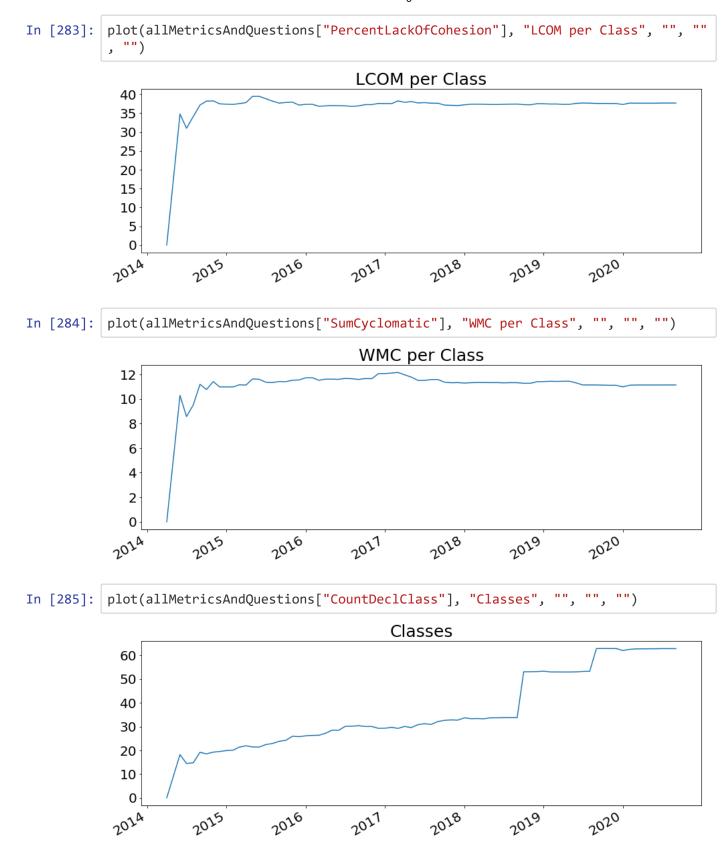
```
plot(allMetricsAndQuestions["numberJavaFiles"], "Java Files", "Java Files", ""
In [274]:
                                                Java Files
           20.0
           17.5
           15.0
           12.5
           10.0
            7.5
            5.0
            2.5
            0.0
                      2015
                                 2016
                                           2017
                                                      2018
                                                                2019
                                                                           2020
           2014
          plot(allMetricsAndQuestions["readability"], "Readability per Class", "", "",
In [275]:
                                          Readability per Class
           0.030
           0.025
           0.020
           0.015
           0.010
           0.005
           0.000
                       2015
                                 2016
                                            2017
                                                      2018
                                                                2019
                                                                           2020
             2014
          plot(allMetricsAndQuestions["CountLine"], "Physical Lines per Class", "", "",
In [276]:
           "")
                                       Physical Lines per Class
           140
           120
           100
            80
            60
            40
            20
                     2015
                                2016
                                                     2018
                                                                2019
                                           2017
                                                                           2020
```

```
In [277]: | plot(allMetricsAndQuestions["CountLineCode"], "LOC per Class", "LOC per Class"
                                           LOC per Class
            80
            60
            40
            20
             0
                     2015
                               2016
                                                              2019
                                                                        2020
                                         2017
                                                    2018
           2014
          plot(allMetricsAndQuestions["CountLineComment"], "CLOC per Class", "", "")
In [278]:
                                          CLOC per Class
            35
            30
            25
            20
            15
            10
             5
             0
                     2015
                               2016
                                                    2018
                                                              2019
                                                                        2020
                                         2017
           2014
          plot(allMetricsAndQuestions["CountClassCoupled"], "CBO per Class", "", "")
In [279]:
                                           CBO per Class
             5
             4
             3
             2
             1
                     2015
                                         2017
                               2016
                                                              2019
                                                                        2020
```

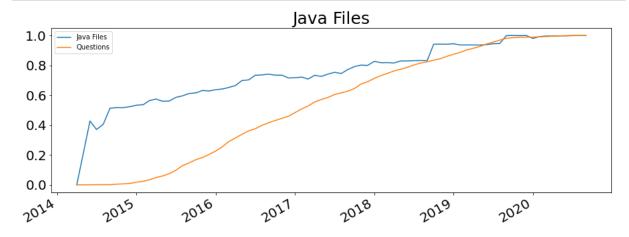
```
plot(allMetricsAndQuestions["CountClassDerived"], "NOC per Class", "", "")
                                             NOC per Class
           0.030
           0.025
           0.020
           0.015
           0.010
           0.005
           0.000
                       2015
                                                                          2020
                                 2016
                                           2017
                                                      2018
                                                                2019
            2014
          plot(allMetricsAndQuestions["CountDeclMethodAll"], "RFC per Class", "", "", ""
In [281]:
                                             RFC per Class
           20.0
           17.5
           15.0
           12.5
           10.0
            7.5
            5.0
            2.5
            0.0
                      2015
                                2016
                                           2017
                                                     2018
                                                               2019
                                                                          2020
           2014
          plot(allMetricsAndQuestions["MaxInheritanceTree"], "DIT per Class", "", ""
In [282]:
                                             DIT per Class
           1.75
           1.50
           1.25
           1.00
           0.75
           0.50
           0.25
           0.00
           2014
                      2015
                                2016
                                           2017
                                                     2018
                                                               2019
                                                                          2020
```



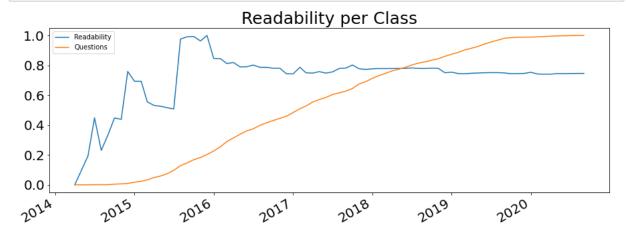
## Plotting metrics and questions

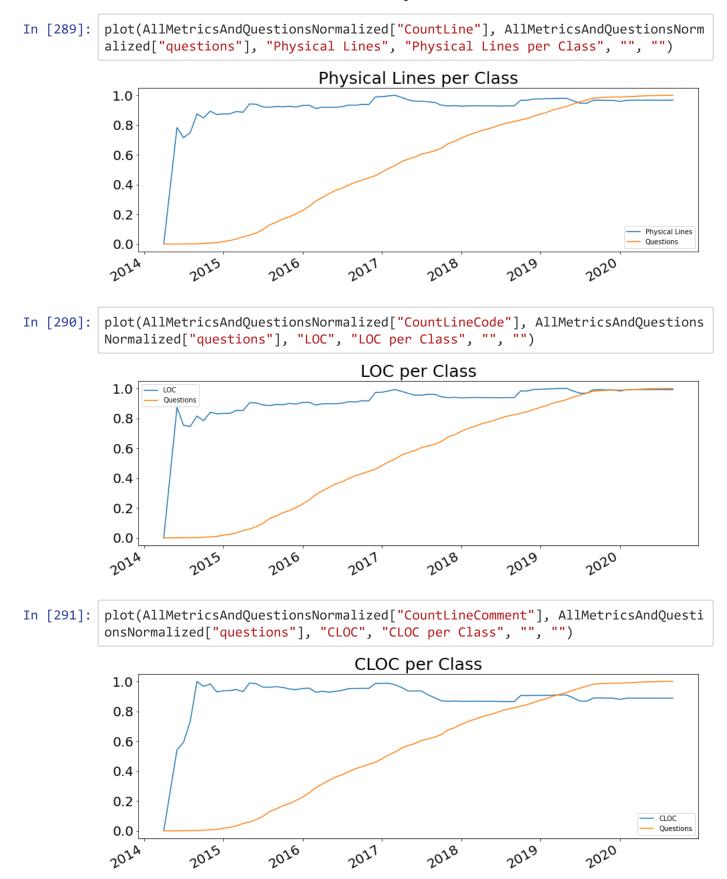
```
In [286]:
          def plot(metrics, questions, metric, title, ylabel, xlabel):
              subplot = metrics.plot(figsize=(15,5), fontsize=20, legend=True, label=met
          ric)
              subplot = questions.plot(figsize=(15,5), fontsize=20, legend=True, label=
          "Questions")
              subplot.set_title(title, fontsize=25)
              subplot.set ylabel(ylabel, fontsize=20)
              subplot.set xlabel(xlabel, fontsize=20)
                    subplot.figure.savefig(metric+".pdf",bbox_inches = 'tight')
```

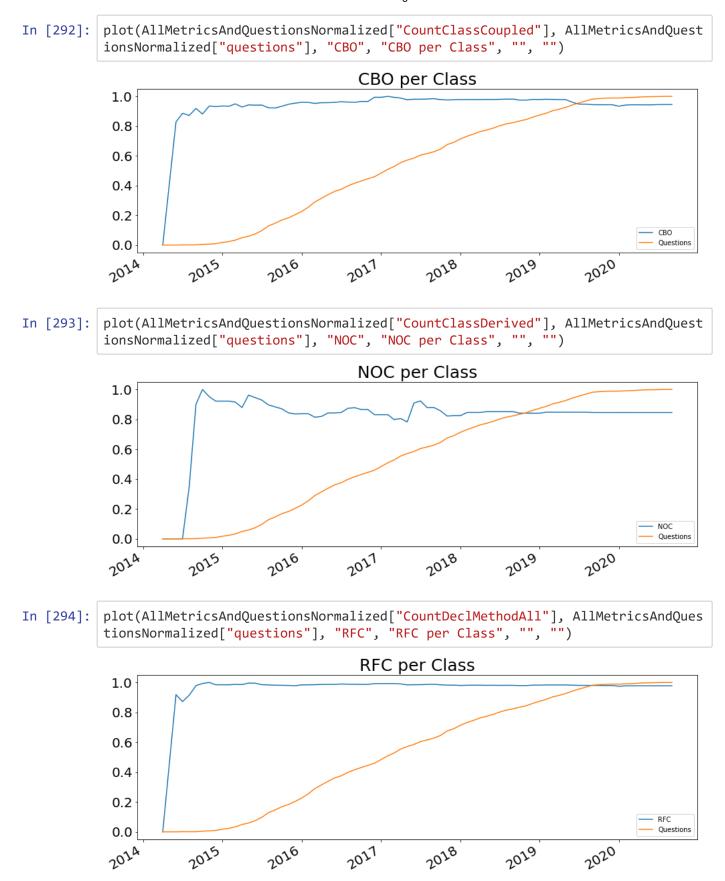
plot(AllMetricsAndQuestionsNormalized["numberJavaFiles"], AllMetricsAndQuestio In [287]: nsNormalized["questions"], "Java Files", "Java Files", "", "")

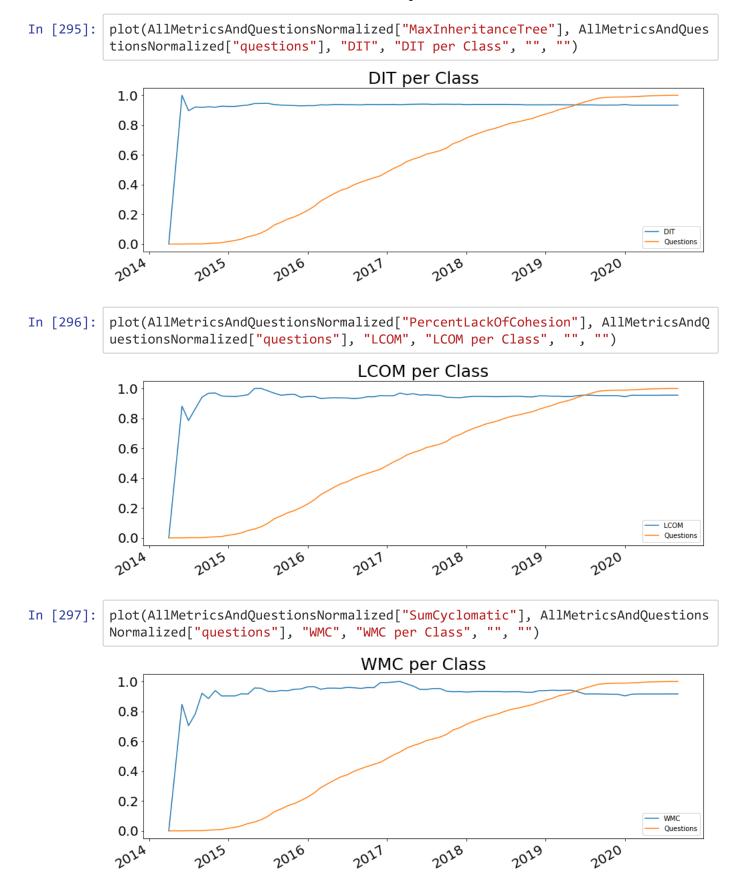


 $\verb|plot(AllMetricsAndQuestionsNormalized["readability"], AllMetricsAndQuestionsNormalized["readability"], AllMetricsAndQuestionsNormal$ In [288]: rmalized["questions"], "Readability", "Readability per Class", "", "")









plot(AllMetricsAndQuestionsNormalized["CountDeclClass"], AllMetricsAndQuestion
sNormalized["questions"], "Classes", "Classes", "") In [298]:

