15.11.2022

Laboratory 4

3. Write a predicate to determine all decomposition of n (n given, positive), as sum of consecutive natural numbers.

$$oneSol(n, i) = \begin{cases} \emptyset, & \text{if } n = 0 \\ i \oplus oneSol(n-i, i+1), & \text{otherwise} \end{cases}$$

$$decomposition(n, i) = \begin{cases} oneSol(n, i), & \text{if } i < n \\ decomposition(n, i+1), & \text{if } i < n \end{cases}$$

* Test Prolog

Given a numerical linear list consisting of integers, delete all elements from N to N.

$$removeElement(l_1 l_2 \dots l_n, e) = \begin{cases} \emptyset, & \text{if } n = 0 \\ \{l_1\} \cup removeElement(l_2 \dots l_n, e), & \text{if } l_1 \neq e \\ removeElement(l_2 \dots l_n, e), & \text{if } l_1 \equiv e \end{cases}$$