```
passed: myfoo not defined
Testing starray
     — properties/sub-structures, one definition at a time —
   STtest
   passed: dup detected
   STtestX
   passed: new done!
   adding struct ZX to STtest.TT
   passed: defined correctly!
   STtest.TT Zy=TT Zy-default
   passed
   STtest.TTT Zy(err)=TT Zy-default
   passed: err detected
     — Extending def structure of an already instantiated starray —
        Note: it will loop if not fixed!
     — Fixing it —
        Note: STtest def \show shall appear in logs (if fixed)
   >{STtest} struct =>
       \{X\} => \{X-default\}
       \{Y\} => \{Y\text{-default}\}
       \{SS\} struct =>
         \{Z\} => \{SS Z - default\}
         \{Zx\} => \{SS Zx-default\}
         \{YY\} => \{YY\text{-default}\}
         {ZsX}  struct =>
            {ZsXa} => {SS ZsX ZsXa-default}
   >
            {Zsxb} = {SS ZsX ZsXb-default}
         \{TTy\} struct =>
   >
   >
            \{TTyZsXa\} \ => \ \{TTyTT\text{-}ZsXa\text{-}default\}
            \{TTyZsxb\} => \{TTyTT-ZsXb-default\}
            {Z} => {TTy-Z-default}
       \{TT\} struct =>
         \{Z\} =  \{TT Z - default\}
         {Zx} => {TT Zx-default} 
{Zy} => {TT Zy-default}
         \{ZX\} struct =>
            {ZXa} => {TT Zx ZXa-default}
            \{Zxb\} => \{TT Zx ZXb\text{-default}\}
        Note: STtest terms \show shall appear in logs (if fixed)
        Note: STtest.SSX (err/warning) shall be in logs:
     — testing term—syntax function—
   STtest.TT.ZXx (err)
   passed: err detected
   STtest.TT.ZX (correct)
   passed
     — Texting expandable predicates and command —
   passed: myfoo isn't defined
   passed: myfoo isn't defined
   passed: STtest.TT.ZX is a starray
```

```
executing term syntax:n (no output)
   This is ZXa: «TT Zx ZXa-default» (using 'parsed' one)
     — expandable cnt/iter commands —
   The current cnt:2(using 'parsed' one)
   passed: cnt isn't 0
   The current iter:2(using 'parsed' one)
   passed: iter is 2
   passed: myfoo not a prop of
   passed: ZXa is prop
   passed: ZXa is true
     — Texting expandable predicates and command with parsed ref
variables -
   executing term syntax:nNN (no output refA)
executing term syntax:nNN (no output refB)
   This is ZXa: «TT Zx ZXa-default» (using 'refA' one)
     — expandable cnt/iter commands —
   The current cnt:2(using 'refA' one)
   passed: cnt isn't 0
   The current iter:1(using 'refB' one)
   passed: iter is 1
   The current iter:2(using 'refA' one)
   passed: iter is 2
   (using refA):
   passed: myfoo not a prop of
   (using refA):
   passed: ZXa is prop
   (using refB):
   passed: ZXa wasn't found
   passed: ZXa is true
     — testing get_prop functions —
       Note: This is (default) 'X' property from ST test[hah] term:
   X-default
        Note: Same with a token-list variable
   X-default
        Note: Same with 'branching'
   X:X-default
   passed: X found correctly
   Xt:
```

```
passed: Xt don't exist
     Note: (same) testing \...if_in:
passed: X exists
passed: Xty don't exit
  — Testing iter functions —
Current STtest iter:
     Note: direct access:2
     Note: using a tmp var:2
     Note: reseting iter
iter:1
     Note: next iter
iter:2
     Note: next iter
iter:2
     Note: set iter hash
iter:1
     Note: set iter->5
iter:2
     Note: set iter->0
iter:1
  — Testing iter functions with branching —
Current STtest iter:
passed: got: 1
iter from STtestY (err):
passed: syntax err OK
     Note: reseting iter
passed
iter:1
     Note: next iter
passed
iter:2
     Note: next iter
passed: 'saturated'
iter:2
     Note: set iter hash
passed: hash found
iter:1
     Note: set iter->5
passed: 'over'
iter:2
     Note: set iter->0
passed: 'under'
iter:1
     Note: set iter->2
passed
iter:2
  — Testing cnt functions —
Current STtest cnt:
     Note: direct access:2
     Note: using a tmp var:2
  — Testing cnt function with branching —
Current STtest cnt:
passed: got: 2
Current\ STtestX\ cnt:
passed: got: 0
Current STtestY cnt:
passed: non existant
```

```
— Testing _if_in function —
passed: X found
passed: G not found
  — Testing term syntax function —
STtest[2].TT is:
passed: correct
STtest[1].TT is:
passed: wasn't instantiated
STtest[1].GG is:
passed: not correct
 — Testing (g)set prop functions —
STtest[2].TT.Z current value: TT Z-default
STtest[2].TT.Z new value: newZ value
  — Testing (g)set prop inside a group —
STtest[2].TT.Z inside: newZ inside group
STtest[2].TT.Z ouside: newZ value
STtest[2].TT.Z inside gset: newZ gset inside group
STtest[2].TT.Z ouside: newZ gset inside group
  — Testing (g)set prop functions —
STtest[2].TT.Z current value: newZ gset inside group
STtest[2].TT.Z new value: newZ value
  — Testing (g)set prop inside a group —
STtest[2].TT.Z inside: newZ inside group
STtest[2].TT.Z ouside: newZ value
STtest[2].TT.Z inside gset: newZ gset inside group
STtest[2].TT.Z ouside: newZ gset inside group
  — Testing (g)set prop functions with branching —
STtest[2].TT.Z current value: newZ gset inside group
passed: new value: newZZZZ value
  — Testing (g)set_prop inside a group —
passed: new value: newZ inside group
STtest[2].TT.Z ouside: newZZZZ value
passed: new value: newZ gset inside group
STtest[2].TT.Z ouside: newZ gset inside group
setting:STtest[1].TT (err, not instantiated)
passed: correct, no instance
  — set prop:nnV inserting a sequence as a property —
    Note: the 2 (equal) sequences shall be in log (\show)
  — defining/setting from keyval —
  — setting from keyval with branching —
passed: correct
  — setting from keyval with branching II —
passed: correct
student definition:
>{student} struct =>
    \{first\} \ => \ \{-first-\}
    \{last\} => \{-last-\}
   {\text{name}} => {\text{-full-name-}}
   \{article\} => \{o(a)\}
   {\text{narticle}} => {(a)}
   \{Article\} => \{O(A)\}
   {\text{Narticle}} => {(A)}
```

```
\{Nproc\} => \{--\}
         \begin{array}{ll} \{\mathrm{ID}\} &=> & \{--\} \\ \{\mathrm{email}\} &=> & \{--\} \end{array} 
   >
   >
         \{advisor\}\ struct =>
           \{first\} => \{-first-\}
           \{last\} => \{-last-\}
           \{name\} \ => \ \{-full-name-\}
           \{article\} => \{o(a)\}
    >
           {\text{narticle}} => {(a)}
    >
   >
           \{Article\} => \{O(A)\}
    >
           {Narticle} => {(A)}
    >
           \{institution\} => \{-inst-\}
   >
>
           \{titleinfo\} => \{-info-\}
           \{\text{email}\} => \{--\}
   >
           \{\text{phone}\} => \{--\}
   >
>
>
           \{\text{somedata}\}\ \text{struct}\ =>
              \{fieldA\} => \{field-Ax\}
              \{fieldB\} => \{field-B\}
   >
              \{ fieldC \} => \{ field-C \}
   >
>
>
              {fieldD} => {field-D}
         {reviewers} struct =>
           \{first\} => \{-first-\}
   >
           \{last\} => \{-last-\}
           {name} => {-full-name-} 
{article} => {o(a)}
    >
   >
    >
           {\text{narticle}} => {(a)}
    >
           {Article} => {O(A)}
           {Narticle} => {(A)}
           \{institution\} => \{-inst-\}
           \{titleinfo\} => \{-info-\}
           \{\text{email}\} = \{ -\} 
\{\text{phone}\} = \{ -\} 
student current terms:
   >{student[1]} (idx: A) =>
    > \{first\} => \{first name\}
       \{last\} = \{last name\}
        {\text{name}} = {\text{-full-name-}}
        \{article\} => \{o(a)\}
   >
        {\text{narticle}} => {(a)}
        \{Article\} => \{O(A)\}
   >
        {Narticle} => {(A)}
   >
        \{\text{Nproc}\} = \{-\}
   >
   >
        {\mathrm{ID}} => {\mathrm{--}}
         \{email\} => \{\}
   >
   >
         \{advisor[1]\}\ (idx:\ A) =>
           \{first\} => \{advisorA first name\}
   >
   >
           {last} => {advisorA last name}
   >
           \{name\} => \{-full-name-\}
           \{article\} => \{o(a)\}
           \{\text{narticle}\} => \{(a)\}
           \{Article\} => \{O(A)\}
           {\text{Narticle}} => \{(A)\}
           \{institution\} => \{-inst-\}
           \{titleinfo\} => \{-info-\}
           \{\text{email}\} => \{--\}
           \{phone\} => \{--\}
           \{somedata[1]\}\ (idx:\ A) =>
              \{fieldA\} => \{field-Ax\}
              {fieldB} => {field-B}
```

```
\{fieldC\} => \{field-C\}
             \{ fieldD \} => \{ field-D \}
>
>
      \{advisor[AB]\}\ (idx:\ A) =>
         \{first\} => \{advisorA first name\}
          {last} => {advisorA last name}
          \{name\} => \{-full-name-\}
          \{article\} => \{o(a)\}
          \begin{cases} \text{(a)} \\ \text{(a)} \end{cases} 
 \begin{cases} \text{Article} \end{cases} => \begin{cases} \text{(a)} \\ \text{(A)} \end{cases} 
 \begin{cases} \text{(A)} \end{cases} 
 \begin{cases} \text{(A)} \end{cases} 
>
>
>
>
          \{institution\} => \{-inst-\}
>
          \{titleinfo\} => \{-info-\}
          \{email\} => \{--\}
>
         \{phone\} => \{--\}
>
         {somedata[1]} (idx: A) =>
>
             \{ fieldA \} => \{ field-Ax \}
>
>
>
             \{ fieldB \} => \{ field-B \}
             \{ \text{fieldC} \} = \} \{ \text{field-C} \}
>
             \{ fieldD \} => \{ field-D \}
>
>
>
      \{advisor[2]\}\ (idx:\ B) =>
         \{first\} => \{student2set first name\}
          {last} => {student2set last name}
         {name} => {-full-name-}
>
          \{article\} => \{o(a)\}
>
         {\text{narticle}} => {(a)}
>
>
         \{Article\} => \{O(A)\}
>
         {Narticle} => {(A)}
>
          \{institution\} => \{-inst-\}
>
          \{titleinfo\} => \{-info-\}
         {email} => {—} {phone} => {—}
>
>
> > > > > > >
          \{\text{somedata}[1]\}\ (\text{idx: A}) =>
             \{fieldA\} => \{field-Ax\}
             \{fieldB\} => \{field-B\}
             \{ fieldC \} => \{ field-C \}
             {fieldD} => {field-D}
         \{somedata[2]\}\ (idx:\ B) =>
             {fieldA} => {field-Ax}
>
>
>
             \{ \text{fieldB} \} => \{ \text{field-B} \}
             \begin{array}{ll} \left\{ \mathrm{field}\,\mathrm{C} \right\} &=> & \left\{ \mathrm{field}\text{-C} \right\} \\ \left\{ \mathrm{field}\,\mathrm{D} \right\} &=> & \left\{ \mathrm{field}\text{-D} \right\} \end{array}
      \{reviewers[1]\}\ (idx:\ A) =>
>
         \{first\} => \{reviewerI first name\}
          {last} => {reviewerI last name}
>
          \{name\} => \{-full-name-\}
>
          \{article\} => \{o(a)\}
>
>
         { \operatorname{narticle} } => { (a) } 
 { \operatorname{Article} } => { (O(A) } 
          {\text{Narticle}} => \{(A)\}
          \{\text{institution}\} = \{-\text{inst-}\}
          \{ \text{titleinfo} \} => \{ -\text{info} - \} 
          \{\text{email}\} => \{--\}
          \{\text{phone}\} = \{\overline{-}\}
```