**Week-2**

References for this week:

Life Cycle of Stars: [The Life and Death of Stars: White Dwarfs, Supernovae, Neutron Stars, and Black Holes](https://youtu.be/4xIQGbYur9Q?si=tNg1Ojd3SBG89pYc)

Post-main sequence evolution of stars - <https://www.atnf.csiro.au/outreach//education/senior/astrophysics/stellarevolution_postmain.html>

Stellar evolution of clusters - <https://www.atnf.csiro.au/outreach//education/senior/astrophysics/stellarevolution_clusters.html>

Shape changes in HR diagrams with age and metallicity -

<http://spiff.rit.edu/classes/ladder/lectures/ordinary_stars/ordinary.html>

Tasks for this week:

1. Find 2 open clusters and plot their HR diagrams
2. Divide the obtained clusters into various spectral types
3. Note down the relative percentages of each spectral type

Rough BP-RP values you can use for classification of stars into spectral types: -0.6, -0.4, 0, 0.38, 0.74, 1.13, 2.31, also cut away the white dwarfs. The following image might be helpful in terms of what is expected -

