Chord Theory – Know the key and the scale, and the chords follow

The key of C major describes a scale with the notes  
\[ C \quad D \quad E \quad F \quad G \quad A \quad B \quad C \]

We could assign numbers to each note relative to C  
\[ 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 1 \]

\[ C \quad E \quad G \quad C \]

If we start at C and choose every other note, we get a C major chord, 
\[ C \quad E \quad G \]  
(3 notes – a triad)  
(Play one, skip one, play one, skip one, play one. Begins again at 1)

For the ukulele, we have 4 strings, so one note can be repeated, yielding different combinations also known as inversions- a different order of the notes of the chord that will have a slightly different sound than CEGC 1351 – GCEC 5131 – see below

Remember how we found the correct notes for a major scale?

Let's find the scale in F: first write all possible notes F Gb G Ab A Bb B C Db D Eb E F

use the formula for the steps major scale 221-2221  
\[ F \quad 2 \quad G \quad 2 \quad A \quad 1 \quad Bb \quad 2 \quad C \quad 2 \quad D \quad 2 \quad E \quad 1 \quad F \]

Therefore, the F major scale is 
\[ F \quad G \quad A \quad Bb \quad C \quad D \quad E \quad F \]

Again, assign numbers  
\[ 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 1 \]

- the major chord is the 1, 3, 5

For the key of F, the major chord is F A C - the F at the nut is ACFA 3513

For the key of G, the major chord is G B D, the G at the nut is GDGB 1513

\[ \begin{align*}
F & \quad G \quad A \quad Bb \quad C \quad D \quad E \quad F \\
1 & \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 1 \\
F & \quad A \quad C \quad F \\
1 & \quad 3 \quad 5 \quad 1
\end{align*} \]

\[ \begin{align*}
G & \quad A \quad B \quad C \quad D \quad E \quad F\#G \\
1 & \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 1 \\
G & \quad B \quad D \quad G \\
1 & \quad 3 \quad 5 \quad 1
\end{align*} \]
Chord Theory - Dominant 7th chord (or 7th chords for short)

To make a 7th chord, add a 4th note to the triad - the flatted 7th note - 2 steps lower than the C. Changing the C on the first string to Bb gives a C7 chord GCEBb. The 7th is also called a "dominant" 7th chord - not so important why just now.

These 7th chords have inherent tension - the 7 chord "wants" to resolve to the 1.

See image above for the G7 chord at the nut - a G7 includes the flatted 7th - F - therefore changing GDGB to GDFB.

What about F7?

The F major scale is F G A Bb C D E F.

Again, assign numbers 1 2 3 4 5 6 7 1.

F major chord is 1, 3, 5 ..........F A C F.

Using the method for a 7th chord by adding the flatted 7 note, F7=F A C Eb.

F7 chord is 1, 3, 5 b7.... ............F A C Eb F.
Chord Theory - Minor chords

The other common type of chords are **minor chords** - in this case, the 3 note is flattened, giving the typical "blue or sad" sound 1, 3b, 5 - Cm = C Eb G

Look for these types of chords as they come up and think of the notes played

The C scale consisting of the notes - C D E F G A B C
The numbers to each note relative to C - 1 2 3 4 5 6 7 1
The C major chord - 1 3 5 or C E G
The C minor chord - 1 b3 5 or C Eb G

To find the **Gm chord**, we again want to flat the 3rd - the B of the GBD G chord
See image above to compare a **G** with **Gm** chord -

Once one understands how to use the scale to find these chords like 135, major chord, other, more complex and interesting chords can be made just by adding the note to the major triad or minor triad. Look at each line of the following table to see how those chords are constructed. The 1 note is the key, then use that scale to add the notes. For a ukulele, a 5 note chord can be played, usually by omitting the root (1) or the 5 note.
Chord “spelling” – use the scale of the key to identify notes

<table>
<thead>
<tr>
<th>Chord</th>
<th>Note</th>
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</thead>
<tbody>
<tr>
<td>major</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>minor</td>
<td>1</td>
<td>b3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>dim</td>
<td>1</td>
<td>b3</td>
<td>b5</td>
<td></td>
</tr>
<tr>
<td>aug</td>
<td>1</td>
<td>3</td>
<td>#5</td>
<td></td>
</tr>
<tr>
<td>sus4</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>sus2</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
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<tr>
<td>6</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>6</td>
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<td>M7</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
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<td>1</td>
<td>b3</td>
<td>5</td>
<td>6</td>
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<tr>
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<td>b3</td>
<td>5</td>
<td>b7</td>
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<tr>
<td>dim7</td>
<td>1</td>
<td>b3</td>
<td>b5</td>
<td>6 = bb7</td>
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<tr>
<td>9</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>b7</td>
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<tr>
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<td>1</td>
<td>3</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Chord Theory – Harmonizing the major scale

What would happen if you played the C scale and used each note as the 1 note of a chord and stacked thirds - (play - skip - play- skip - play) as chords?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
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<td>5</td>
<td>G</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Chord</td>
<td>I</td>
<td>iiim</td>
<td>iiim</td>
<td>IV</td>
<td>V</td>
<td>vim</td>
<td>VII(\text{dim})</td>
<td>I</td>
</tr>
<tr>
<td>Chord</td>
<td>C</td>
<td>Dm</td>
<td>Em</td>
<td>F</td>
<td>G</td>
<td>Am</td>
<td>B(\text{dim})</td>
<td>C</td>
</tr>
</tbody>
</table>

Play these chords in sequence. C Dm Em F G Am Bdim C -can use G7 for B\(\text{dim}\) 
This is called a chorded scale, or harmonizing the scale.

You are likely already familiar with chord progressions used in the key of C –C F G these are the I, IV and V chords (roman numerals are used for chords). You could count it out on your fingers to find the IV and V counting from the I. Add the Vim and you’ve got the “doo wop” progression C Am F G – I, Vim. IV, V. Suppose you wanted to change key and play in the key of G? Use the G scale, count it out and you’d have G as the I, C as IV and D as V.

If you are oriented to the key you are playing in, then you would know the scale and which chords are included as above. Start thinking, C, Am F, G.... I’m playing I, vi, IV V (minor chords have lower case). If the song didn’t fit your vocal range, you could use the I, vi, IV V from G: G, Em, C, D. You can always count out the 1, 4 and 5 on your fingers to keep it straight. Find the 1, 4 and 5 for the key of F.