Bug Hunting: Data

Each piece of code below contains a bug (won't compile), a style problem (code runs, but is written badly) or both. Can you find them all?

| **#1** | ```
My_datastructure =
    game(score :: Number,
         playerX :: Number,
         targetX :: Number,
         dangerX :: Number)
``` | **No data or pipe ( | ),**<br>**= instead of colon( : ), no end statement**<br><br>```
data My_datastructure:
 | game(score :: Number,
        playerX :: Number,
        targetX :: Number,
        dangerX :: Number)
end
``` |
| **#2** | ```
data LocationState:
   | locationState(x :: Number,
                   y :: Number)
end
``` | **Type name and constructor function cannot be the same**<br><br>```
data LocationState:
    | location(x :: Number,
               y :: Number)
end
``` |
| **#3** | ```
location(640, 480) = MY-LOCATION



START-LOCATION = location(30 70)
``` | **Name definition cannot come before value**<br>```
MY-LOCATION = location(640, 480)
```<br><br>**No commas**<br>```
START-LOCATION = location(30, 70)
``` |
| **#4** | ```
data CakeT:
   | cake(flavor,
          layers,
          is-iceCream)
end
``` | **Fields do not include data types**<br><br>```
data CakeT:
   | cake(flavor :: String,
          layers :: Number,
          is-iceCream :: Boolean)
end
``` |
| **#5** | ```
data Vehicle:
   | vehicle(model :: String,
            year  :: Number,
            color :: String,
            price :: Number)
end

old-car =
vehicle("Honda", "red", 10000, 1992)

new-car =
vehicle(Tesla, 2017, blue, 120000)
``` | **Instance fields are placed in the wrong order, according to the data definition**<br><br>```
old-car =
vehicle("Honda", 1992, "red", 10000)
```<br><br>**No quotes around string values for model and color**<br>```
new-car =
vehicle("Tesla", 2017, "blue",
120000)
``` |