```
1 C:\Users\Sapan\Downloads\Project_4P76\venv\Scripts\python.exe C:/Users/Sapan/Downloads/
   Project_4P76/main.py
 2 Press 0 for Sentiment Analysis, Press 1 for Music Generation: 1
 3 Enter 1 to retrain Music Model Enter 0 to load pre-trained music model and test on
   sample input: 1
 4 Found 590 songs in text
 6 Sample song in abc notation file:
7 X:0003
8 T:The Lads of the Village.
9 M:2/4
10 L:1/8
11 Q:1/4=104
12 I: :: ::
13 %% D ^F G A B c d e ^f q a
15 G2g>d|ecBG|a>cBG|FA`FD|G2 gd|ecBG|A>cBG|(D/G/``F/A/) G2:|
16 q>fqd|ecBG|q>fqe|a>qfd|q>fqd|ecBG|A>cBG|(D/G/)(F/A/) G2:|
17 Enter the name of folder to save music generation model data: final_music
18
19 Vectorzed music Vocabulary:
20 {'\n': 0, ' ': 1, '!': 2, '"': 3, '#': 4, '%': 5, '&': 6, "'": 7, '(': 8, ')': 9, ',': 10
    '-': 11, '.': 12, '/': 13, '0': 14, '1': 15, '2': 16, '3': 17, '4': 18, '5': 19, '6':
   20, '7': 21, '8': 22, '9': 23, ':': 24, ';': 25, '<': 26, '=': 27, '>': 28, 'A': 29, 'B
   ': 30, 'C': 31, 'D': 32, 'E': 33, 'F': 34, 'G': 35, 'H': 36, 'I': 37, 'J': 38, 'K': 39,
  L': 40, 'M': 41, 'N': 42, 'O': 43, 'P': 44, 'Q': 45, 'R': 46, 'S': 47, 'T': 48, 'U': 49
    'V': 50, 'W': 51, 'X': 52, 'Y': 53, 'Z': 54, '[': 55, '\\': 56, ']': 57, '^': 58, '_':
   59, '`': 60, 'a': 61, 'b': 62, 'c': 63, 'd': 64, 'e': 65, 'f': 66, 'g': 67, 'h': 68, 'i
   ': 69, 'j': 70, 'k': 71, 'l': 72, 'm': 73, 'n': 74, 'o': 75, 'p': 76, 'q': 77, 'r': 78,
          't': 80, 'u': 81, 'v': 82, 'w': 83, 'x': 84, 'y': 85, 'z': 86, '{': 87, '|': 88
     '}': 89, '~': 90}
21 Enter number of epochs (ideally 2000–4000)(time extensive, gpu will speed up): 3500
22 Music Generation Model Training....
23 Epoch no. 1 Loss = 4.512
24 Epoch no. 401 Loss = 1.397
25 Epoch no. 801 Loss = 0.981
26 Epoch no. 1201 Loss = 0.583
27 Epoch no. 1601 \text{ Loss} = 0.422
28 Epoch no. 2001 Loss = 0.332
29 Epoch no. 2401 Loss = 0.310
30 Epoch no. 2801 Loss = 0.292
31 Epoch no. 3201 Loss = 0.280
32 Total time for all Epochs: 3120.68 sec
33
34
35
36 Vectorzed music Vocabulary:
37 {'\n': 0, ' ': 1, '!': 2, '"': 3, '#': 4, '%': 5, '&': 6, "'": 7, '(': 8, ')': 9, ',': 10
     '-': 11, '.': 12, '/': 13, '0': 14, '1': 15, '2': 16, '3': 17, '4': 18, '5': 19, '6':
   20, '7': 21, '8': 22, '9': 23, ':': 24, ';': 25, '<': 26, '=': 27, '>': 28, 'A': 29, 'B
   ': 30, 'C': 31, 'D': 32, 'E': 33, 'F': 34, 'G': 35, 'H': 36, 'I': 37, 'J': 38, 'K': 39,
   L': 40, 'M': 41, 'N': 42, '0': 43, 'P': 44, 'Q': 45, 'R': 46, 'S': 47, 'T': 48, 'U': 49
     'V': 50, 'W': 51, 'X': 52, 'Y': 53, 'Z': 54, '[': 55, '\\': 56, ']': 57, '^': 58, '_':
   59, '`': 60, 'a': 61, 'b': 62, 'c': 63, 'd': 64, 'e': 65, 'f': 66, 'g': 67,
   ': 69, 'j': 70, 'k': 71, 'l': 72, 'm': 73, 'n': 74, 'o': 75, 'p': 76, 'q': 77, 'r': 78,
   s': 79, 't': 80, 'u': 81, 'v': 82, 'w': 83, 'x': 84, 'y': 85, 'z': 86, '{': 87, '|': 88
    '}': 89, '~': 90}
38 Enter key to generate song with: Song
39 Generated music in abc notation:
40 Song.
41 M:C
42 L:1/8
43 Q:1/2=104
```

```
44 I: :: (1) :: (2) ::
 45 K:D
             ecAc|ecAc c2B|cdc fgf|ecc dcB|c cA A2c2|^c2A2 A2 dc |Bcde
 46 g|fedf
                                                                                  afed
             1]
       47
 48 X:0659
 49 T:The Rarin elew a dan Castre in the Watch.
 50 M:6/8
 51 L:1/8
 52 Q:3/8=120
 53 I: || ::
54 K:G
55 q2|d2d2 d2e2|d2B2 A2B2|d4 F2A :|
 56 c|BGG G2D|EGG EG>G|c6
 57 c|B>ged eAAeg2b|afd ede|fdd
 59 X:0255
 60 T:Quick Step South |e>dB>A G2G
 61 AB A>FD|G2>F G2A:|
 62
 63 X:0184
                                    |afqe fdec|dac
 64 T:Sam be ce fdef
                                                      BGG[]
 66 X:0663
 67 T:German Waltz.
 68 M:3/8
 69 L:1/16
 70 Q:3/8=50
 71 I: :: :| DC
 72 P:ABA % Aird uses a da capo
 73 I: :| || DC
74 K:D
75 P:A
 76 d|dAAf|fdfd
                                   |A2 F>F|G2
                                                   G>G G2 :|
 77
   q>f
            leBBG (d/c/B/A/) GB
                                   | GG
                                           (c/B/A/G/) EAA<B|G/|
 78 K:G
 79 g
        |B>GD D>EF>G| B2 c3/B//c//
80 zA |B>c c3/B//c// dD D2
                              - | !
81 "^So" d2
                  d>e f2 zf|fg fe |d<BA>G G>GGG |c>A c>d e>dc>e|d>c````A>B
                                                                              GFED | G2G2 GBdG
    |BcAF G2G2:|
 82
 83 X:0975
84 T:Life's Fuskle Tc3 E:E Minor
 85 DE | G3 A
             B ({B}d2)
 86 (\{GA\}(B>A)|d3 d f/e/|d3|]
87
88 X:1165
89 T:Quick Step,
 90 T:W.S. Wish.
91 M:C|
 92 L:1/8
 93 Q:1/2=90 "Moderato"
94 I: :: ::
95 K:G
96 D|G2G G2A|GBd g2G|ABA B2G|c2B A2G|FGE D3 |
97 ABG ABG|ABG A2B|c2B A2G|GAF G3:|
98 g2g f2f|e2e def|gag f2e|\
99 dc|BA B/c/|dBG G2:|
100
101 X:0017
102 T:The Scaplail's Strathsy.
103 M:C
104 L:1/8
```

```
File - main
105 Q:1/4=120
106 I: || ||
107 K:D
108 E|FAAB
                dAFA
                       |A2AA AA g2fe|d2G2 BcdB|{B}A4 z2
109 e2|dBGB d<Bc>e|d<BA>B
                             GABG
                                     |d>edB |\
                f2 f2 | |fefg fefg|fefg f2ga|g2e2 e/d/c/B/ |A2 A
110
      Bcd2e2
111 a3 Aish ve
112 M:2/4
113 L:1/8
114 Q:1/4=120
115 I: :: :: :|
116 K:G
117 q|dBBG|cAAF|dqfe|e2dq2|ae dcBA |
         c3 def|g2g f4 |e2g2 (ag
                                   |d2z2:|
119 P:B
              |G/B//g3/d'2c'2b2|agfe dafd|c2e Af<ga>f (g/f/e/d/) c>BA<B|(\{G\}F2)E2 D2 :
120 dBB
121 fe|d2a2 fgaf |{g}f2d2 df e^cA|fddf affd|{f}Te4 d4:|
122 a2qf e2fe|dfed c2f2|eqec d2d2|e2q>e e2 z2 |
123 %
124 [V:1] :| ||
125 K:G
126 G2 B>G d>GB>G|A2 B>d e>de>g|G2 B>B B>Gd>ec' .b.7.
127 M:C
128 L:1/8
129 Q:1/2=60 "Amoroso"
130 I: (1) :| (2) || :: ::
131 K:D
132 d2FG F2Ac|dfeq afdd |]
133
134 X:0843
135 T:Morfa Rhuddlan,
136 C:Irish.
137 M:2/4
138 L:1/8
139 Q:1/4=128
140 I: :: :|
141 K:D
142 AddB|cdeg|fddD|F2A2|BddB|cega|cecd|efga|cAB
143 =f| eaca
                  eAAf| B2cB
                                 e2`a2|a2
```