

```
preprocess_repository = {
foreach( $O_1, O_2$ ) in repository
match_ontologies  $O_1, O_2$ 
end
}

match_ontologies  $O_1, O_2$  = {
mapping =NeonToolKit( $O_1, O_2$ )
 $C_1$  = extract_concept_from ( $O_1$ )
 $C_2$  = extract_concept_from ( $O_2$ )
th = threshold( $C_1, C_2$ )
if (th >  $th_s$ ) create_hypermatching_record  $H_r$ 
store_in_ hypermatching_record( $C_1, C_2, H_r$ )
end
}

Clean_hypermatching_record = {
Foreach hypermatching_record  $H_r$ 
Present_to_expert
if (expert_set_valid_mapping = false) delete  $H_r$  from hypermatching_record
else
continue to  $H_{r+1}$ 
end
}

Hypersubsummed = get_subsumed_with_hypermappings( $C_1, C_2$ )

compute_hypermodule( $H_r$ ){

foreach  $H_r$       Hyper_matching_record
    get_matching_concept ( $C_1, C_2$ )
    hypersubsummed = get_subsumed_with_hypermappings( $C_1, C_2$ )
    hypersubsummer = get_subsummer_with_hypermappings( $C_1, C_2$ )
if empty (hypersubsummed and hypersubsummer){
    mono_module_record ( $C_1, C_2, H_r$ )

                else
                store_in_multi_module_record ( $C_1, C_2, H_r$ )
endif
}
foreach ( $C_1, C_2$ ) in multi_module_record ( $C_1, C_2, H_r$ )
get_all_concepts_in_multimodule_record(c)
if ( $C_1$  subsumes_some_c = true and  $C_1$  subsumed_some_c = false) {
    upper_bound = ( $C_1, H_r$ )
    else
    if ( $C_1$  subsumes_some_c = false and  $C_1$  subsumed_some_c = true) {
        lower_bound = ( $C_1, H_r$ )
    }
endif
}
set_hypermodules(upper_bound  $H_r$ , lower_bound  $H_r$ , multimodule_record)

}
end
```