IIT Guwahati, Dept of CSE, CS331: Prog. Lang Lab
Assignment V: Basic Prolog Programming

Deadline: 11.55 PM IST, 1ˢᵗ April 2025 (Demo on 2ⁿᵈ April 2025)

- Write a Prolog predicate **has_duplicates(X)** that is true if **list** X contains duplicated elements (that is at least 2 copies of an element).

  For instance (user input)

  ```
  ?- has_duplicates([a,e,j,b,d,s,e]).
  Yes

  ?- has_duplicates([a,b,d,s,e]).
  No

  ?- has_duplicates([]).
  No
  ```

- Write a Prolog predicate to find sqaure root of positive number: sqaureroot (X, result, accuracy), where |result*result-X| <accuracy. Initialize result with X/3 and iterate to find the sqaure root.