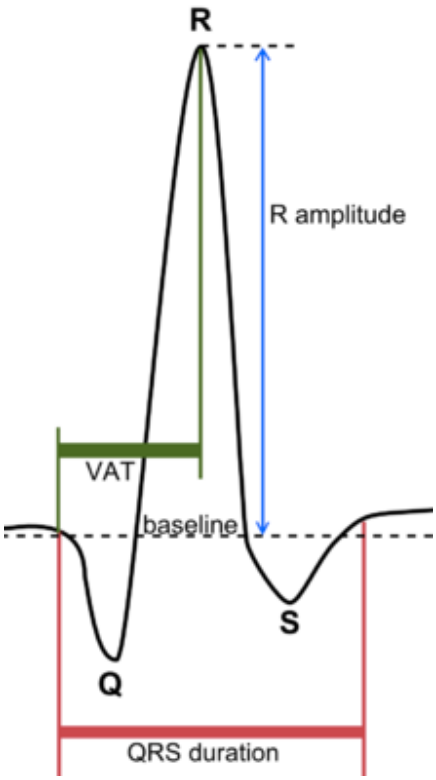
Respirator Team:

Here is a step by step guide for your project (high level)

1: Download the ECG data files (eg: A01.dat)
2: Work out how to read them
3: Confirm that you understand the data format.
4: Be able to extact an event.
5: Display/Graph it
6: Create and algorithm to detect the events/peaks
    a) Simple version with a threshold and then look for peaks
    b) Consider other algorithms : for example zero crossing or centroid.
7: Write a program to process the data files and determine
    a) The time location of an event
    b) Charactertitics: such as Peak Height etc..



Tasks:
1) Determine the baseline
2) Establish a threshold

3) For each peak
4) Locate the peak (R)
5) Determine the R amplitude
6) Log the parameters

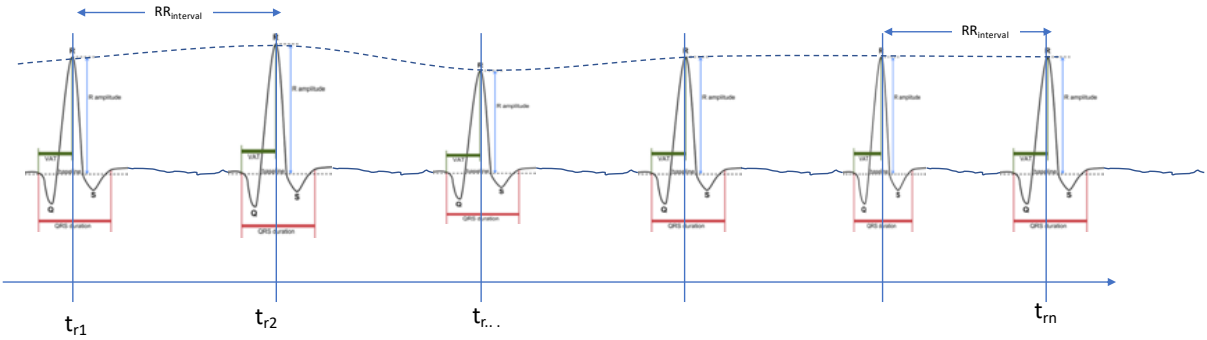
7) Repeat Steps 3-6

8: Create a list with the events similar to that below

Evetn	Offset	Amplitude	T (secs)	DT
1	379	131	3.79	
2	481	132	4.81	1.02
3	583	132	5.83	1.02
4	687	139	6.87	1.04
5	795	134	7.95	1.08

6	906	151	9.06	1.11
7	1013	140	10.13	1.07
8	1118	131	11.18	1.05
9	1223	132	12.23	1.05
10	1327	133	13.27	1.04
11	1425	129	14.25	0.98
12	1525	129	15.25	1
13	1622	114	16.22	0.97
14	1720	126	17.2	0.98
15	1819	128	18.19	0.99

By processing a large number of events



9: Download the corresponding respiration data (A01r.dat)
10: Work out how to read the data
11: Confirm that you understand the data format.
12: Work out which sensor you think gives the best respiration signal (by observation.)
13: See if you can find a correlation between the respirator signal and the processed data from the ECG

a) RR interval
b) R amplitude
c) something else ??