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| Dependency Metrics |  |
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|  | Software Engineering 22/23 |
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# Introduction

This set of metrics is is composed of 7 individual metrics: Cyclic, Dcy, Dcy\*, Dpt, Dpt\*, Pdcy and PDpt. They are used to evaluate the dependencies in a project.

# Cyclic Dependencies

Table

Description automatically generated

This metric calculates the number of classes or interfaces which each class directly or indirectly depends on, and which in turn directly or indirectly depend on it. In GanttProject’s case, close to 380 classes show 0 to 25 cyclic dependencies and some 450 classes show 490 to 510 cyclic dependencies.

This result only shows how difficult it is to understand and test this project, which matches our experience quite accurately.

# Depedencies by Class

Chart

Description automatically generated with medium confidence

This metric calculates the number of classes or interfaces which each class directly depends on.

The high ammount of direct dependencies could indicate some instances of Shotgun Surgery.

# Transitive Dependencies by Class

Table

Description automatically generated

This metric calculates the number of clases or interfaces which each class direcltly or indirectly depends on. This again proving that there could very well be instances of Shotgun Surgery.

# Dependants by Class

Chart

Description automatically generated with low confidence

This metric calculates the number of classes or interfaces which directly depend on each class.

# Transitive Dependants by Class

Table

Description automatically generated with low confidence

This metric calculates the number of classes or interfaces which directly or indirectly depend on each class.

# Package Dependencies by Class

Chart, histogram

Description automatically generated

This metric calculates the number of packages on which each class directly or indirectly depends.

# Dependant Packages by Class

Chart, table

Description automatically generated

This metric calculates the number of package which directly or indirectly depend on each class.[[1]](#footnote-1)

1. [↑](#footnote-ref-1)