PROGRAM: ROGUE 1.0
Description: Random Octave Generator musical Unit Ensemble
Date: November 22, 2009
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Language: Apple BASIC
Platform: AppleWin Emulator

AppleWin is a Apple II emulator for the Microsoft Windows operating system. I used this emulator because of my familiarity with BASIC, the programming language resident on this vintage PC. AppleWin is a emulator written by Tom Charlesworth. AppleWin is now hosted at BerliOS and is distributed under the terms of the GNU General Public License. AppleWin is available for download at http://applewin.berlios.de/

ROGUE DESCRIPTION

This program takes the input from another program that has generated a scale. The program then randomly determines notes that fall into 4 measures of 4 tracks. The notes will be broken up into 4 track listings; bass, mid, high & chord. Bass, mid & high are three note generators based off of conditions. Chord is a summing of key notes from bass, mid & high and then random generated. One condition that certainly determines the outcome, is that no two notes are the same at the key points.
If this is true then the program regenerates new notes to satisfy the condition. Key points are divisions of two, based on the max number of notes allowed a track. Bass has a max number of notes equal to 4, mid is 8 & high is 16 notes per track maximum. Octaves are fixed but randomly determined and velocity is grouped into two random generators.

Notes and values presented by ROGUE are entered into a sequencer by hand.

ROGUE PROGRAM LISTING

```
10    ML = 1
20    ? "ENTER THE NOTES IN THE SCALE"
30    ? "ENTER BLANK OR DOUBLE FOR 8TH NOTE"
40    ? " "
50    INPUT " NOTE 1 = "; N1$
60    INPUT " NOTE 2 = "; N2$
70    INPUT " NOTE 3 = "; N3$
80    INPUT " NOTE 4 = "; N4$
90    INPUT " NOTE 5 = "; N5$
100   INPUT " NOTE 6 = "; N6$
110   INPUT " NOTE 7 = "; N7$
120   INPUT " NOTE 8 = "; N8$
130   ? " "
140   ? "BASS TRACK"
150   ? "MEASURE: " ML "TRACK 1"
160   ? "OCTAVE#    NOTE    VELOCITY"
170   ? "+-------------------------+"
175   F = 0
180   FOR M = 1 TO 4
190   N = INT ( 8 * RND (1)) + 1
200   IF N = F THEN 180
```

```
210   IF N = 1 THEN BN$ = N1$ : GOTO 300
220   IF N = 2 THEN BN$ = N2$ : GOTO 300
230   IF N = 3 THEN BN$ = N3$ : GOTO 300
240   IF N = 4 THEN BN$ = N4$ : GOTO 300
250   IF N = 5 THEN BN$ = N5$ : GOTO 300
260   IF N = 6 THEN BN$ = N6$ : GOTO 300
270   IF N = 7 THEN BN$ = N7$ : GOTO 300
280   IF N = 8 THEN BN$ = N8$

300   IF M = 1 THEN B1$ = BN$
310   IF M = 1 THEN CB1$ = BN$
320   IF M = 2 THEN B2$ = BN$
330   IF M = 3 THEN B3$ = BN$
340   IF M = 3 THEN CB2$ = BN$
350   IF M = 4 THEN B4$ = BN$
360   O$ = "OCTAVE 3"
370   GOSUB 2000
380   ? O$"    "BN$"    "V
385   F = N
390   NEXT M
395   ? " "
400   INPUT "READY FOR THE MID TRACK ";YN$
410   ? "MID TRACK"
420   ? "MEASURE: " ML "TRACK 2"
430   ? "OCTAVE#    NOTE    VELOCITY"
440     ? "+-------------------------+"
450   F = 0
460   FOR M = 1 TO 8
470   N = INT (8 * RND (1)) + 1
480   IF N = 1 THEN MN$ = N1$ : GOTO 570
490   IF N = 2 THEN MN$ = N2$ : GOTO 570
500   IF N = 3 THEN MN$ = N3$ : GOTO 570
510   IF N = 4 THEN MN$ = N4$ : GOTO 570
520   IF N = 5 THEN MN$ = N5$ : GOTO 570
530   IF N = 6 THEN MN$ = N6$ : GOTO 570
540   IF N = 7 THEN MN$ = N7$ : GOTO 570
550   IF N = 8 THEN MN$ = N8$
570   IF M = 1 THEN H$ = MN$ : IF H$ = B1$ THEN GOTO 470
580   IF M = 3 THEN H$ = MN$ : IF H$ = B2$ THEN GOTO 470
590   IF M = 5 THEN H$ = MN$ : IF H$ = B3$ THEN GOTO 470
600   IF M = 7 THEN H$ = MN$ : IF H$ = B4$ THEN GOTO 470
610   IF M = 1 THEN M1$ = MN$
620   IF M = 1 THEN CM1$ = MN$
630   IF M = 2 THEN M2$ = MN$
640   IF M = 3 THEN M3$ = MN$
650   IF M = 4 THEN M4$ = MN$
660   IF M = 5 THEN M5$ = MN$
670   IF M = 5 THEN CM2$ = MN$
680   IF M = 6 THEN M6$ = MN$
690   IF M = 7 THEN M7$ = MN$
700   IF M = 8 THEN M8$ = MN$
710   O = INT (3 * RND (1)) + 1
720   IF O = 2 THEN GOTO 710
730   IF O = 1 THEN O$ = "OCTAVE 4"
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```
740   IF O = 3 THEN O$ = "OCTAVE 5"
750   GOSUB 2100
760   ? O$"    "MN$"    "V
770   F = N
780   NEXT M
790   ? " "
800   INPUT "READY FOR THE HIGH TRACK ";YN$
810   ? "HIGH TRACK"
820   ? "MEASURE: " ML "TRACK 3"
830   ? "OCTAVE#    NOTE    VELOCITY"
840   ? "+-------------------------+"
850   F = 0
860   FOR M = 1 TO 16
870   N = INT (8 * RND (1)) + 1
880   IF N = 1 THEN HN$ = N1$ : GOTO 970
890   IF N = 2 THEN HN$ = N2$ : GOTO 970
900   IF N = 3 THEN HN$ = N3$ : GOTO 970
910   IF N = 4 THEN HN$ = N4$ : GOTO 970
920   IF N = 5 THEN HN$ = N5$ : GOTO 970
930   IF N = 6 THEN HN$ = N6$ : GOTO 970
940   IF N = 7 THEN HN$ = N7$ : GOTO 970
950   IF N = 8 THEN HN$ = N8$
970   IF M = 1 THEN H$ = HN$ : IF H$ = M1$ THEN 870 : IF H$ = B1$ THEN
      870
980   IF M = 1 THEN CH1$ = HN$
990   IF M = 3 THEN H$ = HN$ : IF H$ = M2$ THEN 870
1000  IF M = 5 THEN H$ = HN$ : IF H$ = M3$ THEN 870 : IF H$ = B2$ THEN
      870
1010  IF M = 7 THEN H$ = HN$ : IF H$ = M4$ THEN 870
1020  IF M = 9 THEN H$ = HN$ : IF H$ = M5$ THEN 870 : IF H$ = B3$ THEN
      870
1030  IF M = 9 THEN CH2$ = HN$
1040  IF M = 11 THEN H$ = HN$ : IF H$ = M6$ THEN 870
1050  IF M = 13 THEN H$ = HN$ : IF H$ = M7$ THEN 870 : IF H$ = B4$ THEN
      870
1060  IF M = 15 THEN H$ = HN$ : IF H$ = M8$ THEN 870
1070  O = INT (3 * RND (1)) + 1
1080  IF O = 2 THEN GOTO 1070
1090  IF O = 1 THEN O$ = "OCTAVE 6"
1100  IF O = 3 THEN O$ = "OCTAVE 7"
1110  GOSUB 2100
1120  ? O$"    "HN$"    "V
1130  F = N
1140  NEXT M
1150  ? " "
1160  INPUT"READY FOR THE CHORD TRACK";YN$
1170  ? " "
1200  ? "CHORD TRACK"
1210  ? "MEASURE: " ML "TRACK 4"
1220  FOR M = 1 TO 6
1230  N = INT ( 8 * RND (1)) + 1
1240  IF N = 1 THEN CN$ = N1$ : GOTO
1250  IF N = 2 THEN CN$ = N2$ : GOTO
1260  IF N = 3 THEN CN$ = N3$ : GOTO
```

```
1270  IF N = 4 THEN CN$ = N4$ : GOTO
1280  IF N = 5 THEN CN$ = N5$ : GOTO
1290  IF N = 6 THEN CN$ = N6$ : GOTO
1300  IF N = 7 THEN CN$ = N7$ : GOTO
1310  IF N = 8 THEN CN$ = N8$
1330  IF M = 1 THEN CA$ = CN$ : IF CA$ = CB1$ THEN 1230 : IF CA$ = CM1$
THEN 1230 : IF CA$ = CH1$ THEN 1230
1340  IF M = 2 THEN CB$ = CN$ : IF CB$ = CA$ THEN 1230 : IF CB$ = CB1$
THEN 1230 : IF CB$ = CM1$ THEN 1230 : IF CB$ = CH1$ THEN 1230
1350  IF M = 3 THEN CC$ = CN$ : IF CC$ = CA$ THEN 1230 : IF CC$ = CB$
THEN 1230 : IF CC$ = CB1$ THEN 1230 : IF CC$ = CM1$ THEN 1230 : IF CC$ =
CH1$ THEN 1230
1360  IF M = 4 THEN CD$ = CN$ : IF CD$ = CB2$ THEN 1230 : IF CD$ = CM2$
THEN 1230 : IF CD$ = CH2$ THEN 1230
1370  IF M = 5 THEN CE$ = CN$ : IF CE$ = CD$ THEN 1230 : IF CE$ = CB2$
THEN 1230 : IF CE$ = CM2$ THEN 1230 : IF CE$ = CH2$ THEN 1230
1380  IF M = 6 THEN CF$ = CN$ : IF CF$ = CD$ THEN 1230 : IF CF$ = CE$
THEN 1230 : IF CF$ = CB2$ THEN 1230 : IF CF$ = CM2$ THEN 1230 : IF CF$ =
CH2$ THEN 1230
1390  NEXT M
```

NOTES

LINE 1330-1390 MAYBE WRITTEN MORE EASILY WITH...

```
1330  IF M = 1 THEN CA$ = CN$ : IF CA$ = CB1$ OR CA$ = CM1$ OR CA$ = CH1$
THEN 1230
1340  IF M = 2 THEN CB$ = CN$ : IF CB$ = CA$ OR CB$ = CB1$ OR CB$ = CM1$
OR CB$ = CH1$ THEN 1230
1350  IF M = 3 THEN CC$ = CN$ : IF CC$ = CA$ OR CC$ = CB$ OR CC$ = CB1$
OR CC$ = CM1$ OR CC$ = CH1$ THEN 1230
1360  IF M = 4 THEN CD$ = CN$ : IF CD$ = CB2$ OR CD$ = CM2$ OR CD$ = CH2$
THEN 1230
1370  IF M = 5 THEN CE$ = CN$ : IF CE$ = CD$ OR CE$ = CB2$ OR CE$ = CM2$
OR CE$ = CH2$ THEN 1230
1380  IF M = 6 THEN CF$ = CN$ : IF CF$ = CD$ OR CF$ = CE$ OR CF$ = CB2$
OR CF$ = CM2$ OR CF$ = CH2$ THEN 1230
1390  NEXT M

1400  ? "FIRST CHORD"
1410  ? "OCTAVE 4    "CA$ : GOSUB 2000 : ? "VELOCITY= "V
1420  ? "OCTAVE 5    "CB$ : GOSUB 2000 : ? "VELOCITY= "V
1430  ? "OCTAVE 6    "CC$ : GOSUB 2000 : ? "VELOCITY= "V
1450  ? "SECON CHORD"
1460  ? "OCTAVE 4    "CD$ : GOSUB 2000 : ? "VELOCITY= "V
1470  ? "OCTAVE 5    "CE$ : GOSUB 2000 : ? "VELOCITY= "V
1480  ? "OCTAVE 6    "CF$ : GOSUB 2000 : ? "VELOCITY= "V
1490  ? " "
1500  INPUT "DO YOU WANT TO DO IT AGAIN?";YN$
1510  ML = ML + 1
1520  IF YN$ = "Y" THEN GOTO 140
1530  END
```

GOSUBS

```
2000  V = INT (5 * RND (1)) + 1
2010  IF V = 1 THEN V = 25
2020  IF V = 2 THEN V = 50
2030  IF V = 3 THEN V = 75
2040  IF V = 4 THEN V = 100
2050  IF V = 5 THEN V = 125
2060  RETURN

2100  V = INT (127 * RND (1)) + 1
2110  IF V < 20 THEN GOTO 2100
2120  RETURN
```

This computer program will compose a random musical score by generating notes that the user must input directly into a midi sequencer or maintain a chart of the notes as they are generated. The program can run indefinitely and will continue to generate random notes until the user halts the program.

DISCLAIMER

This is my first written presentation of this program. Its main purpose is to describe my effort. This program may not be accurate to the current working program as I make changes to the code often. I will replace this PDF as I can to update it with the most current running version of my program.