Algorithm 1: Semantic anatomization clustering algorithm

Input : Knowledge graph G
Sensitive predicate p

Output: A list L_2 containing the clusters to be used to apply anatomization

$L_1 \leftarrow retrieve\ the\ initial\ clusters\ from\ G\ using\ p$;
$L_2 \leftarrow empty\ list$;
while L_1 *not empty* **do**
    $first \leftarrow$retrieve the first cluster from L_1;
    $L_1 \leftarrow L_1/\{first\}$;
    $best\_similarity \leftarrow 0$;
    foreach *c in* L_1 **do**
        $similarity \leftarrow$
         $compute\ taxonomy\ similarity\ between$ first $and\ c$;
        if $similarity > best\_similarity$ **then**
            $best\_similarity \leftarrow similarity$;
            $closest \leftarrow c$;
            $in\_L_1 \leftarrow True$;
    foreach *c in* L_2 **do**
        $similarity \leftarrow$
         $compute\ taxonomy\ similarity\ between$ first $and\ c$;
        if $similarity > best\_similarity$ **then**
            $best\_similarity \leftarrow similarity$;
            $closest \leftarrow c$;
            $in\_L_1 \leftarrow False$;
    $new\_cluster \leftarrow merge(first, closest)$;
    if in_L_1 **then**
        $L_1 \leftarrow L_1/\{closest\}$;
    else
        $L_2 \leftarrow L_2/\{closest\}$;
    $L_2 \leftarrow L_2 \cup \{new\_cluster\}$;
RETURN L_2