Lab Assignment 4

CS 362 – Principles of Programming Languages II

Winter 2018

Problems

- Implement a predicate `median(A, B, C, X)` stating that `X` is the median of the numbers `A`, `B`, and `C`.
- Implement a predicate `contains(L, X)` stating that the list `L` contains `X`, i. e., $\texttt{X} \in \texttt{L}$.
- Implement a predicate `largerEqual(L, X)` stating that `X` is larger than or equal to every element in the list `L`. Formally, it should be equivalent to the statement $\forall\, y \in \texttt{L}\colon \texttt{X} \geq y$.
- Implement a predicate `max(L, X)` stating that `X` is the maximum of the numbers in the list `L`. Your predicate should be made of a single rule using only the predicates `contains` and `largerEqual`.

To compare two numbers `X` and `Y`, you can use `X =< Y` to check if $\texttt{X} \leq \texttt{Y}$, `X >= Y` to check if $\texttt{X} \geq \texttt{Y}$, `X = Y` to check if $\texttt{X} = \texttt{Y}$, and `X =\= Y` to check if $\texttt{X} \neq \texttt{Y}$.

Submission

Write your implementation in a single `.pl`-file and upload it to canvas.

This is an individual assignment. Therefore, a submission is required from each student.

Deadline: Sunday, February 11, 11:59 pm.