Organising a Song - Case Study Project

Part 1:

The resources in this case study will be the music notes and how they can be organised to form a song. The idea can further be scaled to show how this arrangement can affect mood and consequently how music can be arranged into separate playlists depending on type of organisation.

Domain: Music and in particular, the fundamental organisation and design of a western classical song.

My reason for selecting the above genre for a case study is my interest in music that stems from the experience that I have in western classical music. My experience in the domain is roughly over 10 years, having played the piano for that period of time. Although none of my courses here at Berkeley have music as a specific domain, my interest in music is why I wish to pursue this as a case study topic for the course.

Part 2:

What is being organised?

Arranging music notes using specific constraints of scales and harmonies to compose a song. For the purpose of organising notes to compose a song a notation system of signs is used. This mainly serves the purpose of defining two key properties of tone, “pitch” and “duration”.

They may be arranged for reading purposes on the ‘staff’- a fundamental latticework upon which music symbols are placed. The staff is then further divided into the two ‘clefs’. The ‘Treble Cleff’ and the ‘Bass Cleff’.

Along with the duration of each note, the song as a whole is gives what is referred to as a “Time signature” or a meter which indicated the number of beats to a measure.

Why is it being organised?

Music like other sources of entertainment can alter mood. Songs played in the major scale tend to produce a happier tune/ mood whereas those played in the minor scale tend to bring out a more emotional, often pensive mood. Composers often use these particular characteristics to convey a message/mood through their songs. Effective organisation of notes with certain rules makes music.

Without organisation of notes, it would be close to impossible for a composer to convey a particular mood or emotion that the song is intended for. The key signature is a descriptor that plays a major role in determining the mood or the emotion of the song. It is denoted by a group of flats or sharps that appear at the beginning of a piece.

How much is it being organised?

The question of how much is being organised is often left to the composer, and his/her expertise in the area. Some songs have a more complex structure than others. A tonal system is usually in place with specific chord progressions or harmonic progressions that govern the song and are very easily identifiable. There are two fundamental aspects to a song, the pitch-"what note must be played" and the duration-"how long must it be played"

Pitch: A single letter sign at the beginning of the staff, indicates the pitch of the tone. They can be of two types- the treble clef and the base clef. The notes are then arranged on the staff for the primary purpose of writing music.

Duration: Along with knowing what note needs to be played, a key component of music is "How long the note must be sustained".

Not only does an artist need to know how long to hold a note but also how long should a duration of silence be maintained. Silence in music is indicated by a "rest".

The various notes are: Whole note, half note, Quarter note, Eighth notes and sixteenth notes. For every note in music there exists a rest of the same value.

The organisation of music is like math- two half notes form a whole and two sixteenth notes form an eighth note.

Time Signatures: The time signature of a composition will appear at the start of the song, and is depicted using two numbers. The upper number indicates how many beats to a measure, whereas the lower number depicts which type of note will receive one beat.

Accents: The style of playing or "finesse" is added to a song using various *descriptors* to the song. They may be certain notations that indicate that a note must be played louder than the rest. They may be indicated using certain keywords like "Crescendo" which indicate a gradual increase in loudness of the notes being played. The "Diminuendo" on the other hand does the opposite, gradually decreasing the loudness of the notes played as the song progresses.

When is it being organised?

Notes to compose a song are organised when the song is written. However, most famous songs composed by great artists, are often modified to add particular variations to the song, thus forming in an iterative fashion new versions of the original piece.

Another way to look at this is, while the song on the whole is given a time signature, the presence of certain keywords placed within the song can change the "tempo" or the "pace" or even the mood of the song.

How (or by whom) is it being organised?

When composing a song notes are organised into a particular time-frame that can be looked at as a constraint in the organising system. The staff is also divided by a vertical stroke that defines a "measure" within which the notes are written and each measure must

satisfy the time signature. The various timings for songs may be 3:4, 6:8, 4:4 etc. The timing of the song defines its structure. Each note itself has a specific time for which it must be held while playing the tune.

While the song is written by the composer himself the artist or the person who eventually plays the song often adds his/her own elements to the song personalizing it or customizing it to suit his/her preferences.

Part 3:

Artefacts or Supporting Materials:

Tutorial on composition of a song, that support the concepts described in the case study.

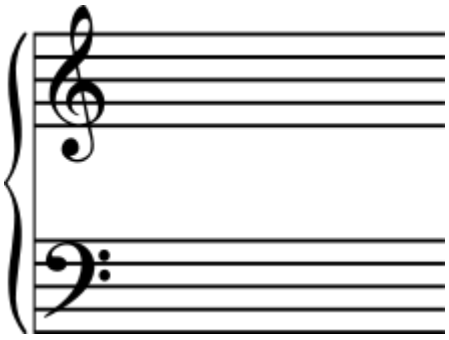
The artefact document depicts how each of the concepts described above come together when composing a song.

202 Case Study Artefact

Tutorial

Musical Notation:

Staff:



Pitch:

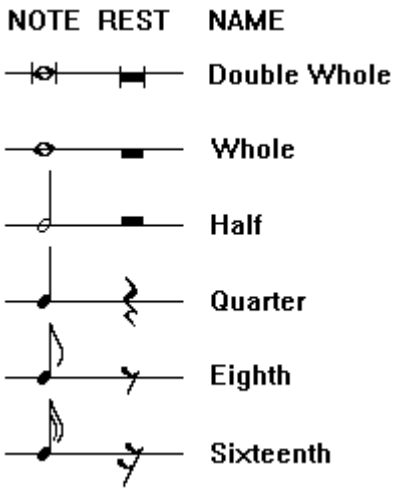
The above image depicts the staff, lines indicating where the notes will be organised. The upper notation is known as the “Treble cleff” and the lower is the “Bass cleff”.

Duration: This indicates how long a particular note needs to be held.

The various notes are:

Each note above indicates the duration for which a note in music is sustained as mentioned in the case study.

For each note depicted above there also exists and equal valued “rest”, which is indicative of silence.



Time Signatures:

The number of beats per measure of the song is given by the time signature and is depicted by numbers at the start of the song.

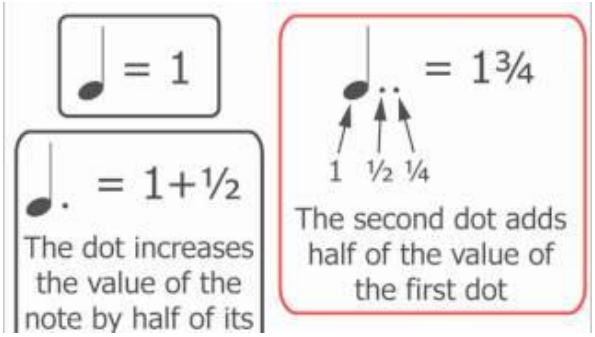
For example a song with a time signature of 4/4 has 4 quarter notes per measure or per bar and a time signature of ¾ has 3 quarter notes per measure.

2/4	2 Beats per bar	1 2 1 2 1 2 1 2 1 2 1 2
3/4	3 Beats per bar	1 2 3 1 2 3 1 2 3 1 2 3
4/4 OR C	4 beats per bar	1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

The “C” in the above image is known as common time and is just another notation for the 4/4 time signature. The four at the bottom indicates the “type of note” that will receive that value. So a 4 indicates a quarter, hence there will be four quarter notes per bar in the 4/4 time signature.

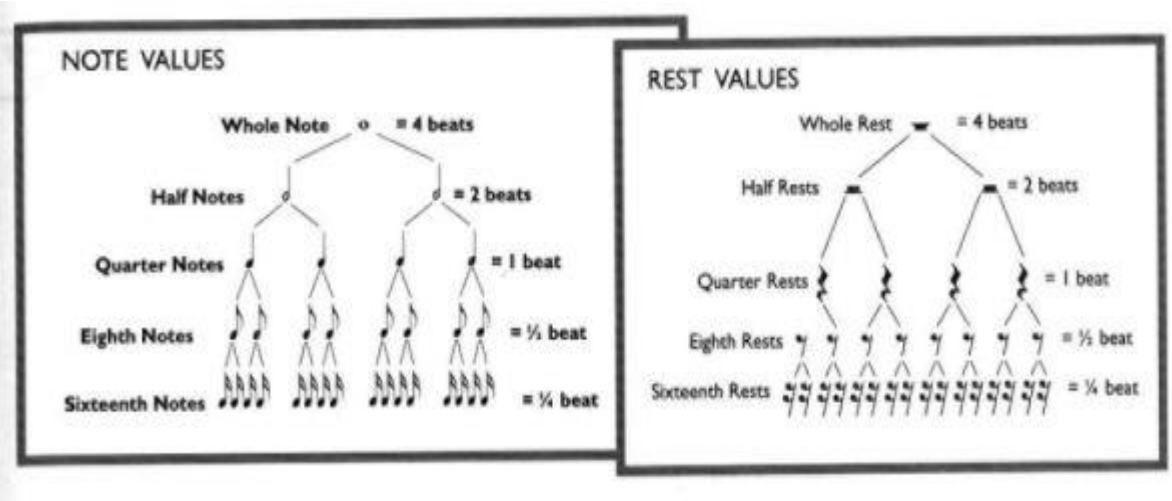
Accents/Note Descriptors:

As shown in the image the dot notation after the note indicates that although the note itself is a quarter, it must be held for half more than its value. Therefore the note is now valued at one and a half beats while a second dot adds half the value of the previous notation or the first dot.



Music is organised like math:

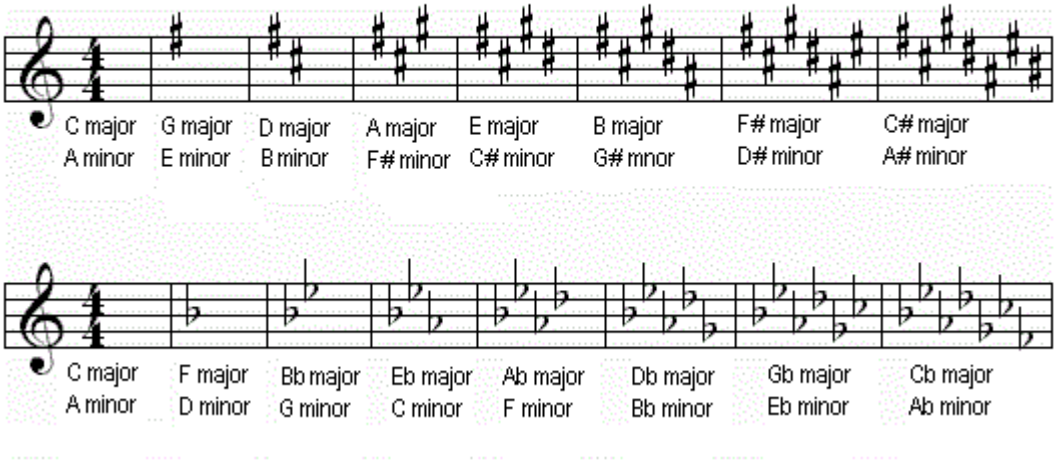
As stated in the case study, just like in math where two halves make a whole, two quarters in music make a half note. The same concept is followed for rest values.



Key signatures:

The key signature is a group of sharps or flats at the beginning of each line of the staff that indicates the scale that the song must be played in. Each sharp indicates that the specific note must be raised a half value throughout the song unless stated otherwise within the song with the indication of a natural sign. The Flat on the other hand indicates that the note must be lowered by a half value throughout the song. The scale could be major or minor.

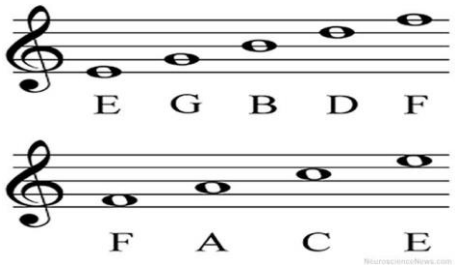
Key signatures: major and relative minor



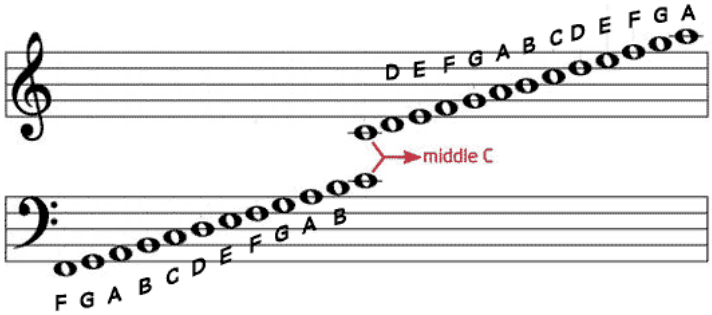
As seen above the C major and its relative A minor scale are the simplest with no flats and no sharps. As the scales progress, there is an addition of sharps to the Major scale and an addition of flats to the relative minor scales.

How to read music:

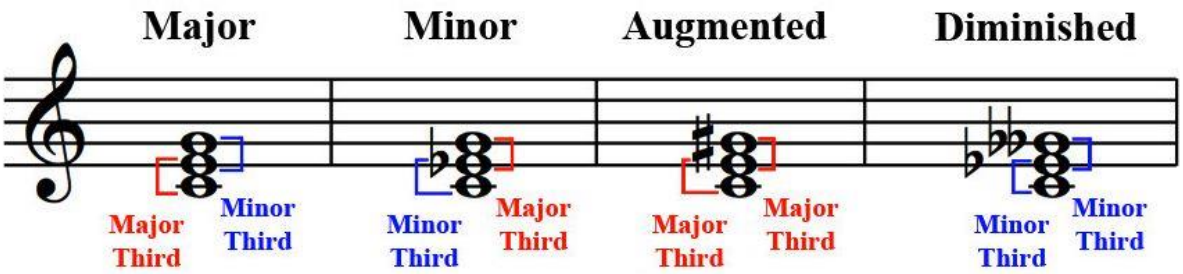
As shown below the lines on the staff are representative of the notes: E G B D F, whereas the spaces represent the notes: F A C E.



A clear depiction of both the bass and the treble staff can be seen below where the notes follow an alphabetical order going from A-G.



In addition to playing notes one at a time, notes are often, in a song played in unison this can also be called a chord. It is a set of three or more notes played simultaneously. The descriptions for chords are – Majors, minors, augmented and Diminished.



Speed:

How fast the song must be played, this is specified for the song as a whole.

Largo-very slow

Lento-slow

Adagio-slower than andante

Andante-moderately slow

Moderato-moderate

Vivace-lively

Allegro-fast

References used for this document:

Dr. Graham Freeman lecture slides.

http://www.musictheory.org.uk/