10.01.2023

Laboratory 7

9. Write a function that removes all occurrences of an atom from any level of a list.

$$myRemoveAtom(atom, l_1 \dots l_n) = \begin{cases} nil, & \text{if } n = 0 \\ myRemoveAtom(atom, l_1 \dots l_n), & \text{if } l_1 \text{ is a list} \\ nil, & \text{if } l_1 = atom \\ l_1 l_2' \dots l_n, & \text{otherwise} \end{cases}$$

where $l_1 \dots l_n$ is the sublist

$$myMain(atom, l_1 l_2 \dots l_n) = myRemoveAtom(atom, l_1 \dots l_n)$$

* Test Prolog

Write a function to sort a linear list without keeping the double values.

$$myInsert(l_1 l_2 \dots l_n, e) = \begin{cases} \{e\}, & \text{if } n = 0 \\ l_1 l_2 \dots l_n, & \text{if } l_1 = e \\ \{e\} \cup l_1 l_2 \dots l_n, & \text{if } e < l_1 \\ \{l_1\} \cup myInsert(l_2 \dots l_n, e) \end{cases}$$

$$mySort(l_1 l_2 \dots l_n) = \begin{cases} nil, & \text{if } n = 0 \\ myInsert(mySort(l_2 \dots l_n), l_1), & \text{otherwise} \end{cases}$$