1.what is unsupervised learning ?

our job is to find some structure or some pattern or just find something interesting in the data. This is unsupervised learning, we call it unsupervised because we're not trying to supervise the algorithm. To give some quote right answer for every input, instead, we asked the our room to figure out all by yourself what's interesting. Or what patterns or structures that might be in this data, with this particular data set

2. type of unsupervised learning :

+ cluster

+ anomaly detection: which is used to detect unusual events. This turns out to be really important for fraud detection in the financial system, where unusual events, unusual transactions could be signs of fraud and for many other application

+ dimensionality redution : This lets you take a big data-set and almost magically compress it to a much smaller data-set while losing as little information as possible