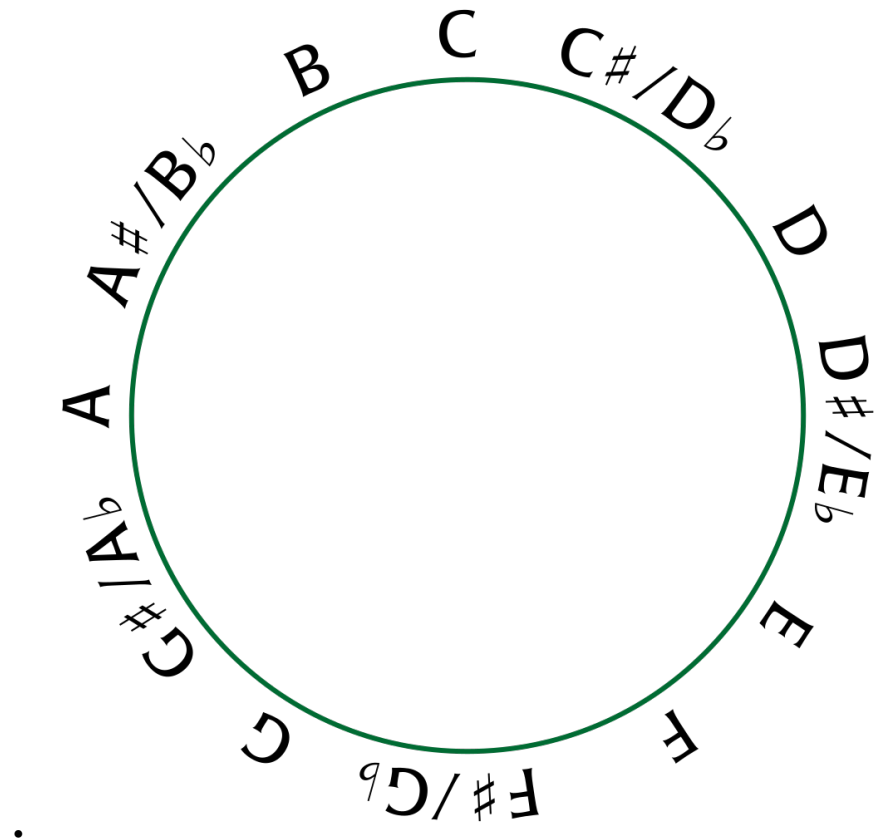# Week -1 Theory

Chromatic scale notes

- A, A#, B, C, C#, D, D#, E, F, F#, G, G#, A

Tones

- `Whole tone` : e.g. A -> B i.e. a jump of two frets.
- `Semi tone`: e.g. A -> A# i.e. a jumping to next fret.

Circle of notes

Making the major scale

Formula

- `Root + 2 tone + 1 semitone + 3 tone + 1 semitone`

All major scales

C major scale

- `C D E F G A B C`
- `Natural scale`

Db/C# major scale

- `C# D# F F# G# A# C C#`
- Converted: `Db Eb F Gb Ab Bb C Db`
- `5b scale`

D major scale

- `D E F# G A B C# D`
- `2# scale`

Eb/D# major scale

- `D# F G G# A# C D D#`
- Converted `Eb F G Ab Bb C D Eb`
- `3b scale`

E major scale

- `E F# G# A B C# D# E`
- `4# scale`

F major scale

- `F G A A# C D E F`
- Converted: `F G A Bb D E F`
- `1b scale`

Gb/F# major scale

- `F# G# A# B C# D# F F#`
- Converted: `Gb Ab Bb Cb Db Eb F Gb`
- `6b scale`

G major scale

- `G A B C D E F# G`
- `1# scale`

Ab/G# major scale

- `G# A# C C# D# F G G#`
- Converted: `Ab Bb C Db Eb F G Ab`
- `4b scale`

A major scale

- `A B C# D E F# G# A`
- `3# scale`

Bb/A# major scale

- `A# C D D# F G A A#`
- Converted: `Bb C D Eb F G A Bb`
- `2b scale`

B major scale

- `B C# D# E F# G# A# B`
- `5# scale`

Rules for major and minor scale

- No alphabets should be repeated.
- Sharps and flats will not be there in the same scale.
- All alphabtes must be present.
- If the scale does not satisfy the above then:
  - The scale is in sharp(`#`) mode.
  - To convert the scale convert it into flat(`b`) mode.

Example F# major scale

- `F# G# A# B C# D# F F#`
- Convert `#` to `b`:
    - `Gb Ab Bb Cb Db Eb F Gb`
- `F#` major scale does not exist. We call `Gb` major scale.
- `Gb` major scale is an example of `6b scale` since it has 6 flat notes.

Natural scale

- If a scale does not have any sharp or flat notes then it is called a natural scale.

Making the minor scale

Formula

- To make a minor scale, put `b` on 3rd, 6th and 7th notes of a major scale.

Rules

- In case of the converted major scales, put the `b` on sharp(`#`) mode first.
- If the scale is still not satisfying the rules, then put the `b` on the converted scale.

Example Cm scale

- C major scale
    - `C D E F G A B C`
- C minor scale
    - `C D Eb F G Ab Bb C`
- Since it has 3 flat notes we call it a `3b scale`.

Example F#m scale

- F# major scale
    - `F# G# A# B C# D# F F#`
- F# minor scale
    - `F# G# A B C# D E F#`
- Since it has 3 sharp notes we call it a `3# scale`
- F# major scale does not exists but minor does since it satisfies the rules.

All minor scales

C minor scale

- C D Eb F G Ab Bb C
- 3b scale

C# minor scale

- C# D# E F# G# A B C#
- 4# scale

D minor scale

- D E F G A Bb C D
- 1b scale

Eb/D# minor scale

- D# F Gb G# A# B Db D#
- Converted: Eb F Gb Ab Bb Cb Db Eb
- 6b scale

E minor scale

- E F# G A B C D E
- 1# scale

F minor scale

- F G Ab A# C Db Eb F
- Converted: F G Ab Bb C Db Eb F
- 4b scale

F# minor scale

- F# G# A B C# D E F#
- 3# scale

G minor scale

- `G A Bb C D Eb F G`
- `2b scale`

G# minor scale

- `G# A# B C# D# E F# G#`
- `5# scale`

A minor scale

- `A B C D E F G A`
- `Natural scale`

Bb/A# minor scale

- `A# C Db D# F Gb Ab A#`
- Converted: `Bb C Db Eb F Gb Ab Bb`
- `5b scale`

B minor scale

- `B C# D E F# G A B`
- `2# scale`

Relative major and minor scale

Major	Relative Minor	Result
C	A	Natural scale
Db/C#	Bb/A#	5b scale
D	B	2# scale
Eb/D#	C	3b scale
E	C#	4# scale
F	D	1b scale
Gb/F#	Eb/D#	6b scale
G	E	1# scale
Ab/G#	F	4b scale
A	F#	3# scale
Bb/A#	G	2b scale
B	G#	5# scale

Scale shapes

- Format `string-fret/finger`

Shape-1

```
5-3/3 4-0/0 4-2/2 4-3/3 3-0/0
3-2/2 2-0/0 2-1/1 2-3/3 1-0/0
1-1/1 1-3/3 1-5/1 1-7/3 1-8/4
```

Shape-2

```
6-8/4 5-5/1 5-7/3 5-8/4 4-5/1
4-7/3 3-4/1 3-5/1 3-7/3 2-5/1
2-6/2 2-8/4 1-5/1 1-7/3 1-8/4
```

Shape-3

```
6-8/2 6-10/4 5-7/1 5-8/2 5-10/4
4-7/1 4-9/3 4-10/4 3-7/1 3-9/3
3-10/4 2-8/2 2-10/4 1-7/1 1-8/2
```

Shape-4

```
6-8/1 6-10/3 6-12/4 5-8/1 5-10/3
5-12/4 4-9/1 4-10/2 4-12/4 3-9/1
3-10/2 3-12/4 2-10/1 2-12/3 2-13/4
```

Combination
- Practice shape-1 in downward motion then shape-2 in upward motion and then shape-3/4 in downward motion.
- Practice the above pattern in reverse also.
- Practice with metronome

Exercise-1 in D-minor

- Format `string-fret/finger`

```
4-7/3 3-7/3 3-6/2 3-7/3 2-6/2 3-7/3 3-6/2 3-7/3
1-5/1 3-7/3 3-6/2 3-7/3 1-6/2 3-7/3 3-6/2 3-7/3
1-5/1 2-8/4 2-6/2 1-5/1 2-8/4 2-6/2 2-5/1 2-8/4
2-6/2 2-5/1 3-7/3 2-6/2 2-5/1 3-7/3 3-6/2 3-7/3

3-7/3 4-7/3 5-8/4 4-7/3 5-5/1 5-8/4 6-5/1 5-5/1
5-5/1 6-5/1 6-8/4 5-5/1 4-7/3 3-7/3 2-6/2 1-5/1
1-6/2 2-8/4 2-5/1 2-8/4 3-7/3 2-6/2 4-7/3-s-4-8/3
4-5/1 4-8/4 5-7/3 4-5/1 4-7/3 3-7/3 3-6/2 2-5/1

3-7/1 1-10/4 3-7/1 1-8/2 3-7/1 1-7/1 3-7/1 2-10/4
3-7/1 2-8/2 3-7/1 2-7/1 3-9/4 3-7/2 3-6/1 3-7/2
3-5/1 1-8/4 3-5/1 1-7/3 3-5/1 1-5/1 3-5/1 2-8/4
3-5/1 2-6/2 3-5/1 2-5/1 3-7/4 3-5/2 3-4/1 3-5/2

1-5/1 2-8/4 2-6/2 2-5/1 1-6/2 1-5/1 2-8/4 2-6/2
1-8/4 1-6/2 1-5/1 2-8/4 1-10/4 1-8/3 1-6/2 1-5/1
2-6/2 1-5/1 2-5/1 1-5/1 3-7/3 1-5/1 3-6/2 1-5/1
4-7/3 1-5/1 3-6/2 1-5/1 3-7/3(sustain)
```

- -s- means slide.