Algorithm 1: Checking compatibility

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1 $L \leftarrow \{l_a, l_b, l_c, ...\}$
   ```
   /* Set of licenses                                          */
   ```
2 $C \leftarrow \{C_{la}, C_{lb,...}\}$
   ```
   /* The way to relicense derivative works, C_li =1 means permissive
      license, 2 means file-level weakly restricted license License,
      3 means library-level weakly restricted license, and 4 means
      restricted license                                        */
   ```
3 $P \leftarrow \{p_{Interaction}, p_{Retain}, p_{Enhance}, p_{Modification}, p_{Acceptance}, p_{Patent\_termi}\}$
   ```
   /* The set of compatibility determination conditions          */
   ```
4 $SP_{li} \leftarrow \{p|p \in P, li \in L\}$
   ```
   /* The open source license li contains the set of decision
      conditions in P                                          */
   ```
5 $FV_{li} \leftarrow \{lx|lx \in L\}$
   ```
   /* Set of compatible subsequent versions of license li        */
   ```
6 $SL_{li} \leftarrow \{lm|lm \in L\}$
   ```
   /* Set of secondary licenses of license li                   */
   ```

   Input: $l_a, l_b \in L$
   Output: $SecondaryCompatibility_{a \rightarrow b}, CombinativeCompatibility_{a \rightarrow b}$

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7 **if** $C_{la} == 1 \&\& SP_{la} \subseteq SP_{lb}$ **then**
8 $\quad |\quad SecondaryCompatibility_{a \rightarrow b} \leftarrow 1$
9 **if** $C_{la}, C_{lb} \in \{2, 3, 4\} \&\& (lb \in FV_{la} || lb \in SL_{la})$ **then**
10 $\quad |\quad SecondaryCompatibility_{a \rightarrow b} \leftarrow 1$
11 **if** $C_{la} \in \{1, 2, 3\} \&\& C_{lb} \in \{1, 2\}$ **then**
12 $\quad |\quad CombinativeCompatibility_{a \rightarrow b} \leftarrow 1$
13 **return** $SecondaryCompatibility_{a \rightarrow b}, CombinativeCompatibility_{a \rightarrow b}$