* In an ECG diagram there are 5 types of waves the can be observed:
  + P waves
  + QRS complex (aka Q, R, S waves)
  + and T waves
* For an ECG diagram to be valid, it’s not necessary to observe all the above types of waves.
* Polarized myocardial cells 🡪 -90mV, while depolarized myocardial cells 🡪 +20mV
* The isoelectric line is the term used to describe the straight line in an ECG strip, which illustrates the resting state of the myocardial cells.
* The depolarization of myocardial cells is what causes the muscle contraction (atrial contraction), expressed through the P wave.
* The atrial contraction, generated by the depolarization of the myocardial cells, takes place from the beginning of the P wave through the middle (upper point) of the R wave 🡪 this period of time is what’s commonly known as atrial systole (0.1 sec)
* The QRS complex is the depolarization of the ventricular myocardium 🡪 it initiates the contraction of the ventricular myocardium, which takes place from the middle (upper point) of the R wave, through the end of the T wave 🡪 ventricular systole (0.3 sec)
* Between waves S and T we can observe what is called the isoelectric period, aka the period when there is no voltage difference across cardiac muscle cell membrane 🡪 the signal briefly returns to the isoelectric line
* The T wave signifies the repolarization of the ventricle
* The PQRST waves are generated by the sinus node, the “pacemaker” of the heart
  + Sinus rhythm = PQRST in the right order + is fairly regular
  + Sinus bradycardia = PQRST in the right order + is fairly regular BUT rate is below 60
  + Sinus tachycardia = PQRST in the right order + is fairly regular BUT rate is above 100
* A cardiac cycle is of the PQRST waves
* The P, Q and upward deflection of the R wave 🡪 depolarization of atrial myocardium, whereas the downward deflection of the R wave and the S wave 🡪 depolarization of ventricular myocardium. The ventricular myocardium is repolarized by the T wave. The repolarization of the atrial myocardium is “hidden” underneath the QRS complex.