```
public interface Song {
                                                                                                      frq_{IMP}: 1 time
    void sTitle();
                                                                                         W<Composer,Song>=1×s_{IMF}
}//Song is defined in package P1
                                                                         EWM: s_{IMP}=4, OWM: s_{IMP}=10, DWM: \dot{s}_{IMP}=10
class Composer implements Song/*IMP*/ {
     public void sTitle() {
          System.out.println("Composer");
                                                                              Composer
                                                                                                             Song
}//Composer is defined in package P1
                                                                                                       frq<sub>INH</sub>: 1 time
class Copyright extends Composer/*INH*/ {
                                                                                     W<Copyright,Composer>=1×s_{INH}
    public void sTitle() {
                                                                           EWM: s_{INH}=3, OWM: s_{INH}=9, DWM: s_{INH}=10
          System.out.println("Copyright");
}//Copyright is defined in package P1
class Company {
                                                                                                          Propaganda
     public int cCnt;
     public void desc() {
          System.out.println("Company");
                                                                              Copyright
                                                                                             frq_{LVA}: 1 time
                                                                                                                   P2
}//Company is defined in package P3
                                                                                             frq_{RET}: 1 time
class Propaganda {
                                                                                             frq_{INS}: 1 time
     private Company myCompany;/*GVA*/
                                                             W<Propaganda,Copyright>=1×s_{LVA}+1×s_{RET}+1×s_{INS}
     public void setCompany(Company company/*PAR*/)
                                                                                EWM: s_{LVA}=1, s_{RET}=3, s_{INS}=2
          company.cCnt++/*ACC*/;
                                                                                OWM: s_{LVA}=1, s_{RET}=1, s_{INS}=0
                                                                                DWM: s_{LVA}=1, s_{RET}=1, s_{INS}\neq 1
                                                                                                           Company
     public Copyright/*RET*/ getCopyright() {
          Copyright myCopyright/*LVA*/ = new Copyright()/*INS*/;
                                                                                                                   P3
                                                                                                   frq_{GVA}: 1 time
          return myCopyright;
                                                                                                   frq_{PAR}: 1 time
                                                                                                  frq_{ACC}: 2 times
     public void say()
                                                                                                   frq_{MEC}: 1 time
          myCompany.desc()/*MEC*/;
                                                            W<Propaganda,Company>=1 \times s_{GVA} + 1 \times s_{PAR} + 2 \times s_{ACC} + 1 \times s_{MEC}
          myCompany.cCnt++/*ACC*/;
                                                                              EWM: s_{GVA}=3, s_{PAR}=3, s_{ACC}=2, s_{MEC}=2
                                                                            OWM: s_{GVA}=5.5, s_{PAR}=1, s_{ACC}=0, s_{MEC}=1
}//Propaganda is defined in package P2
                                                                              DWM: s_{GVA}=1, s_{PAR}=1, s_{ACC}=1, s_{MEC}=1
```

Fig. 6. A simple Java code snippet (the left part) and its corresponding CSN_{WD} (the right part). The text beside each link denotes the coupling types (i.e., CS) that the link represents, the frq_c of each coupling c, the formula to compute the weight associated with each link, and the s_c of each coupling c.

APPENDIX A A SIMPLE EXAMPLE

Figure 6 gives a simple example to illustrate the idea to build the CSN_{WD} for a Java code snippet. There is one interface (viz. Song) and four classes (viz. Composer, Copyright, Propaganda, and Company) defined in the Java code snippet, and thus we can create five nodes in the CSN_{WD}. Besides, the interface and classes are coupled through ten couplings that have been marked explicitly using comments "/**/" in the code snippet. For example, there exist five couplings from Propaganda class to Company class, i.e., one instance of GVA coupling (cf. private Company myCompany; /*GVA*/), instance of PARcoupling public void setCompany (Company company/*PAR*/)), two instances ACCcCnt++/*ACC*/; couplings (cf. company. myCompany.cCnt++/*ACC*/;), and one instance of MEC coupling (cf. myCompany.desc()/*MEC*/;). Thus, we can create a link from the node of Propaganda class to the node of Company class. Note that though there exist five couplings, we keep only one (cf. Definition 1). Then, the weight associated with this link is computed by $w\langle Propaganda, Company\rangle = 1 \times s_{GVA} + 1 \times s_{PAR} + 2 \times s_{PAR}$ $s_{ACC} + 1 \times s_{MEC}$. If we use DWM to assign the weights, then $w \langle Propaganda, Company \rangle = 1 \times 1 + 1 \times 1 + 2 \times 1 + 1 \times 1 = 5.$ Other links in the CSN_{WD} can be similarly created.