## 1 Syntax

The minimal syntax, may extend someday.

```
letter
                   a..z | A..Z
             ::=
ident
                   letter {letter}
             ::=
                   forall binder {binder}, term
term
             ::=
                   fun {binder} => term
                   fix name fix_body
                   let ident {binder} :term := term in term
                   term \rightarrow term
                   term arg {arg}
                   {\tt match}\ term\ {\tt with}
                      { | equation}
                   end
                   sort
                   (term)
                   term
arg
             ::=
binder
                  name: term
             ::=
name
             ::=
                   ident
sort
                  Prop | Set | Type
             ::=
fix_body
                  ident {binder} :term := term
             ::=
                   pattern => term
equation
             ::=
pattern
                  ident {name}
             ::=
                   axiom
sentence
             ::=
                   definition
                   inductive
                   fixpoint
                   assertion proof
assumption
             ::=
                  Axiom ident: term.
definition
                  Definition ident {binder} : term := term .
             ::=
inductive
                   Inductive ident {binder} : term :=
             ::=
                      { | ident {binder} : term} .
                   Theorem ident {binder}: term.
assertion
             ::=
proof
             ::=
                  Proof . {tactic .} Qed .
```

tactic ::= applying

| context\_managing | case\_analyzing | rewriting | computing | equality

applying := exact term

apply term [in ident]

 $context\_managing ::= intro [ident]$ 

intros

 $case\_analyzing ::= destruct term$ 

induction term

rewriting ::= rewrite [ <- | ->] term [ in term]

computing ::= simpl

 $equality \qquad \qquad ::= \quad \texttt{reflexivity}$ 

symmetry

helper ::= printing

proof\_handling

printing ::= Print ident.

Check term .

 $proof\_handling ::= Undo.$ 

Restart. Admitted.

Abort.