



Can you crack the secret code?

Turn Grumpies into Smilies in ROLAND WADDILOVE's guessing game

FIVE Grumpies are standing behind a wall. Can you find out what colours they are and their order? You can choose how many different colours the Grumpies may be and you can have up to 10 guesses.

Pressing one of the number keys places a coloured Smiley and DEL will delete the last one. When you have entered a row of five Smilies your guess is marked. A black peg is given for the right colour in the right place, and a white peg for the right colour in the wrong place.

Many of you will have guessed the game it is based on. If you haven't it is very easy to learn and great fun to play, but frustrating when you can't work out the code!

The program is fully structured with no confusing GOTOs. Lines 30 to 50 run the program, calling the various subroutines when necessary. Each of the subroutines has been labelled with a REM statement and they are separated by lines with a single colon.

| 1 2 3 4 5 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | DEL |
|-----------|---|---|---|---|---|---|---|---|---|---|-----|
| 10 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |
| 60 | | | | | | | | | | | |
| 70 | | | | | | | | | | | |
| 80 | | | | | | | | | | | |
| 90 | | | | | | | | | | | |
| 00 | | | | | | | | | | | |



VARIABLES

| | |
|------------------|--------------------------------------|
| code (S) | The secret code. |
| guess (M) | Your guess. |
| markedguess (S) | Whether your guess has been marked. |
| markedanswer (S) | Whether your answer has been marked. |
| level | Used in loops. |
| guesses | Number of colours. |
| correct | Number of guesses made. |
| is | Number correct. |
| is | Key pressed. |
| is | General variable. |

```

10 REM ** Secret Code **
20 REM *by R.A. Smithover
30 REM :
40 DIM S(14)
50 DIM G
60 DIM L(4)
70 DIM C(12)
80 DIM M(14) DIM A(14) DIM R(14)
90 DIM correct% AND guesses%
100 DIM M0 M1 M2 M3 M4
110 DIM
120 DIM C0 C1 C2
130 DIM
140 DIM key%
150 DIM i% j% k% l%
160 DIM
170 :
180 REM ** initialize **
190 DIM S(14) = "12345678901234"
200 DIM L(4) = "1,2,1,1"
210 DIM C(12) = "1,2,1,1,1,1,1,1,1,1,1,1"
220 DIM M(14) = "1,2,1,2,1,2,1,2,1,2,1,2,1,2"
230 DIM M0 M1 M2 M3 M4 = ""
240 DIM correct% guesses%
250 DIM i% j% k% l%

```

```

51. as: intname (S)
260 FOR i% = 0 TO 13
270 M0(i%) = i%
280 NEXT
290 i% = 0
300 RETURN
310 :
320 DIM i% j% k% l% m% n% o% p% q% r% s% t%
330 :
340 REM ** print board **
350 CLS: OPEN "RESTORE" INPUT
360 PRINT " Secret Code" PRINT
370 FOR i%
380 FOR j% = 0 TO 13: STEP 1: PRINT i% j%
390 NEXT j%
400 FOR i% = 0 TO 13: DIM M0(i%) S(i%)
410 RESTORE "CONVERSION" DIM M1 M2 M3 M4
420 NEXT
430 DIM S0 S1 S2 S3 S4
440 FOR i% = 0 TO 13: PRINT " ? ? ? ? "
450 NEXT
460 LOCATE 1, 1: FOR i% PRINT "key":
470 FOR i% = 0 TO level
470 FOR i% PRINT i%: DIM M(i%)

```

SUBROUTINES

- Initialize**
Defines the tone and volume envelopes and the character for the peg. Clears the arrays, sets the colours and switches off the auto repeat.
- Print board**
Characters for the board are in data statements. Just the keys and colours used.
- Read & Print**
Called to read the data statements and print the board.
- Set variables**
Set guess, correct, and level.
- Set code**
Make up the secret code.
- Input guess**
Type in your guess placing \$'s if you are playing Smiley's. Delete the last Smiley if DEL is pressed.
- Check guess**
Mark your guess, and if it is correct, ... if the right colour is in the right place.
- Award blank peg**
... if the right colour is in the wrong place.
- Game over**
Print the message and make an appropriate sound. Show the secret code. Ask if you want to play again.
- Instructions**
Print the instructions.

```

480 NEXT
490 RETURN
500 :
510 DIM S0 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13
520 DIM M0 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13
530 DIM C0 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12
540 DIM M0 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13
550 DIM M0 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13
560 DIM M0 M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13
570 :
580 REM ** read & print **
590 FOR i% = 0 TO 13
600 FOR j% = 0 TO 13
610 READ i%: PRINT M0(i%)
620 NEXT
630 RETURN
640 :
650 REM ** set variables **
660 guesses% = correct% + level%
670 CLS: FOR i% = 0 TO 13: DIM M(i%)
680 PRINT "How many colours?"
690 LOCATE 3, 1: PRINT "Press 4 - 7"

```