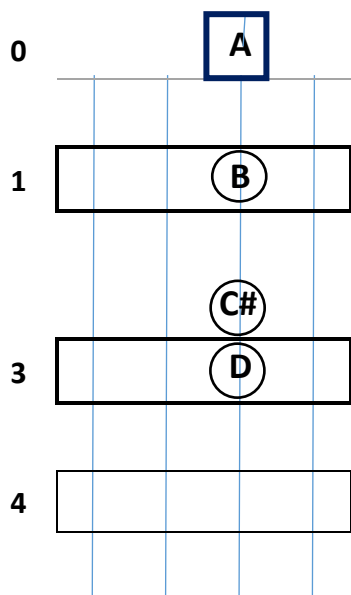


String Theory Book A

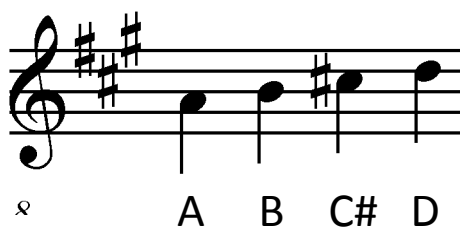
Theory Through Scales

“I’m a dot – what’s my name?”

On your A string the notes are named:



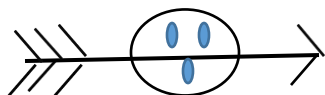
On the music staff they live here:



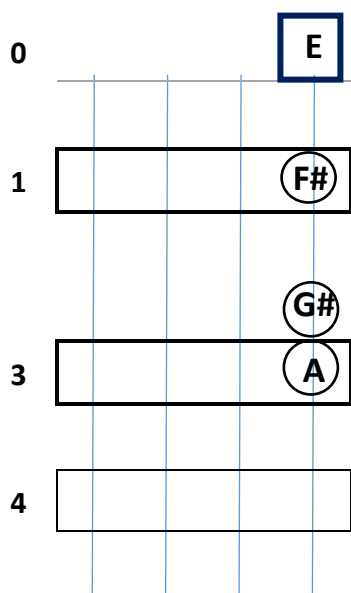
The open and 2nd finger notes are space notes:



1st and 3rd finger notes are line notes:



On the E string the notes are named:



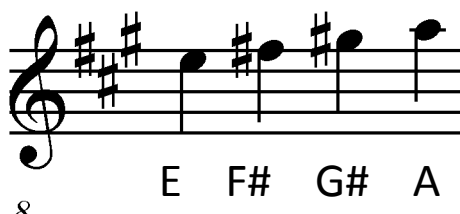
Because they go in order by the alphabet:

A B C D E F G

But in music the alphabet stops at G and starts again:

A B C D E F G A B C D E F G

On the staff the E string notes look like this:

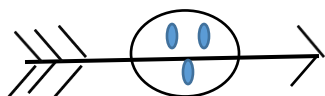


A needs a line so it is connected to the staff.
This line is called a ledger line.

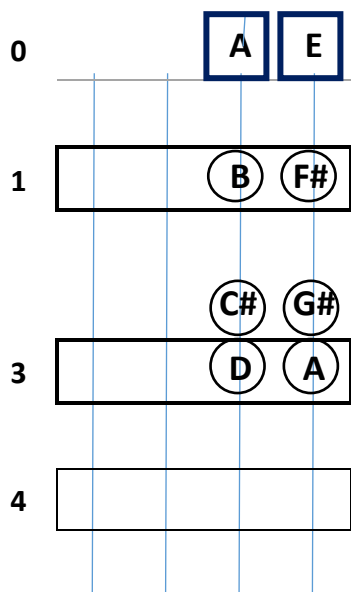
The open and 2nd finger notes are space notes:



1st and 3rd finger notes are line notes:

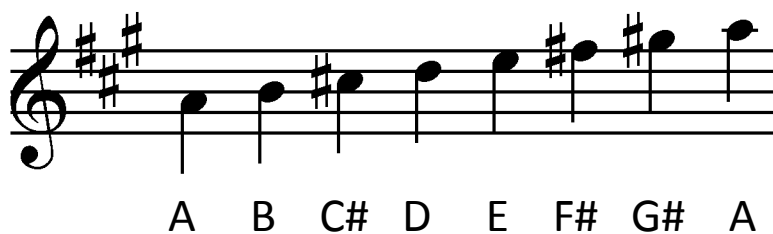


If we play both strings it sounds like a scale. It is called the A Major Scale.



Here it looks like
2 small sets of notes

On the staff:



Here it looks like
1 large set of notes

Some people say :

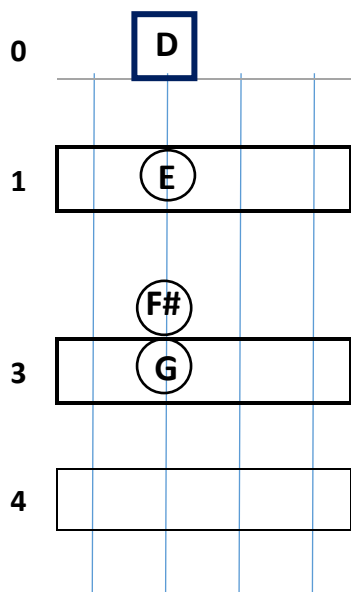
Do Re Mi Fa So La Ti Do

Some people say :

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

Either way, the first and the last are the same

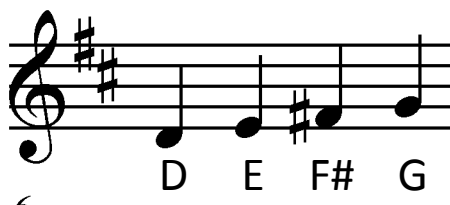
On your D string the notes are named



Because in the alphabet:

A B C D E F G A B C

On the music staff it looks like:

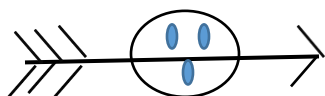


These notes are below the A string notes on the staff because the D string sound is lower than the A string sound.

The open and 2nd finger notes are space notes:

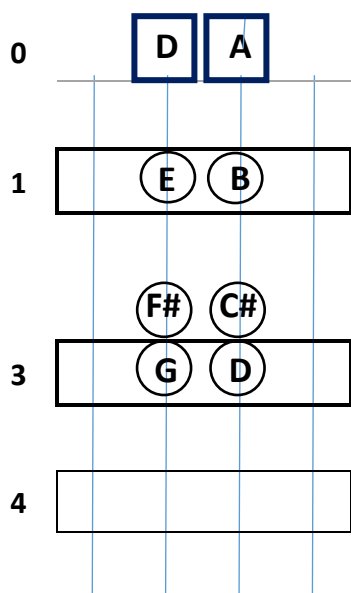


1st and 3rd finger notes are line notes:



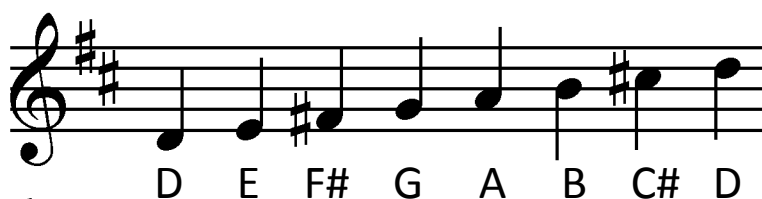
If we put the D string and A strings together it sounds like a scale.

It is called the D Major Scale



Here it looks like
2 small sets of notes

On the staff:



Here it looks like
1 large set of notes

The notes follow the musical alphabet:

A B C D E F G A B C D E F G...

Some people say :

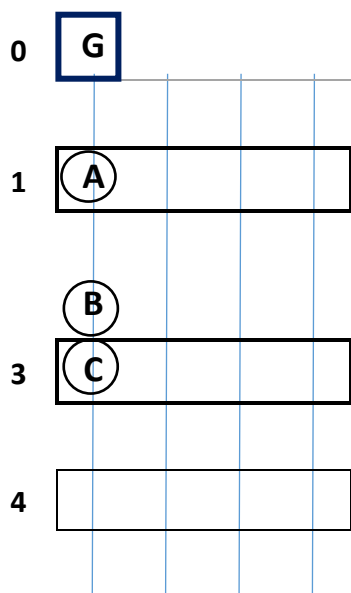
Do Re Mi Fa So La Ti Do

Some people say :

D E F# G A B C# D
└──────────────────┘

Either way, the first and the last are the same

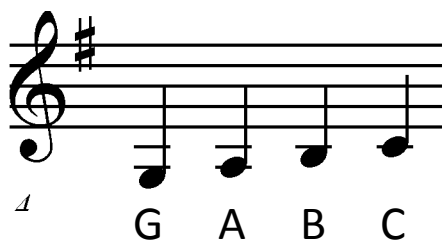
On your G string the notes are named



They are in the alphabet:

A B C D E F G A B

On the music staff it looks like:



The open and 2nd finger notes are space notes:



1st and 3rd finger notes are line notes:

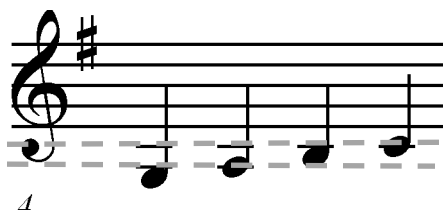


These notes need to be put on the small ledger lines so they will be connected to the staff.

Imagine that the staff has more lines:

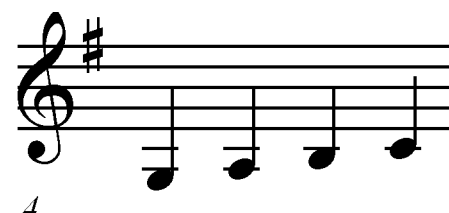


Now put the G string notes on those lines:



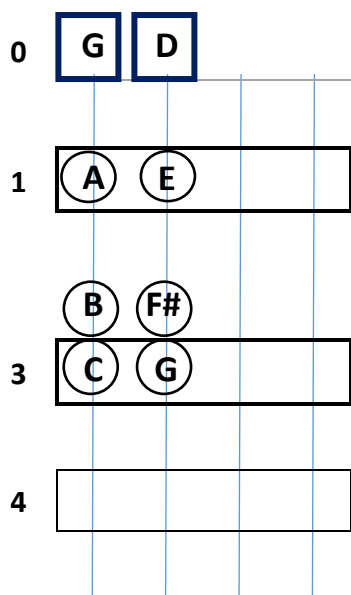
We only show the extra lines where they touch the notes under or over the staff.

The little lines are called ledger lines (ledge like shelf – the notes are on a shelf).



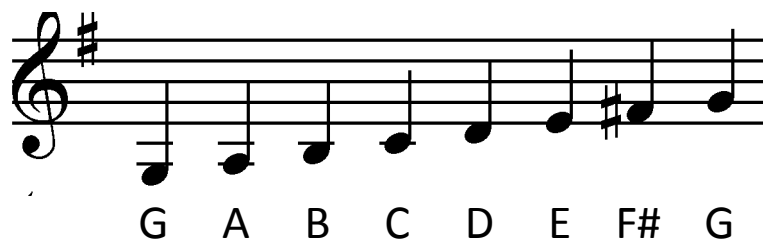
If we put the G string and D strings together it sounds like a scale.

It is called the G Major Scale



Here it looks like
2 small sets of notes

On the staff:



Here it looks like
1 large set of note

The notes follow the musical alphabet:

A B C D E F G A B C D E F G A B C...

Some people say :

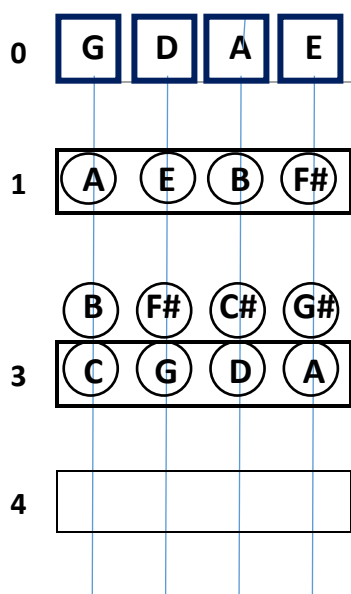
Do Re Mi Fa So La Ti Do

Some people say :

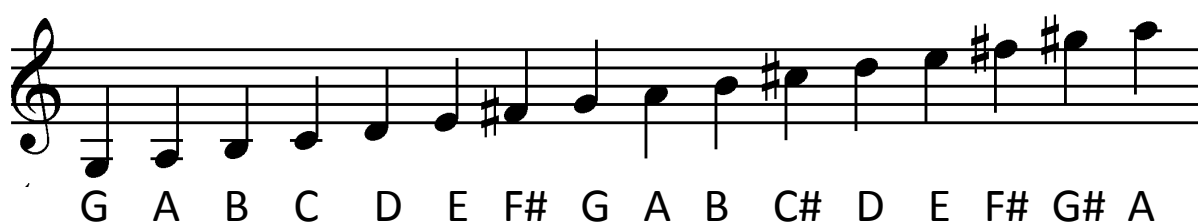
G A B C D E F# G

Either way, the first and the last are the same

We can show all four strings together – but if we play them they do not sound like one big scale.



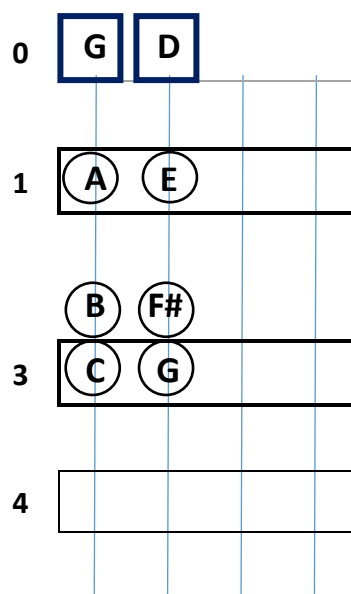
On the staff:



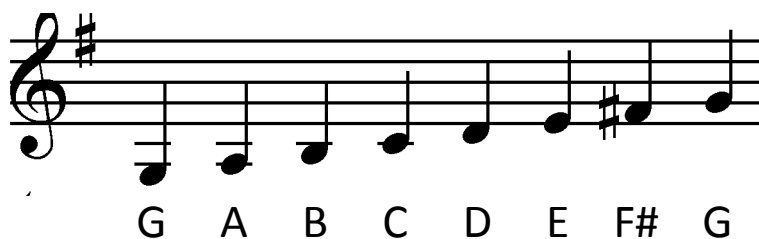
To fix this problem so we can use more strings we have to talk about sharps.

There are rules about when to use a sharp on a note and when not to use a sharp on a note.

Play the G Major Scale again:



Look at the notes on the staff:



These are the notes of the G Major Scale.

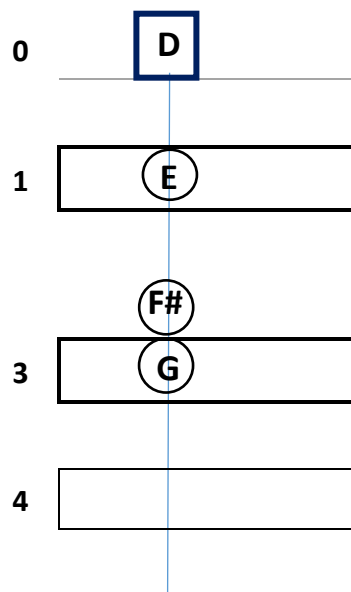
G A B C D E F# G

The notes of the G Major Scale will always be:

G A B C D E F# G

Now let's play the G Major Scale starting on a different G on our violin.

Look at the D string notes:

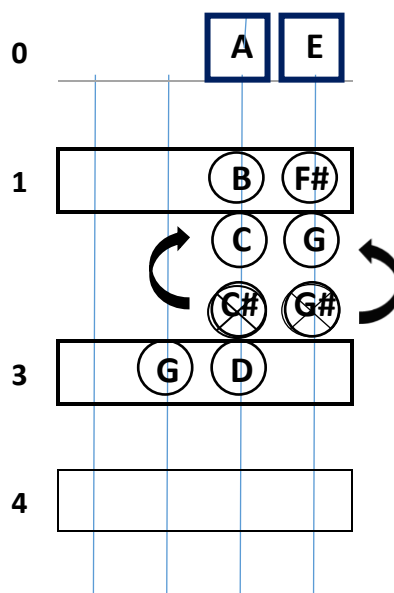


We know that 3rd finger on the D string is named G.

We can start a scale on that note and spell it the correct way for G Major:

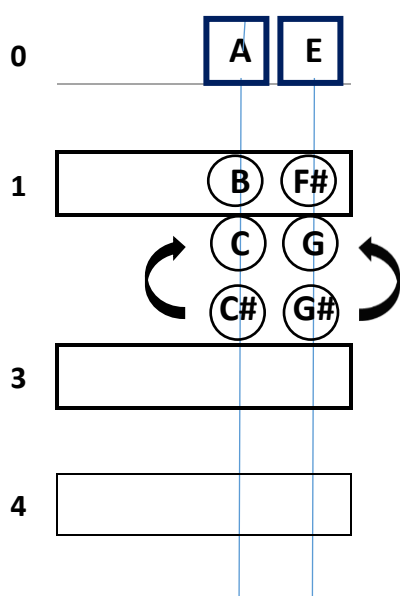
G A B C D E F# G

This will also be a G Major Scale. It will sound higher than the G Major Scale that begins on the open G string.

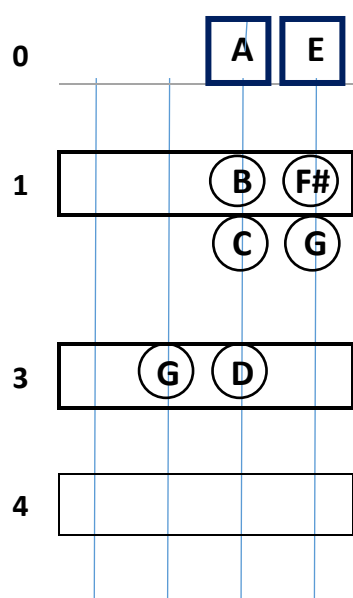


To make it sound right we had to lower the 2nd finger on both the A string and E string.

When we make the 2nd finger go lower on each string we erased a sharp.

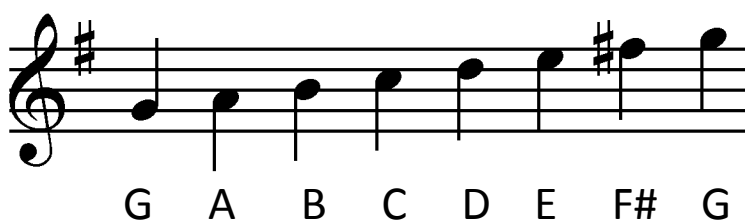


Now look without the x'd out notes:



The scale is spelled : G A B C D E F# G

On the music staff:



Open string and 2nd fingers are space notes.

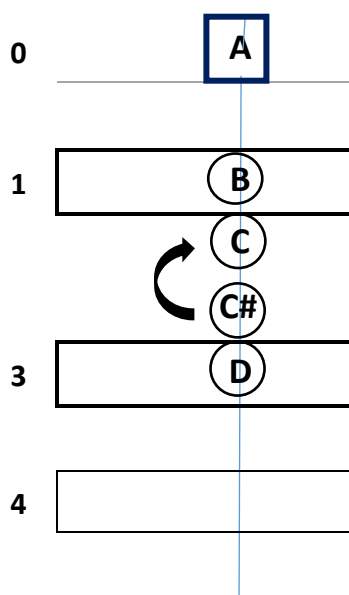
1st and 3rd fingers are line notes.

Let's look again at the 2nd finger in both the regular and low position.

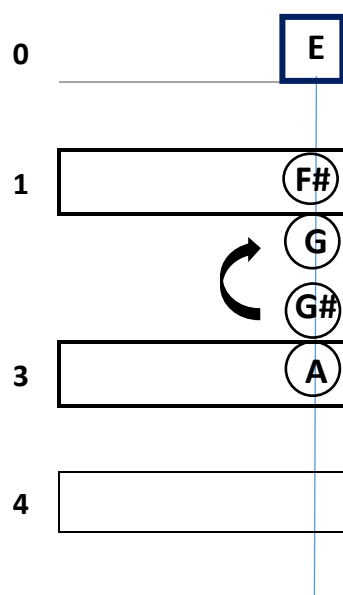
Some people call the regular 2nd finger the high 2nd finger.

Notice that the note sounds higher in the regular (high) position and that it sounds lower in the low position.

The A string 2nd fingers:



The E string 2nd fingers:



Each of these scales has eight notes:

Do	Re	Mi	Fa	So	La	Ti	Do
1	2	3	4	5	6	7	8

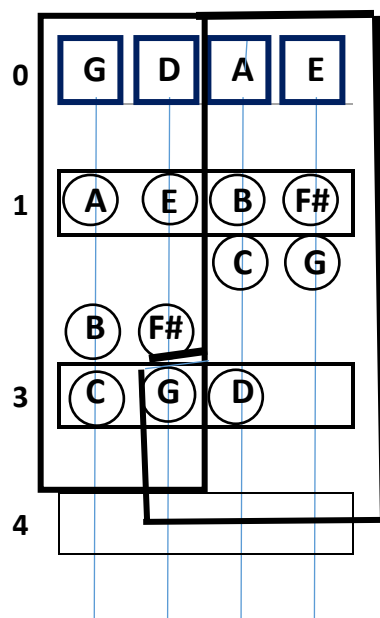
In music we have a name for this set of eight notes – one octave.

(The word octave comes from the same root as the words octagon and octopus.)

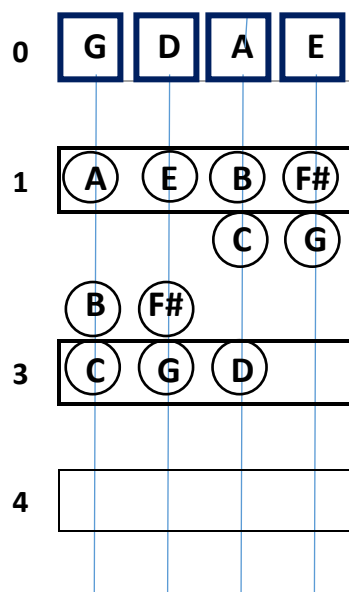
If we put two eight note scales together we call it a two octave scale.

Let's put both the low and high one octave G Major Scales together to make a gigantic two octave G Major Scale.

G	A	B	C	D	E	F#	G
						+	
						G	A
						B	C
						D	E
						F#	G



The two one octave G Major scales combined into one two octave G Major scale.



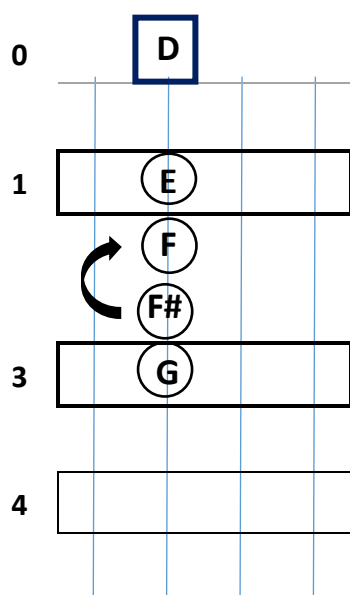
On the staff:



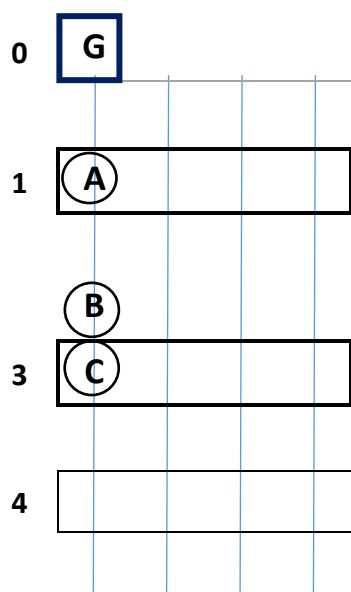
G A B C D E F# G
G A B C D E F# G

Now we can play all four strings and they sound like they match.

Here are the D String 2nd fingers:

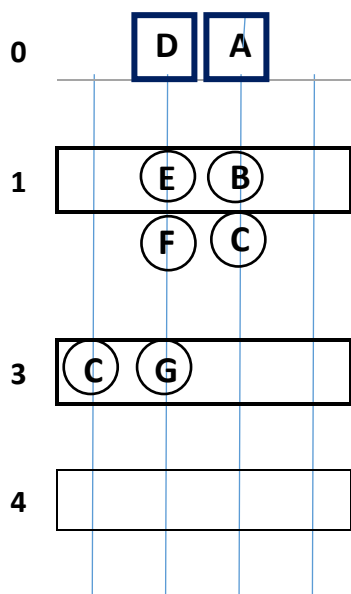


Begin a scale on the note C – use 3rd finger on the G string



A very similar scale can be made starting on 3rd finger on the G string.

To make it sound right we have to lower the 2nd finger on both the D string and the A string.



The notes follow the musical alphabet:

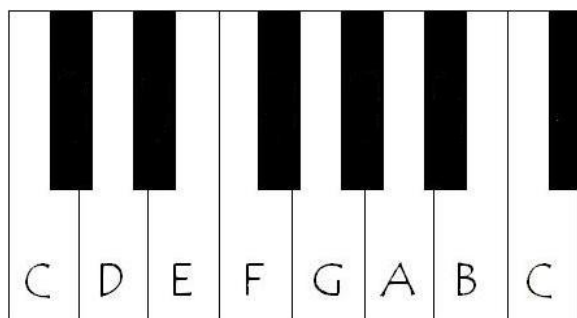
A B **C D E F G** A B C D E F G...

On the staff:



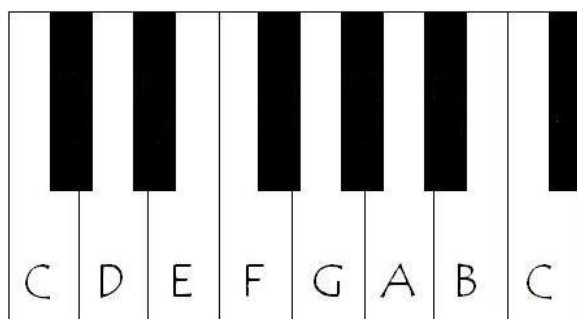
Some people like this scale best because it doesn't have any sharps in it.

If you try a piano and play only the white keys these are the notes you play.



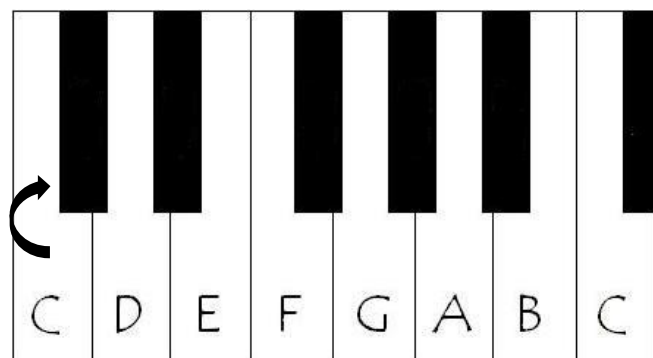
If you start on the note C on the piano the white keys will make a C Major Scale.

Note that C is under the group of two black notes.



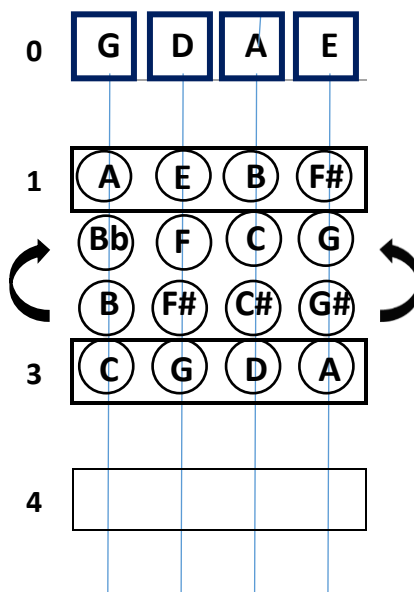
If the piano plays the C Major Scale while the violin plays the C Major Scale the sounds will match.

On the piano you make a note sharp by going up to the next black key



On the violin you make a note sharp (higher) by sliding the finger closer to your nose (up the fingerboard).

You erase a sharp (make a note lower) by sliding your finger away from your nose (down the fingerboard).



What about the G string?

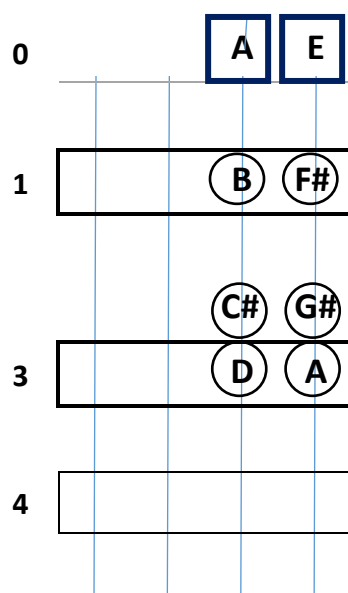
It uses a new kind of note when the 2nd finger slides down the fingerboard.

It is called a flat.

We'll learn about flats after we add some more sharps.

MORE SHARPS!

Play the A Major Scale again:



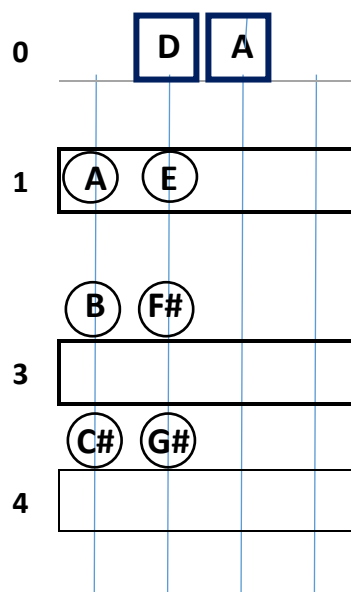
The notes follow the musical alphabet: A B C D E F G A B C D E F G...

On the staff:

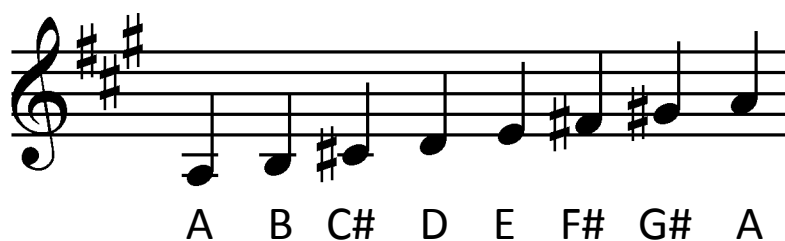


Let's play these notes starting 1st finger on the G string.

It makes a lower A Major Scale.

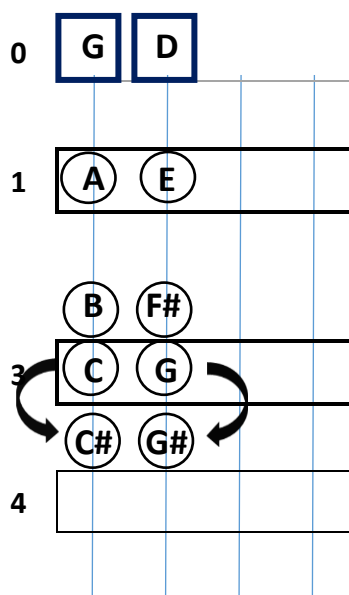


On the staff:

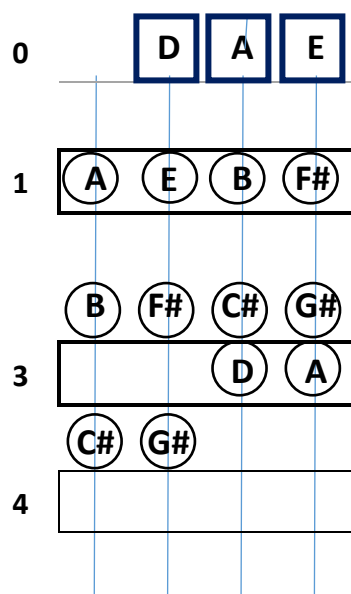


To make this scale sound right you have to slide the 3rd finger on the G string and the 3rd finger on the D string closer to your nose (higher).

This adds a sharp to the 3rd finger notes.



Now let's put the lower one octave A Major Scale and the higher one octave A Major Scale together to make the two octave A Major Scale.



On the staff:

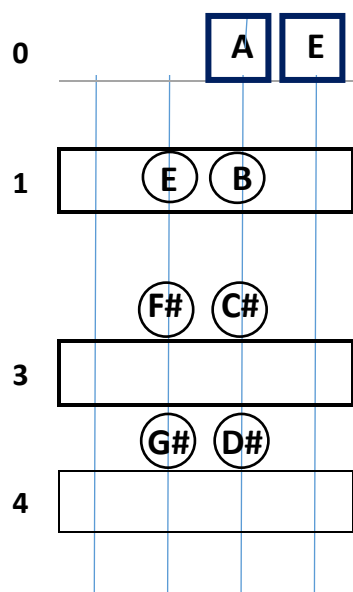


Open string and 2nd fingers are space notes.

1st and 3rd fingers are line notes.

Another scale that uses sharpened 3rd fingers is the E Major Scale.

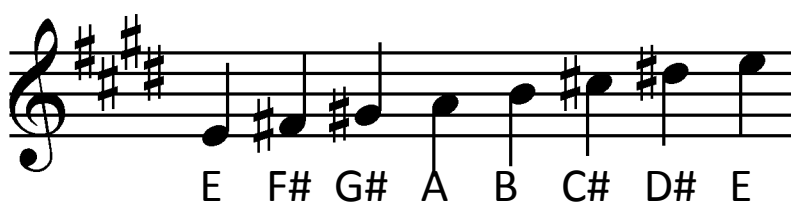
Begin a scale on the note E – use 1st finger on the D string.



The notes follow the musical alphabet:

A B C D E F G A B C D E F G...

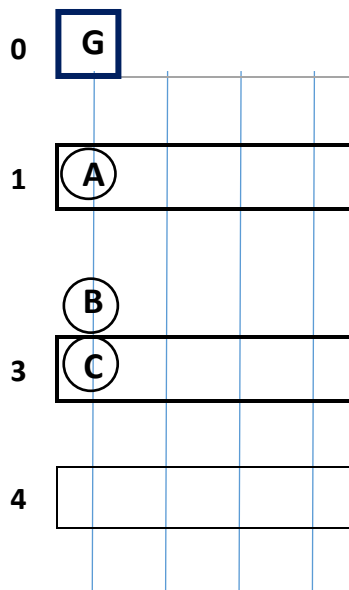
On the staff:



NOW FOR FLATS

Now let's take the 2nd finger on the G string and slide it away from your nose.
It is now a low 2nd finger

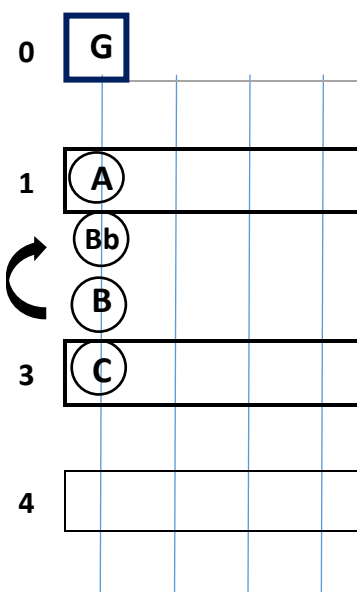
The name of 2 on G is



B not B#!

So when we slide it away
from your nose (lower)
we cannot erase a sharp because
there is no sharp to erase.

Another way to change a note is to add a flat.
Adding a flat makes a note lower.



Slide 2nd finger away from
Your nose (lower).
This adds a flat.

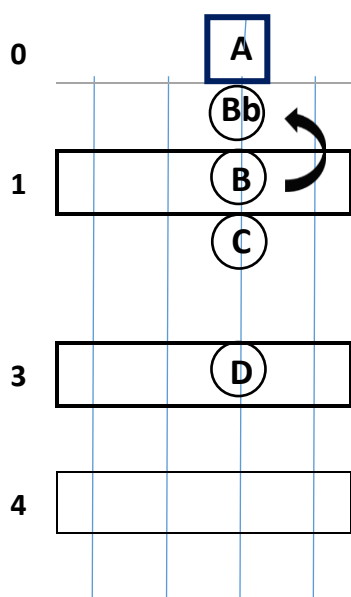
Let's play a song that uses this note. Start Go Tell Aunt Rhodey on Bb.

It sounds unusual. Most people think it sounds sad.

It uses a scale called the G Minor Scale instead of the G Major Scale.

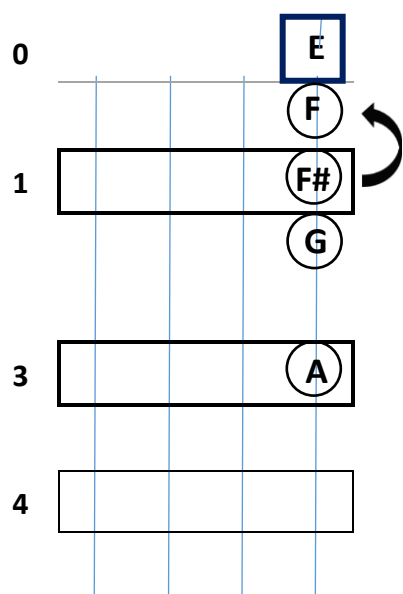


Another Bb on your instrument is on the A string.



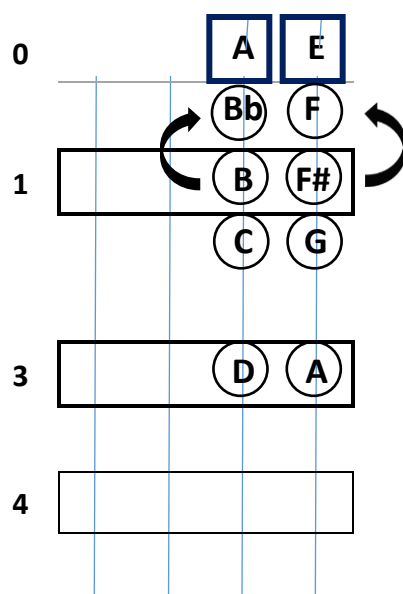
Slide 1st finger away from your nose (lower).
This adds a flat.

Let's also lower the 1st finger on the E string



Slide the 1st finger away from your nose (lower).
The regular 1st finger is named F#.
This time the low 1st finger erases a sharp.

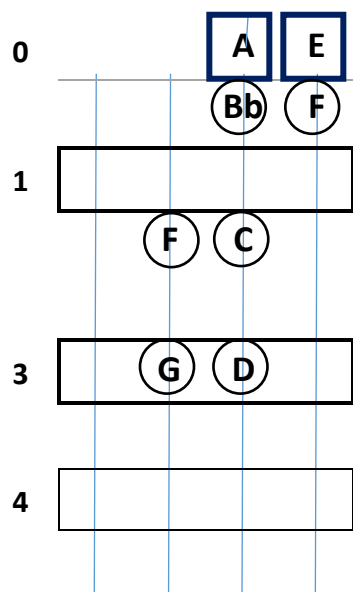
When we look at these strings together we see a new rule:



When you slide a finger away from your nose (make the note lower) you either
add a flat OR
erase a sharp. \

Let's play a scale that uses both of these low 1st fingers.

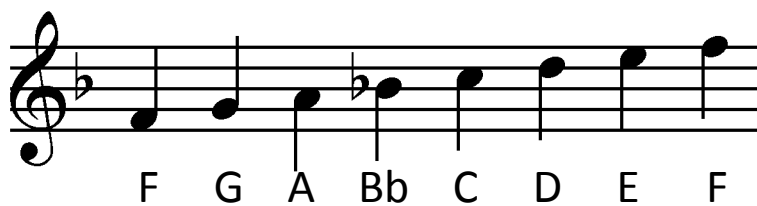
To play this scale begin on F – use low 2nd finger on the D string.



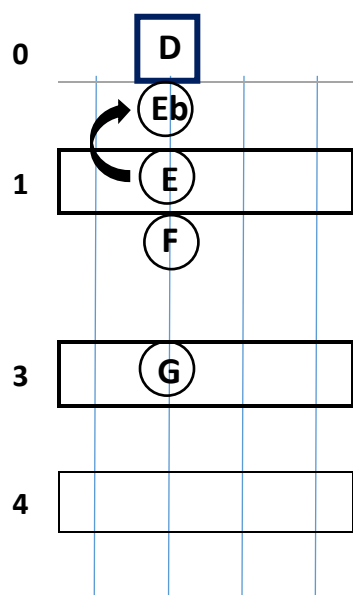
The notes follow the musical alphabet:

A B C D E F G A B C D E F G A...

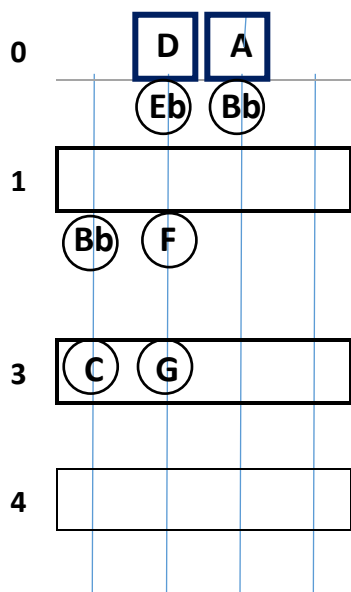
On the staff:



You can also add a flat to the 1st finger on the D string.



A scale that uses Bb and Eb begins on the low 2nd finger on the G string (Bb).



The notes follow the musical alphabet:

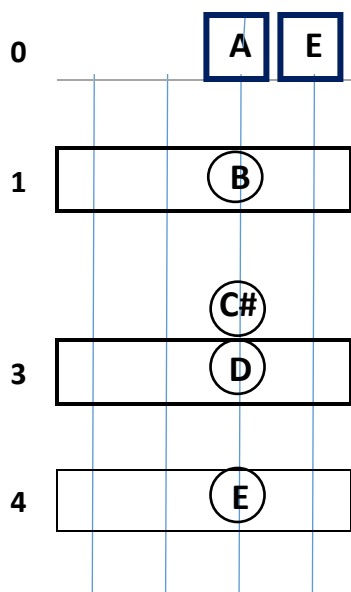
A B C D E F G A B C D E...

On the staff:

k

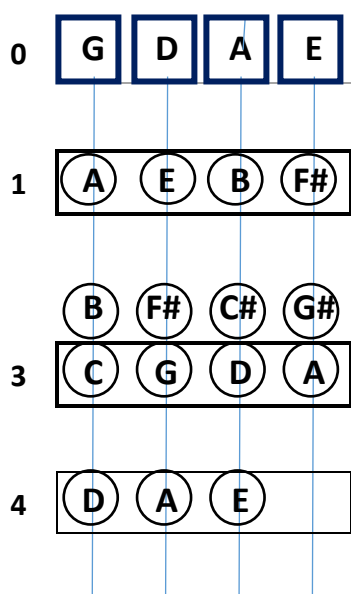


Another Eb on your instrument can be made on the A string.

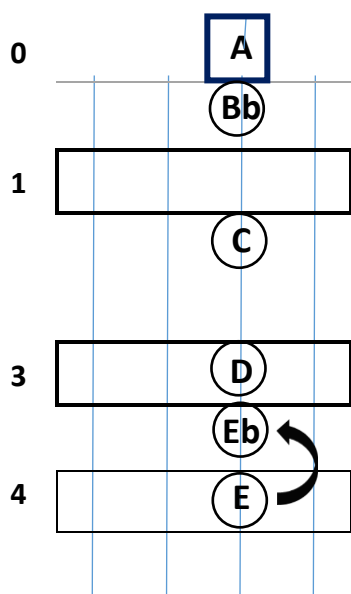


Fourth finger sounds the same
as the next open string – open E

This is true for all of the strings – 4th finger sounds the same as the next open string:



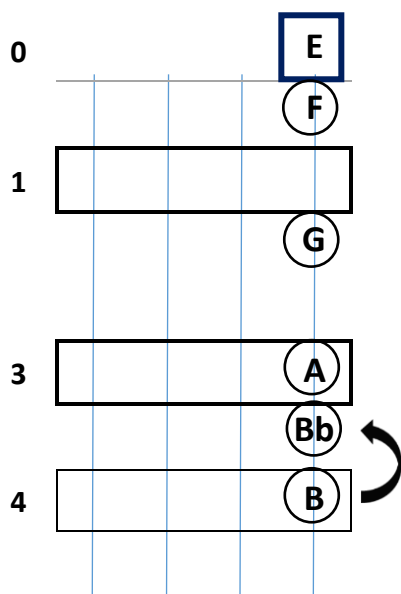
If we slide the fourth finger on the A string away from your nose (lower) it adds a flat:



Slide the fourth finger away from your nose (lower).
This adds a flat

The name of the low 4th finger on the A string is Eb.

You can also add a flat to the 4th finger on the E string.

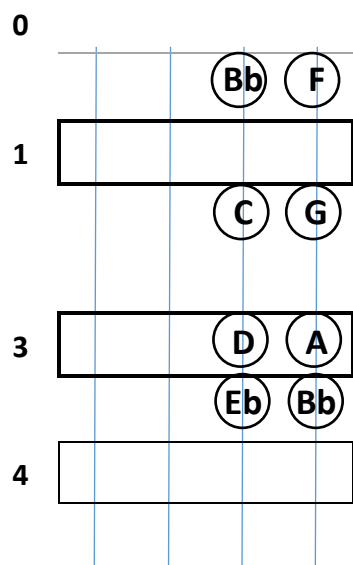


Slide the 4th finger away from your nose (lower).
This adds a flat.

The name of the low 4th finger on the E string is Bb.

The higher Bb Major Scale uses both of these low 4th fingers..

Begin the scale on Bb – use the low 1st finger on the A string.



You cannot play open E as this scale uses an Eb.

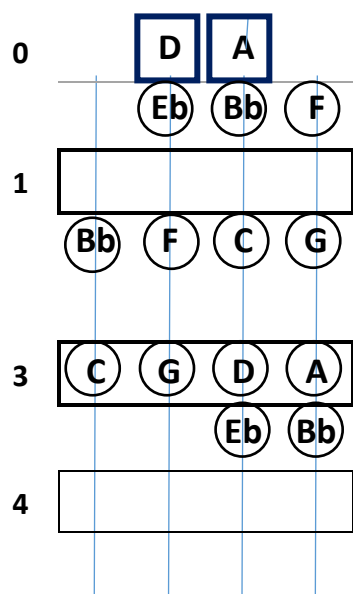
The notes follow the musical alphabet:

A B C D E F G A B C D E...

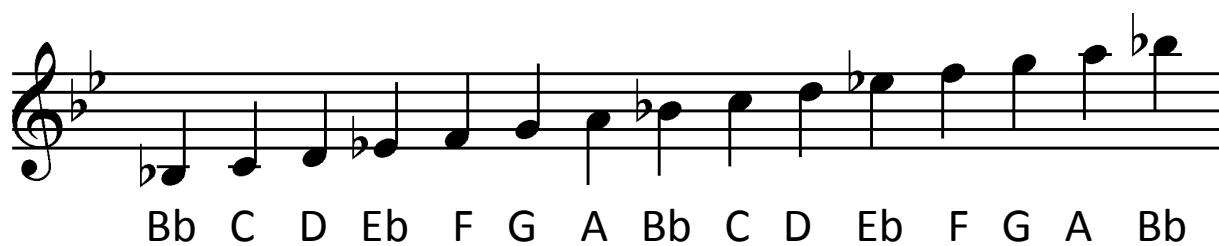
On the staff:



When we put the lower one octave Bb Major Scale and the higher one octave Bb Major Scale together we make a two octave Bb Major Scale



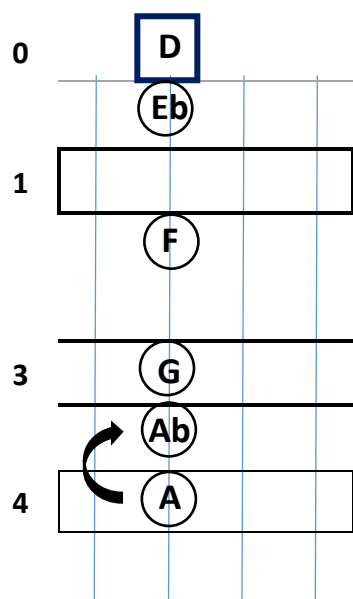
On the staff:



Open string and 2nd fingers are space notes.

1st and 3rd fingers are line notes.

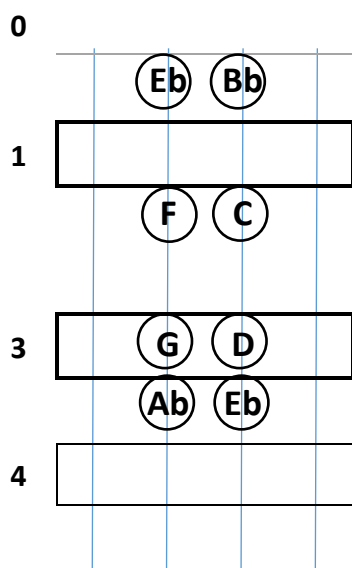
You can add a flat to the 4th finger on the D string.



Slide the 4th finger away from your nose (lower).
This adds a flat.

You can begin a scale on Eb – use low 1st finger on the D string.

This scale will use low one on the A string and the E string.



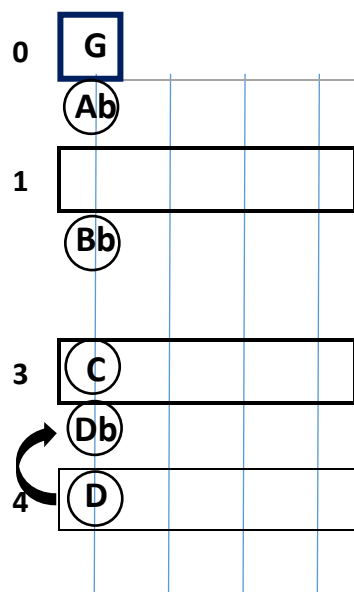
The notes follow the musical alphabet:

A B C D E F G A B C D E F G ...

On the staff:



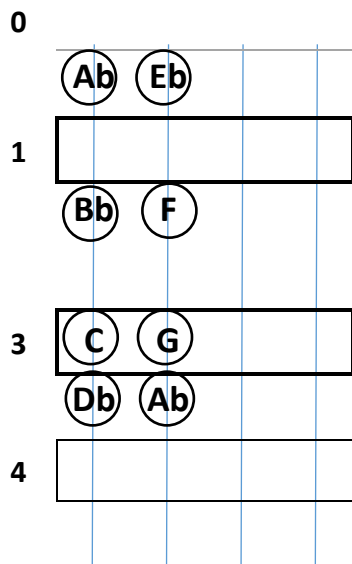
You can add a flat to the 4th finger on the G string.



Slide the 4th finger away from your nose (lower).
This adds a flat.

You can begin a scale on Ab – use low 1st finger on the G string. thhhhhh

This scale will use low one on the D string and the G string.



The notes follow the musical alphabet:

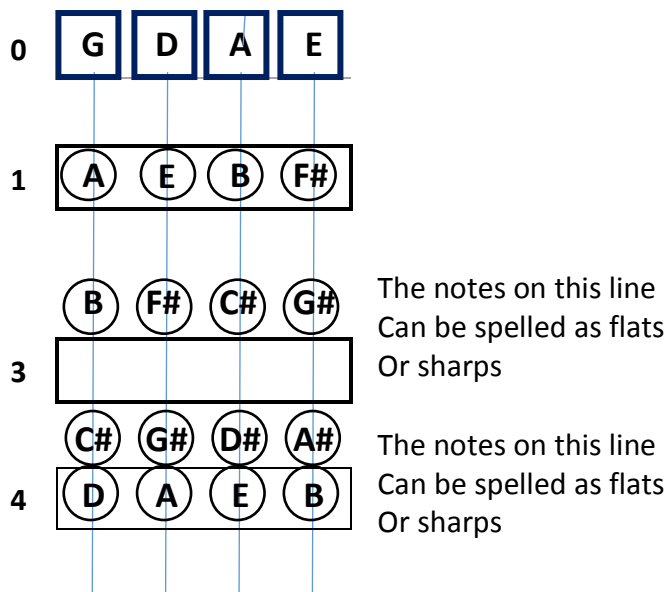
A B C D E F G A B C D E F G A B C... ..

On the staff:

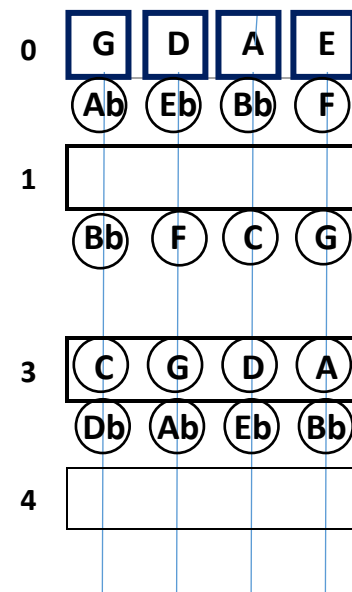


Let's look at all the notes we have named so far:

Notes with Sharps



Notes with Flats



These are most of the notes you will use in your music.

However, there are still other places for us to add sharps and flats.

If you are up to a challenge try the next pages.

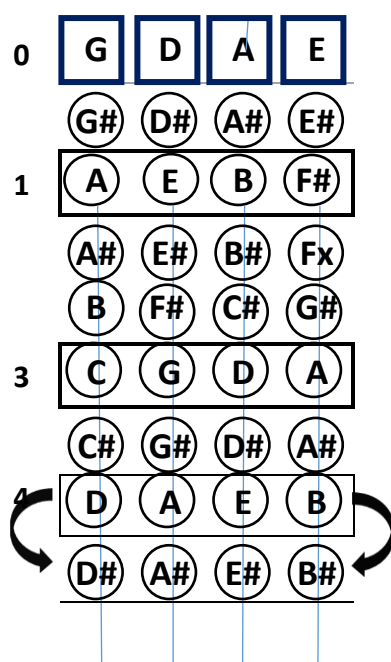
Good Luck!

More Advanced Sharps

The notes of the open strings can be made sharp.

There are two ways to do that.

One way is to slide the 4th finger towards your nose – adding a sharp.



There is a different way is to make the open note sharp.

This image can help you understand how that works.

Place your finger on the G string on the bump at the end of the fingerboard near the scroll –

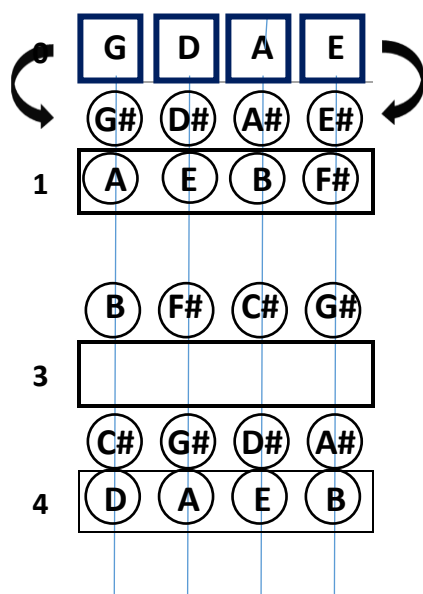
This piece of wood is called the nut.

It functions as a 2nd bridge for the string which is suspended between the nut and the regular bridge near the f-holes.

Play the note, now lift the finger and play the string again. The notes both sound like open G.

Now place the first finger back on the nut and slide it towards your nose – making the note higher. This adds a sharp to the note – G#.

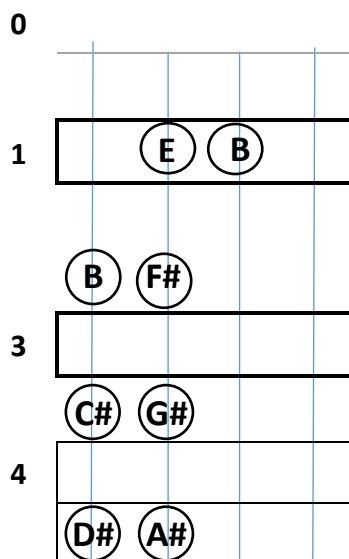
The placement of the finger is called a low 1st finger but the note is spelled as a high open.



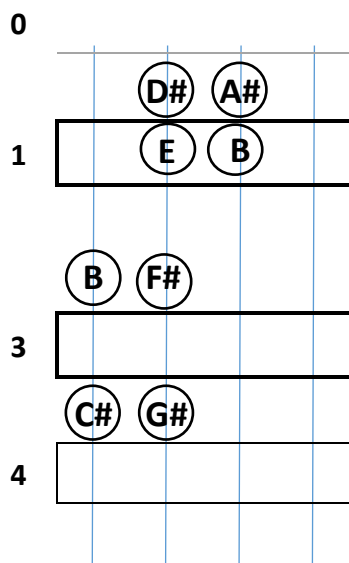
A scale that uses this new type of sharp is the B scale.

Begin on 2nd finger on the G string on the note B.

Here it is shown using high 4th fingers to add a sharp to the open string notes.



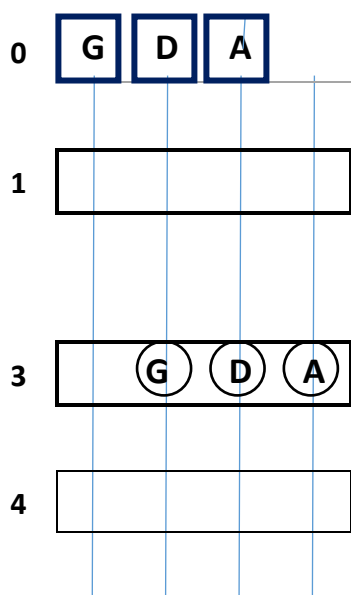
Here it is shown using low 1st fingers to add a sharp to the open string notes.



These scales use different fingers but are spelled the same and sound the same.

More Advanced Flats

The names of most of the 3rd fingers are also the names of open strings.



The lower and higher notes with same name are sets of octaves.

The notes are like the bottom and top notes of a scale.

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

A horizontal line with vertical end caps is drawn under the first and last notes (A and A) of the third scale.

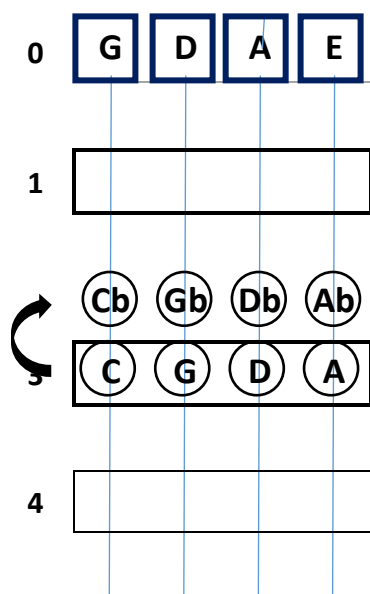
In each of the scales above the first and the last are the same.

On each line the first and last notes are the same. They are eight notes apart – that distance is called one octave.

The 3rd finger note can be made flat.

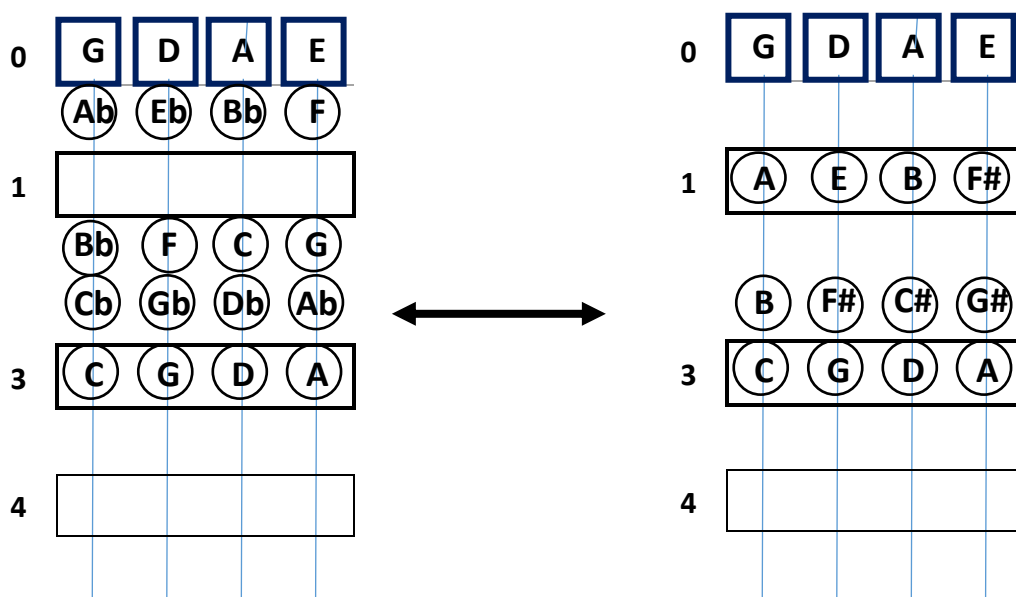
Put 3rd finger on each string and slide it away from your nose.

On every string this adds a flat to the note name.



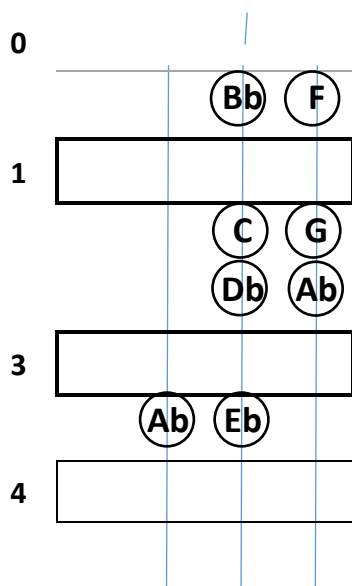
The low 3rd finger sounds best if placed close to the low 2nd finger.

It is in almost the same spot as the regular 2nd finger (the high 2nd finger).



Low 3rd fingers and High 2nd fingers are seldom used together in music.

A scale that uses the low 3rd finger begins on Ab – use the low 4th finger on the D string.



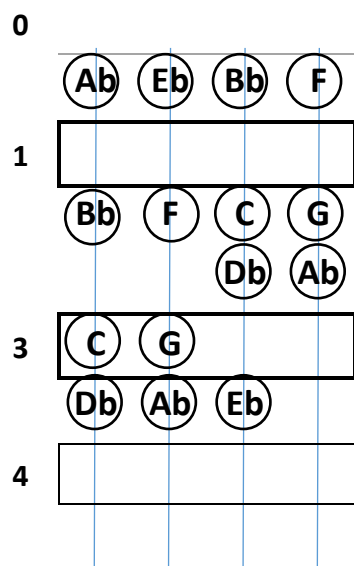
The notes follow the musical alphabet:

A B C D E F G A B C...

On the staff:



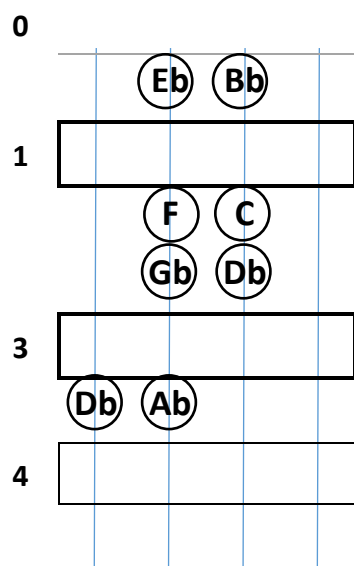
When we add both the lower one-octave Ab Major Scale and the higher one-octave Ab Major Scale together we get a two-octave Ab Major Scale.



On the staff:



Another scale that uses the low 3rd finger begins on Db – use the low 4th finger on the G string.



The notes follow the musical alphabet:

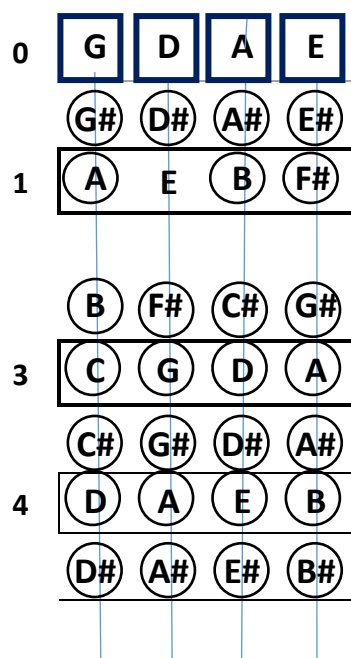
A B C D E F G A B C D E G

On the staff:



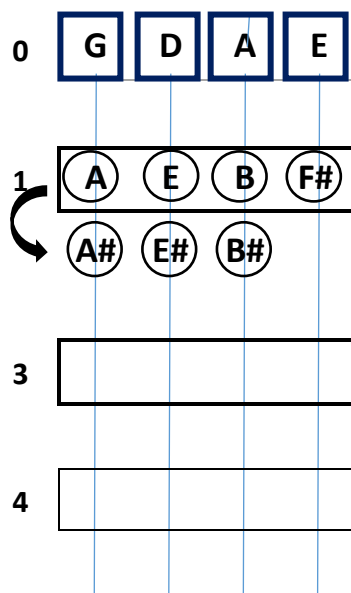
The Most Advanced Sharps

What is the only finger we have not made sharp?



It is the 1st finger.

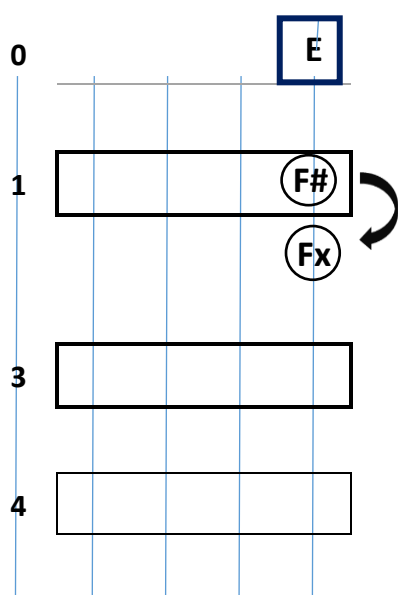
Place the 1st finger on the G, D and A strings.
Slide it towards your nose (higher) – this adds a sharp.



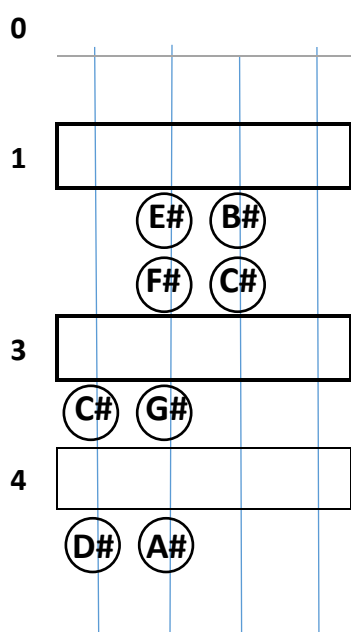
Place 1st finger on the E string. It is already named F#.

If you slide it towards your nose to make it higher it adds another sharp. This note is called F double-sharp. The symbol for double-sharp is an x - Fx.

Double-sharps are the most advanced types of sharps and will be covered in a later theory book.



A scale that uses high 1st fingers is the C# Major Scale – begin on high 3rd finger on the G string.



It is interesting to note that all notes in this scale are sharped.

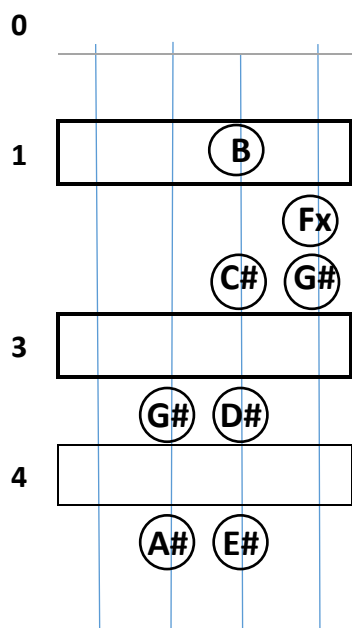
The notes follow the musical alphabet:

A B C E F G A B C D E F G

On the staff:



Another scale that uses high 1st fingers is the G# Major Scale (Warning: this scale uses Fx on the E string) - begin on high 3rd finger on the D string.



It is interesting to note that all notes in this scale are sharpened.

The notes follow the musical alphabet:

A B C D E F G A B C D E F G A B C

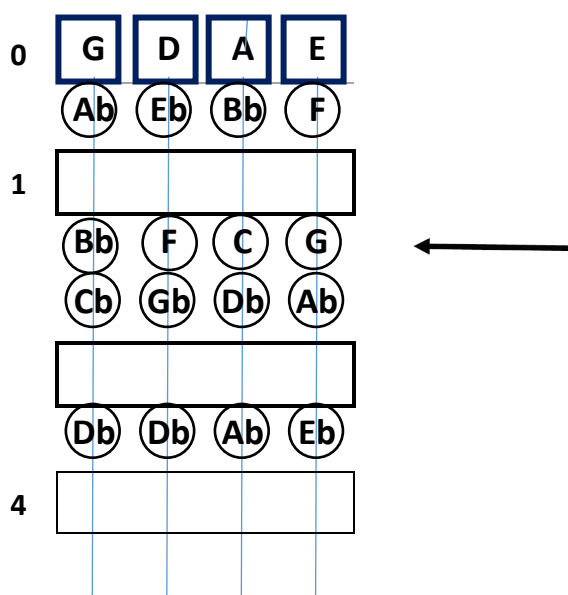
On the staff:



The Most Advanced Flat

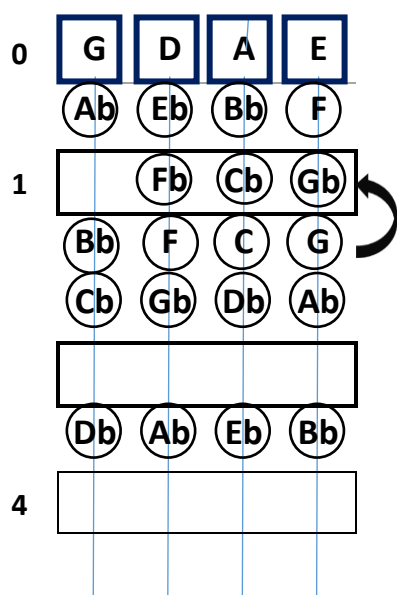
There is still one other way to add flats.

Here are the flats we have added so far – Can you see which notes do not include a flat?



Did you notice that the 2nd fingers on the D, A and E strings have no flats? They are named F, C, and G.

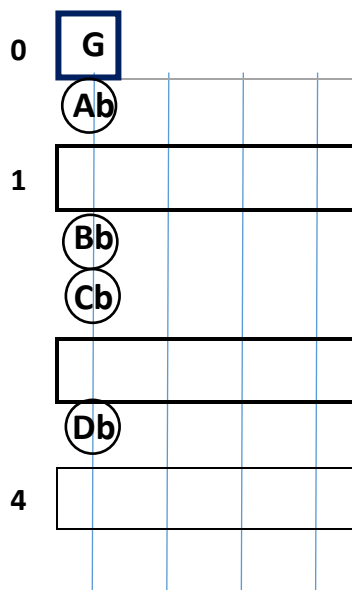
If you slide the 2nd finger away from your nose (this will be the second time that we have done this – the first time we erased a sharp on each string) it adds a flat to the note.



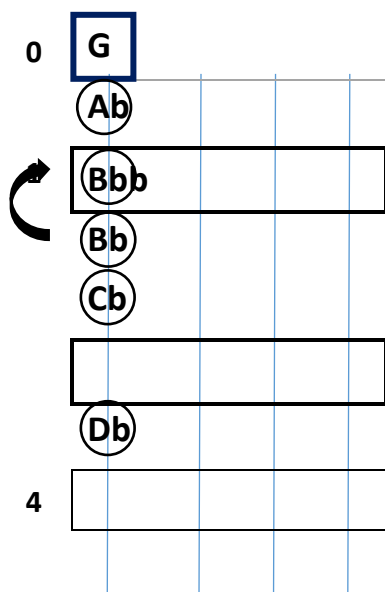
I call this the double low 2nd finger. The double low 2nd finger sounds best when it is placed close to the low 1st finger.

The double low 1st finger is almost the same as the regular 1st finger and is basically on the 1st finger tape.

On the G string the low 2nd finger already has a flat



If you make the Bb with a low 2nd finger on the G string and slide it away from your nose this adds a flat. The name of this note is B double flat which is written Bbb.

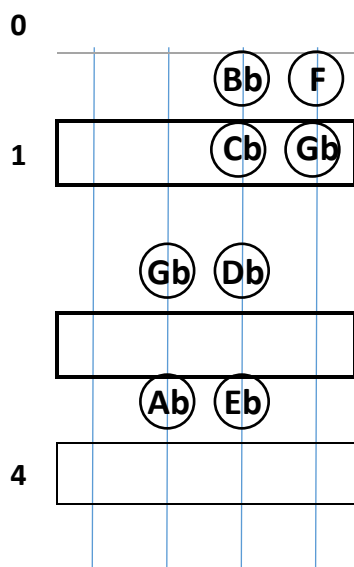


Double flats will be covered along with double sharps in a later theory book.

Here is what it looks like on the staff:



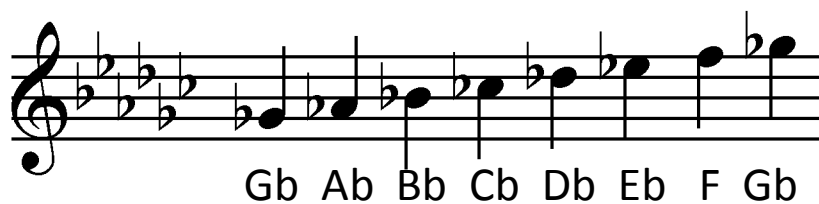
A scale that uses a double low 2nd finger is the Gb Major Scale – begin by using a low 3rd finger on the D string.



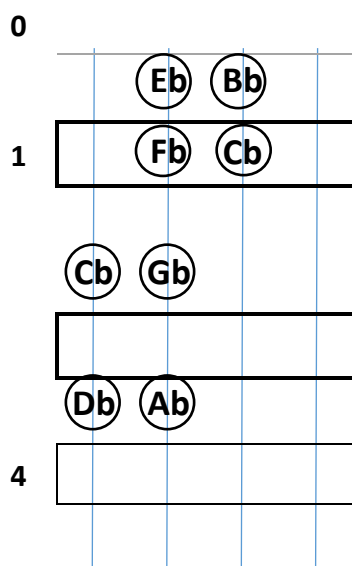
The notes follow the musical alphabet:

A B C D E F G A B C D E F G A B C ...

On the staff:



Another scale that uses a double low 2nd finger is the C_b Major Scale – begin by using a low 3rd finger on the G string.



The notes follow the musical alphabet: A B C D E F G A B C D E F G

On the staff:



It is interesting to note that in this scale all of the notes are flatted.

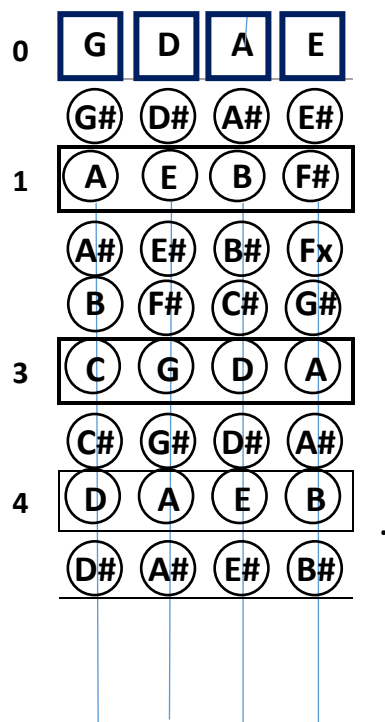
In the C Major Scale none of the notes has a sharp or flat.

In the C[#] Major Scale all of the notes have sharps.

In the C_b Major Scale all of the notes have flats.

The Last Sharped Note

Here are all of the sharps we have made so far:



I call this note a double high 2nd finger.

The double high 2nd finger sounds best when placed close to the high 3rd finger

The double high 2nd finger is very similar to the regular 3rd finger – it is basically placed on the 3rd finger tape.

We have now covered every sharp and flat that is used in first position on the violin. We have covered the note F double sharp and the note B double flat – more double sharps and double flats will be covered in a later theory book.

The next area for us to study is the name of the notes in positions other than first position on the violin. If you know how to play in positions try the next section.

