

# Binary

This game tests your skills in binary-to-decimal and decimal-to-binary conversion. You are given twenty conversion trials. Numbers are chosen randomly and your score is printed at the end. The answer to any conversion you miss is displayed; if the next conversion is presented, you may assume you got the previous one correct.

There are several possible modifications for this program such as timing the response, allowing the user to specify the number range, checking for duplicate numbers, or extending it to other bases.

This program was written by Ted Park of Pacific Union College. It originally appeared in *Creative Computing*, Mar/Apr 1975.

BINARY  
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```

      cls
HIT ENTER TO START? _
BINARY: 00111  DECIMAL: ? 7
BINARY: 00111  DECIMAL: ? 7
BINARY: 11100  DECIMAL: ? 27  CORRECT ANSWER: 28
BINARY: 01000  DECIMAL: ? 8
BINARY: 11110  DECIMAL: ? 32  CORRECT ANSWER: 30
BINARY: 00101  DECIMAL: ? 5
BINARY: 01111  DECIMAL: ? 15
BINARY: 00101  DECIMAL: ? 5
BINARY: 00001  DECIMAL: ? 1
BINARY: 01011  DECIMAL: ? _

      cls

DECIMAL: 31  BINARY: ? 11111
DECIMAL: 11  BINARY: ? 01011
DECIMAL: 30  BINARY: ? 11110
DECIMAL: 26  BINARY: ? 11010
DECIMAL: 6   BINARY: ? 00110
DECIMAL: 15  BINARY: ? 01100  CORRECT ANSWER: 01111
DECIMAL: 9   BINARY: ? 01001
DECIMAL: 14  BINARY: ? 01110
DECIMAL: 30  BINARY: ? 11110
DECIMAL: 27  BINARY: ? 10001  CORRECT ANSWER: 11011
  
```

YOUR SCORE: 75 %

TRY AGAIN? \_

```

      cls
  
```

```

10 CLS: PRINT@413, "BINARY"
20 PRINT: PRINT TAB(7) "COPYRIGHT 1979 CREATIVE COMPUTING MORRISTOWN, NJ"
30 PRINT@960, " " : INPUT "HIT ENTER TO START"; I$
40 CLS
50 B$="01"
60 T0=20
70 FOR I=1 TO 10
80 GOSUB 400
90 P0=PEEK(16416)+PEEK(16417)*256-15360
100 PRINT "BINARY: ";
110 FOR J=1 TO 5
120 PRINT MID$(B$,B(J)+1,1);
130 NEXT J
140 PRINT " DECIMAL: ";
150 INPUT A
160 IF A=D THEN 190
170 PRINT@P0+38, "CORRECT ANSWER: "; D
180 T0=T0-1
190 REM
200 NEXT I
210 FOR A=1 TO 500: NEXT CLS
220 FOR I=1 TO 10
230 GOSUB 400: P0=PEEK(16416)+PEEK(16417)*256-15360
240 PRINT "DECIMAL: "; D;
250 PRINT " BINARY: ";
260 I$="00000"
270 INPUT I$
280 IF LEN(I$)>10 THEN 350
290 I$="00000"+I$
300 I$=RIGHT$(I$,5)
310 FOR J=1 TO 5
320 IF MID$(B$,B(J)+1,1)<>MID$(I$,J,1) THEN 350
330 NEXT J
340 GOTO 400
350 PRINT@P0+39, "CORRECT ANSWER: ";
360 FOR J=1 TO 5
370 PRINT MID$(B$,B(J)+1,1);
380 NEXT J: PRINT
390 T0=T0-1
400 REM
410 NEXT I
420 PRINT
430 PRINT
440 PRINT "YOUR SCORE: "; INT(T0/.2+5); "%
450 PRINT
460 INPUT "TRY AGAIN"; ANS$
470 IF LEFT$(ANS$,1)="Y" THEN CLS: GOTO 50 ELSE END
480 D=0
490 FOR J=1 TO 5
500 B(J)=INT(RND 0)+5)
510 D=D*2+B(J)
520 NEXT J
530 RETURN
  
```