Triads and Seventh Chords

Triads:
A triad is a three note chord created by adding notes a third and a fifth above a root note:
(The three notes of the triad are called the root, the third, and the fifth.)

![Triad diagram](image)

If we build triads on each note of the C Major Scale (using notes of the scale - all the white notes):

![Triad diagram](image)

Triads are often referred to by using roman numerals to indicate the scale degree they are built on:
(note the upper and lower case and the ° sign to indicate type.

we will find we have built three different kinds of triads:

On C, F, and G (the first, fourth and fifth note of the scale we have created Major triads
(A Major third and Perfect fifth above the root).

![Triad diagram](image)

On D, F, and A (the second, third, and sixth note of the scale) we have created minor triads
(a minor third and Perfect fifth above the root).

![Triad diagram](image)

On B (the seventh note of the scale) is a diminished triad
(a minor third and a diminished fifth above the root).

![Triad diagram](image)
if you take a major triad and expand the fifth you will create an Augmented triad (a Major third with an Augmented fifth above the root). + is used as an abbreviation for augmented

Here are all four triad types built on the root of C. See how the notes shift.

Augmented  Major  Minor  Diminished

You can build your triads by knowing your thirds and fifths. You can also build your triads If you know the white note triads and understand how one type shifts to another.

Also remember that if you shift each note of the triad the same number of half steps the type will stay the same. So to move from a c minor triad to a c# minor triad move each note up one half step.

The notes of a triad can be reordered in any way. If a note that is not the root is on the bottom we call the triad "inverted"

A triad is in first inversion if the third is on the bottom. (sometimes labeled 6 due to the 6th between the bottom and the root)

A triad is in second inversion if the fifth is on the bottom. (sometimes labeled 64 due to the intervals above the lowest note).

the 6 and 64 labels are called figured bass. Second inversion (64) is a very weak sound and is only used by composers in specific instances.
Seventh Chords
As a review the interval of a seventh (two notes seven letter names apart) can be classified into types

Major Sevenths (like C - B) are 7 letter names and 11 half steps apart .. or more easily a half step short of an octave.

minor sevenths (like C-Bb) are 7 letter names and 10 half steps apart .. or more easily a whole step short of an octave.

you could create a seventh that was 7 letter names and 9 half steps apart .. we would call that a diminished seventh (B-Ab) or one that was 12 half steps .. seven letter names and the same distance as an octave (C-B#)

To create a seventh chord add a seventh above the root or one more 3rd (skip a note up) to a triad

\[ I7 \quad ii7 \quad iii7 \quad IV7 \quad V7 \quad vi7 \quad viiø7 \]

You can find that we have created:

on C (I7) and F (IV7) Major Seventh Chords (Major triad and a Major Seventh above the root)

on d (ii7), e (iii7), and a (vi7) minor seventh chords
(minor triad and a seventh a minor seventh above the root)

on G (V7) Dominant seventh chord (Major triad and a minor seventh above the root)
.. in common parlance if somebody does not specify the type of Seventh chord [they just say G7] we assume this is the type they are referring to).

and on b (viiø7) a half diminished seventh chord
(a diminished triad with a minor seventh) sometimes referred to as minor seventh flat five in jazz)

one more type of seventh chord that is commonly used can be found if we look at the harmonic minor scale and look at the seventh step.

if we build a seventh chord off the seventh step we have created a
Fully diminished seventh chord (a diminished triad with a diminished seventh)
Seventh Chords can be inverted as well (note the new figured bass symbols).
(a diminished triad with a diminished seventh)

\[\text{I7 I65 I43 I42}\]

It is relatively common to find seventh chords where the fifth has been left out of the chord

\[\text{V7}\]

Sevenths of seventh chords are dissonant notes and have a strong pull down by step as the seventh chord resolves to the next chord.

You can continue adding thirds to the top of the chord to create 9th, 11th, and 13th chords. These are "extended harmonies" or "upper extensions". They are most typically found on the V (fifth scale degree chord). (9ths pull down a step like sevenths, 11ths like to sustain into the next chord, and 13ths like to fall by third).

\[\text{V9 V11 V13}\]

In music chords can be found voiced every possible way and even arpeggiated (spread over a melodic pattern). Train your ears and eyes to spot them. Both of these examples are just C Major triads (C E G)