideas. Make sure that each set is not related to the other words in those lines. When you have added the extra words, count up the total number of sets of words from line 740 and assign it to TT in line 310.

```
 10 REM  WHODUNNIT
 20 REM  COPYRIGHT  (C)  G.LUDINSKI  1983
 30 MODE  5
 40 DIM  WD$(30,3),N(5),X(4),Y(4),P1$(2
),P2$(2)
 50 X(1)=0:Y(1)=7:X(2)=10:Y(2)=7:X(3)=
0:Y(3)=14:X(4)=10:Y(4)=14
 60 SC=0:TU=0
 70 GOTO  200
 80 REM
 90 REM  U.D.G.  CALCULATOR
100 REM
110 DEF  FNB(N$)
120 TF=0
130 FOR  L=0  TO  7
140 TF=TF+(2^L)*VAL(MID$(N$,8-L,1))
150 NEXT  L
160 =TF
170 REM
180 REM  SHAPES  OF  MEN
190 REM
200 BD=FNB("001111100"):LG=FNB("001110
00")
210 VDU  23,224,FNB("00010000"),FNB("00
111000"),FNB("00111000"),FNB("00010000")
,BD,BD,BD,BD
220 VDU  23,225,BD,BD,LG,LG,LG,LG,LG,LG
230 VDU  23,226,0,0,0,0,FNB("00001111")
,FNB("01011111"),255,255
240 VDU  23,227,0,0,0,0,FNB("11000001")
,255,255,255
250 M$=CHR$(224)+CHR$(10)+CHR$(8)+CHR$
(225):V$=CHR$(226)+CHR$(227)
260 B=128:BL=0:RD=1:YE=2:WH=3
270 COLOUR  B+BL:COLOUR  WH
280 REM
290 REM  READ  WORDS
300 REM
310 TT=25
320 FOR  II=1  TO  TT
330   READ  WD$(II,1),WD$(II,2),WD$(II,
3)
340 NEXT  II
350 TIME=0
360 REM
370 REM  UPRIGHT  MAN  AND  GUN  SHOT
380 REM
390 CLS:COLOUR  B+BL:COLOUR  WH:PRINT  TA
B(0,20);M$
400 *FX15,0
410 ENVELOPE1,1,0,0,0,100,20,10,126,-5
0,-1,-76,126,126:SOUND0,1,6,255
420 FORI=1TO4
430   N(I)=RND(TT)
440 NEXTI
450 IF  N(1)=N(2)  OR  N(1)=N(3)  OR  N(1)=
N(4)  OR  N(2)=N(3)  OR  N(2)=N(4)  OR  N(3)=N
(4)  THEN  GOTO390
460 REM
470 REM  DRAW  PEOPLE  AND  NAMES
480 REM
490 TU=TU+1
500 SN=RND(4)
510 FORI=1TO2
520   P1$(I)=WD$(N((2*I)-1),RND(3)):P2
$(I)=WD$(N(2*I),RND(3))
530   COLOUR  WH:PRINTTAB(0,7*I);M$;:CO
LOUR  YE:PRINT"  Mr  ";P1$(I);:COLOUR  WH:PR
INTTAB(10,7*I);M$;:COLOUR  YE:PRINT"  Mr  "
;P2$(I)
```

```
 540     PRINTTAB(0,(7*I)+3);2*I-1;TAB(10
,(7*I)+3);2*I
 550   NEXTI
 560   VC$=WD$(N(SN),RND(3)):IF VC$=P1$(1
) OR VC$=P2$(1) OR VC$=P1$(2) OR VC$=P2$
(2) THEN 560
 570   MU$=" "+VC$+" "
 580   PRINTTAB(0,21)"    "
 590   COLOUR WH:PRINTTAB(0,21);V$;:COLOU
R B+WH:COLOUR WH:PRINT TAB(10,20);MU$;:C
OLOUR RD:PRINT TAB(10,21);MU$;:COLOUR WH
:PRINT TAB(10,22);MU$:COLOUR B+BL
 600   K=1
 610   I$=INKEY$(100):IF I$="" AND K<5 TH
EN PRINTTAB(X(K),Y(K))" "TAB(X(K),Y(K)+1
)" ":K=K+1:GOTO610
 620   REM
 630   REM POLICE SIREN
 640   REM
 650   IF VAL(I$)=SN THEN FOR K=1 TO 4:SO
UND 1,-15,109,10:SOUND 1,-15,101,10:NEXT
:SC=SC+1
 660   REM
 670   REM SCORE
 680   REM
 690   COLOUR WH:PRINTTAB(0,1);SC;" solve
d"TAB(10,1);TU;:IF TU > 1 THEN PRINT " m
urders" ELSE PRINT " murder "
 700   COLOUR WH:PRINT TAB(0,28)"Press Re
turn":INPUT RG$:GOTO 390
 710   REM
 720   REM DATA
 730   REM
 740   DATA Big,Small,Large,Fat,Thin,Plum
p,Quiet,Loud,Noisy,Wet,Dry,Damp
 750   DATA Hot,Cold,Warm,A,Z,Alpha,Good,
Bad,Nice,Mad,Crazy,Sane,Dull,Shiny,Matt,
See,Hear,Feel,Old,Young,Aged,Laugh,Cry,W
eep,Kid,Child,Adult,Am,Pm,Noon,Bird,Fowl
,Beast,Snow,Ice,Sleet,Beer,Lager,Cider
 760   DATA King,Queen,Jack,Give,Take,Gra
sp,BBC,ITV,Ch. 4,Ill,Well,Sick,Gym,PT,PE
,Red,Amber,Green,Load,Save,Chain,Eye,I,A
ye
```