

051: contextorder2.hs

↑ up

- issued: 2020-04-28
- 分類: A サンプルコードが fail
- status: Open

概要

instance 宣言における型変数の出現順序に関するもの。以下のプログラムがエラーとなる:

```
data Pair a b = Pair a b

instance (Show a, Show b) => Show (Pair b a) where
  show (Pair x y) = "Pair " ++ show x ++ " " ++ show y

main = print (Pair 1 'x')
```

調査ログ

2020-12-17 (Thu)

bunny 0.9.0 での実行結果:

```
$ bunny testrun contextorder2.hs
/home/unno/bunny/0.9.0/bin/bunnyc -d ./jout/contextorder2 --xno-implicit-prelude /home/unno/bunny/0.
/home/unno/bunny/0.9.0/bin/bunnyc -d ./jout/contextorder2 --xlibrary-path /home/unno/bunny/0.9.0/lib
Not a BoxedCharObj:AtomExpr(a=Var(obj=1 :: Integer))
Exception in thread "main" java.lang.AssertionError
    at jp.ne.sakura.uhideyuki.brt.runtime.RTLib.toJString(RTLib.java:98)
    at jp.ne.sakura.uhideyuki.brt.runtime.PutStrLnFunc.call(RTLib.java:29)
    at jp.ne.sakura.uhideyuki.brt.runtime.EvalApply.evalFun(RT.java:243)
    at jp.ne.sakura.uhideyuki.brt.runtime.EvalApply.runStep(RT.java:60)
    at jp.ne.sakura.uhideyuki.brt.runtime.EvalApply.eval(RT.java:18)
    at jp.ne.sakura.uhideyuki.brt.runtime.RT.eval(RT.java:292)
    at Sample.main(Sample.java:6)
```

2021-01-13 (Wed)

--ddump-core してみる。

Pair 向け Show の実体では、辞書を a, b の順番でうけとって、つかうのは b, a 順となっている :

```
(Main.Pair%I.show :: ([Prelude.Show t64,Prelude.Show t65] :=> ((Main.Pair t65) t64) -> [Prelude.Char])
  \ (Main.Pair%I.show.DARG0 :: ^^c3^84) (Main.Pair%I.show.DARG1 :: ^^c3^84) ->
  \ (_Main.Pair%I.show.U1 :: ([Prelude.Show t50,Prelude.Show t51] :=> ((Main.Pair t51) t50))) -
  case (_Main.Pair%I.show.U1 :: ([Prelude.Show t50,Prelude.Show t51] :=> ((Main.Pair t51)
    Main.Pair (_Main.Pair%I.show.U2 :: t52) (_Main.Pair%I.show.U3 :: t53) :: (t52 -> (t5
      (((Prelude.++ :: ([t55] -> ([t55] -> [t55]))))
        "Pair ")
      (((Prelude.++ :: ([t56] -> ([t56] -> [t56]))))
        (((Prelude.show :: ([Prelude.Show t57] :=> (t57 -> [Prelude.Char])))
          (Main.Pair%I.show.DARG1 :: ^^c3^85))
          (_Main.Pair%I.show.U2 :: t52)))
        (((Prelude.++ :: ([t60] -> ([t60] -> [t60]))))
          " ")
        (((Prelude.show :: ([Prelude.Show t61] :=> (t61 -> [Prelude.Char])))
          (Main.Pair%I.show.DARG0 :: ^^c3^85))
          (_Main.Pair%I.show.U3 :: t53))))))
```

一方、渡す側では Pair に渡す順番で CompositDict を構成している :

```
(Main.main :: (Prelude.IO Prelude.())) =
  (((Prelude.print :: ([Prelude.Show t1] :=> (t1 -> (Prelude.IO Prelude.()))))
    (CompositDict ${Main.Pair Prelude.Show} [ ${Prelude.Integer Prelude.Show}, ${Prelude.Char Prelude.Show} ]))
  (((Main.Pair :: (t2 -> (t3 -> ((Main.Pair t2) t3))))
    (((Prelude.fromInteger :: ([Prelude.Num t4] :=> (Prelude.Integer -> t4)))
      ${Prelude.Integer Prelude.Num})
      (1 :: Prelude.Integer))) 'x'))
```

これ、Rename の段階で instance (Show a, Show b) => Show (Pair b a) where を instance (Show b, Show a) => に書き換えてやれば、つじつまが合うんじゃないかな。

2021-10-24 (Sun)

全件確認シリーズ :

```
unno@unno-FMVD70GN7G ~/work/bissues/051
```

```
$ cat contextorder2.hs
```

```
data Pair a b = Pair a b
```

```
instance (Show a, Show b) => Show (Pair b a) where
```

```
  show (Pair x y) = "Pair " ++ show x ++ " " ++ show y
```

```
main = print (Pair 1 'x')
```

```
unno@unno-FMVD70GN7G ~/work/bissues/051
```

```
$ runhaskell contextorder2.hs
```

```
Pair 1 'x'
```

```
unno@unno-FMVD70GN7G ~/work/bissues/051
```

```
$ ~/prj/bunny/compiler/bin/bunny testrun contextorder2.hs
```

```
/home/unno/prj/bunny/compiler/bin/bunnyc -d ./jout/contextorder2 --xno-implicit-prelude /home/unno/p
```

```
/home/unno/prj/bunny/compiler/bin/bunnyc -d ./jout/contextorder2 --xlibrary-path /home/unno/prj/bunn
```

```
Not a BoxedCharObj:AtomExpr(a=Var(obj=1 :: Integer))
```

```
Exception in thread "main" java.lang.AssertionError
```

```
    at jp.ne.sakura.uhideyuki.brt.runtime.RTLib.toJString(RTLib.java:98)
```

```
    at jp.ne.sakura.uhideyuki.brt.runtime.PutStrLnFunc.call(RTLib.java:29)
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    at jp.ne.sakura.uhideyuki.brt.runtime.EvalApply.evalFun(RT.java:243)
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    at jp.ne.sakura.uhideyuki.brt.runtime.EvalApply.runStep(RT.java:60)
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```
    at jp.ne.sakura.uhideyuki.brt.runtime.EvalApply.eval(RT.java:18)
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```

```
    at Sample.main(Sample.java:6)
```

ランタイムエラーになっているよう。