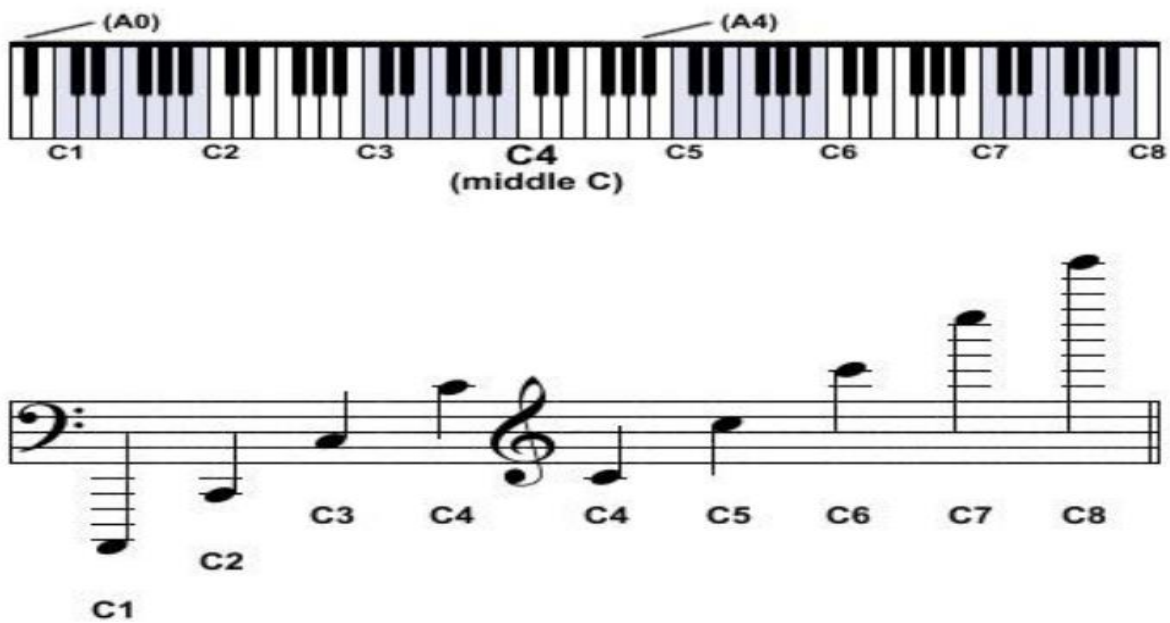# Melody Generation

1) Music Theory concepts for the Melody generation And What is Melody .

• A melody is a tune, voice or line, is a linea succession of musical tones that the listener perceives as a single entity.

• Melody is a sequence of combination of note and rets.

• Note is addiction of pitch and Duration note = pitch+Duration.

• Pitch is always indicates that how High/ Low a note is . If we have high frequency the have high pitch and if we have low frequency then low pitch .

note names: C   C♯   D   D♯   E   F   F♯   G   G♯   A   A♯   B   C

• Here we have 2 same Note name but both have different frequency so we can not identify by note-name so we use another way .
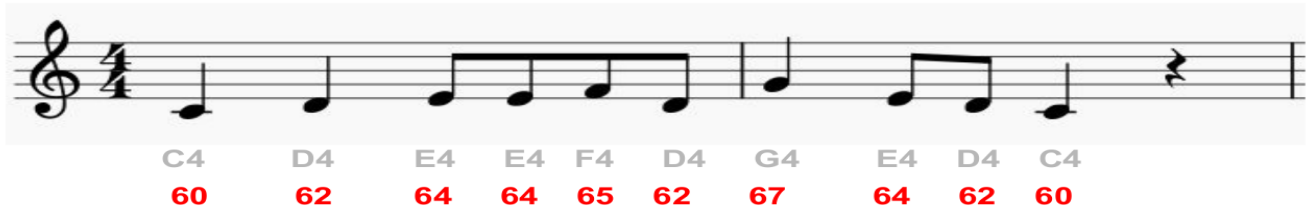
• Scientific pitch notation = note name + octave
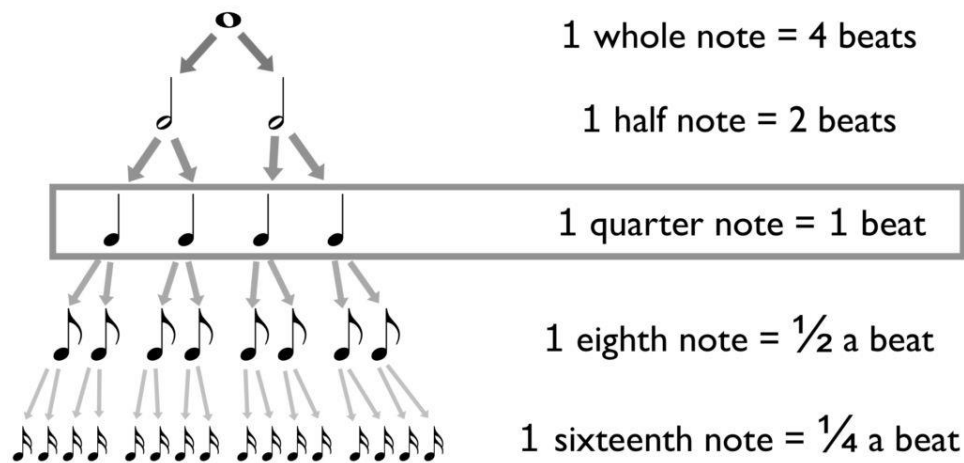
- **MIDI note notation**

• midi is a protocol to play , edit and record music

• Map note to numbers – c4=60

• below image is MIDI note notation which is all note name with MIDI numbers.

Melody with MIDI Note numbers

C4	D4	E4	E4	F4	D4	G4	E4	D4	C4
60	62	64	64	65	62	67	64	62	60

Note Values

1 whole note = 4 beats

1 half note = 2 beats

1 quarter note = 1 beat

1 eighth note = ½ a beat

1 sixteenth note = ¼ a beat

Melody with note values

1   1   0.5 0.5 0.5 0.5   1   0.5 0.5   1   1

Duration in # beats: 4   4

here above image is shows melody with note value and after 4 times 0.5 one strat line is there that is called 1 pass

and as per above image as per note value in one pass have total 4 beat and second pass have also 4 beat .

What is MIDI Notes

MIDI : Musical instrument Digital interface

   • MIDI is protocols witch allows electronic instruments and other digital musical tools to communicate with each other .

   • MIDI itself does not make sound, it is just a series of messages like "note on," "note off," "note/pitch," "pitchbend," and many more.

   • These messages are interpreted by a MIDI instrument to produce sound.

   • A MIDI instrument can be a piece of hardware (electronic keyboard, synthesizer) or part of a software environment

Advantage of MIDI :

compact -an entire song can be stored within a few hundred MIDI messages

easy to modify/manipulate notes-change pitch, duration, and other parameters without having to rerecord

change instruments-remember, MIDI only describes which notes to play, you can send these notes to any instrument to change the overall sound of the composition.