Lab 1

```
# install.packages('UsingR')
library(UsingR)
data(normtemp)
```

Use the normtemp dataset to answer the following:

Determine the following statistics for the variable temperature:

Minimum: 96.30

Maximum: 100.80

Mean: 98.25

Standard Deviation: 0.7331832

```
summary(normtemp)
```

```
##   temperature         gender          hr
##  Min.   : 96.30   Min.   :1.0   Min.   :57.00
##  1st Qu.: 97.80   1st Qu.:1.0   1st Qu.:69.00
##  Median : 98.30   Median :1.5   Median :74.00
##  Mean   : 98.25   Mean   :1.5   Mean   :73.76
##  3rd Qu.: 98.70   3rd Qu.:2.0   3rd Qu.:79.00
##  Max.   :100.80   Max.   :2.0   Max.   :89.00
```

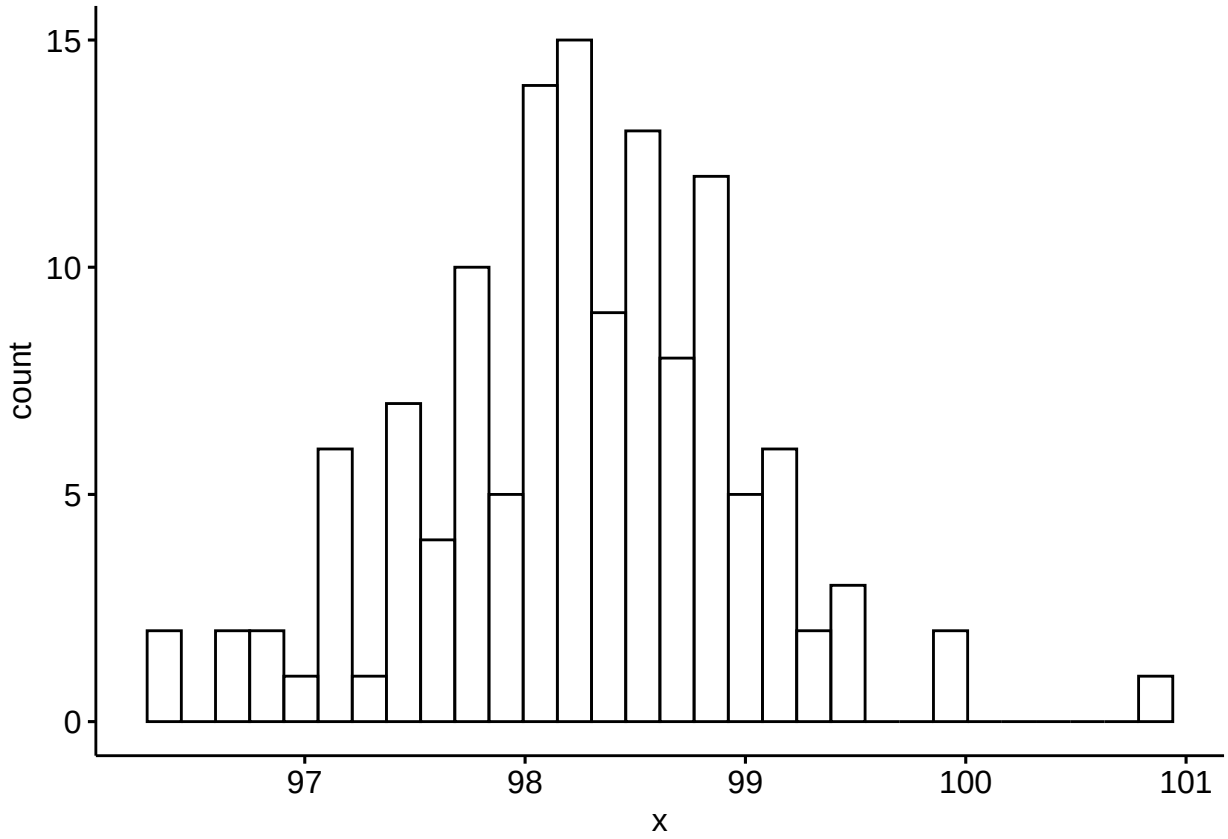
```
sd(normtemp$temperature)
```

```
## [1] 0.7331832
```

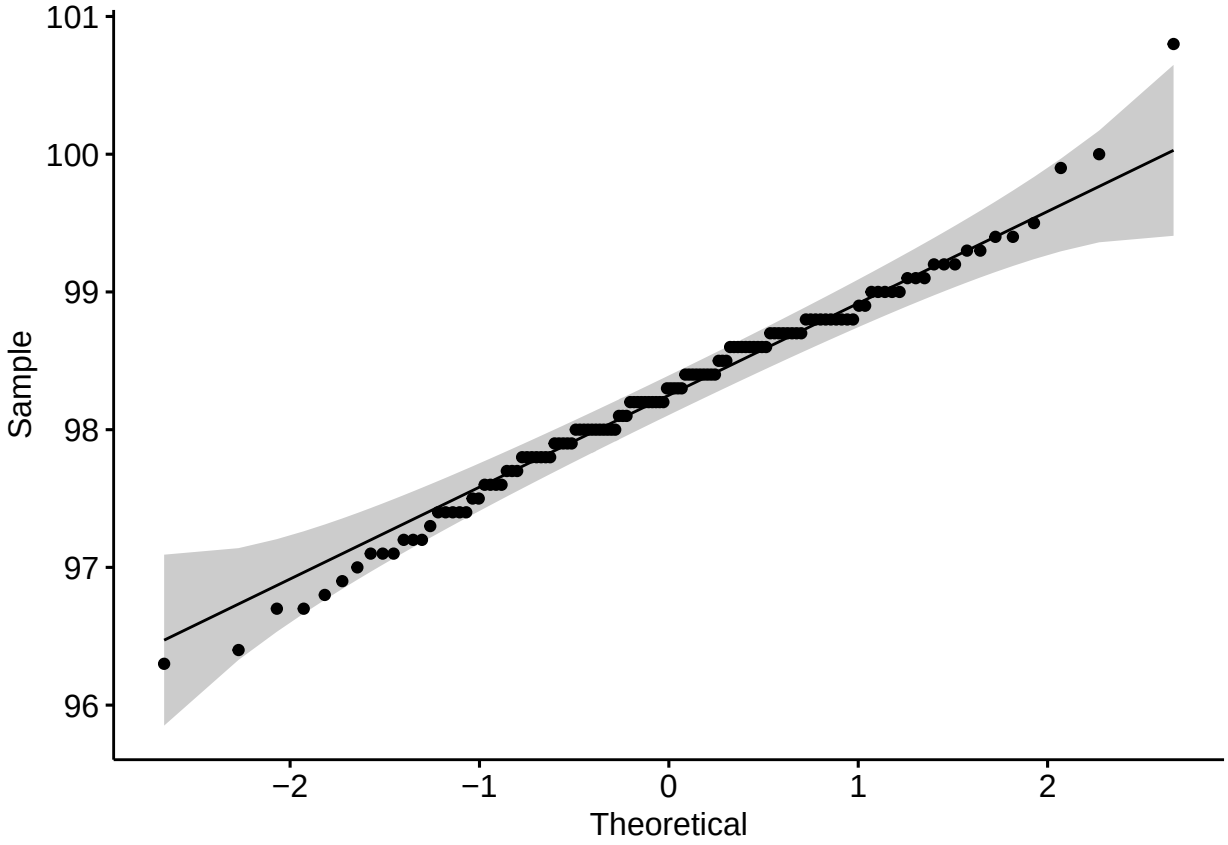
Does temperature appear to be normally distributed?

Yes, the distribution of temperature looks to be Normally distributed visually.

```
# install.packages("ggpubr")
library(ggpubr)
gghistogram(normtemp$temperature) # Use ggpubr gghistogram to speed up graph making
```



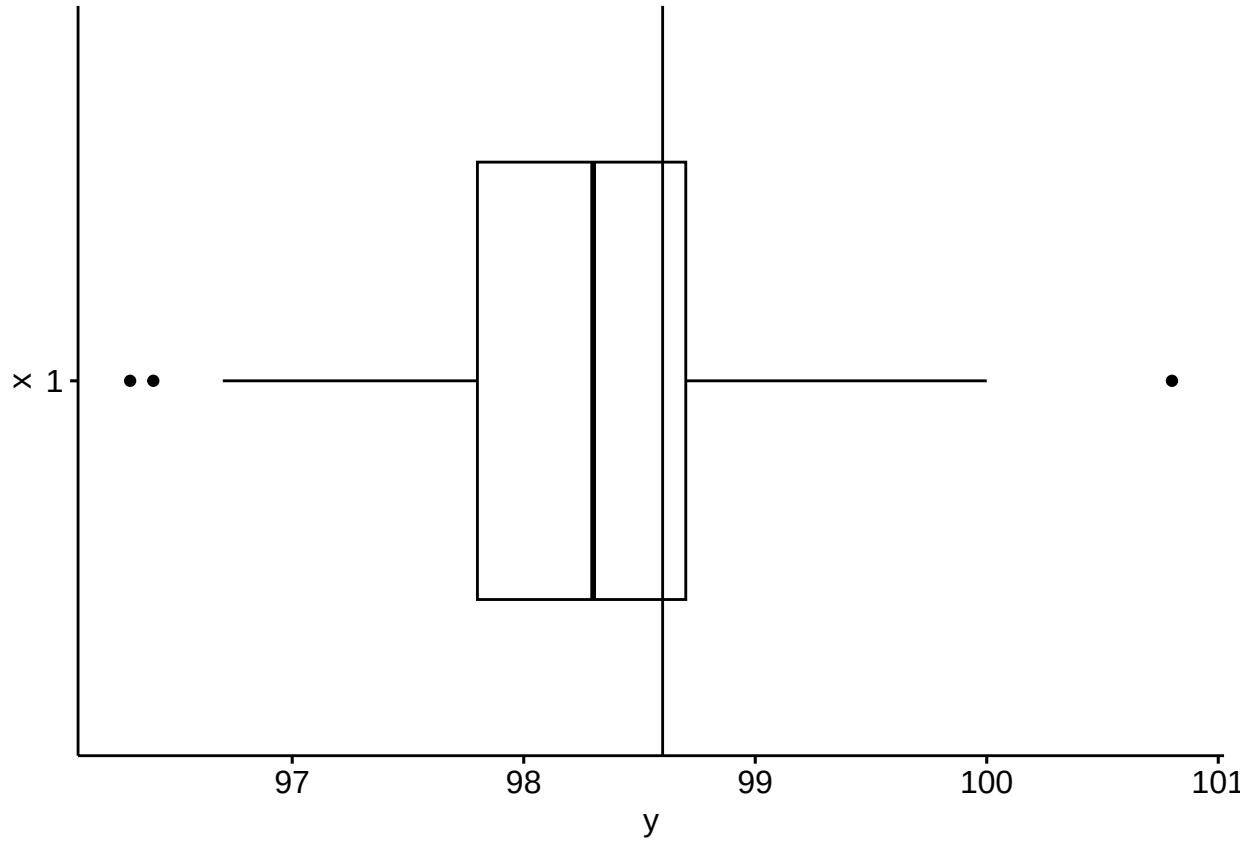

```
ggqqplot(normtemp$temperature)
```



Create box plots for temperature. Are there any outliers? Display a reference line at 98.6. Does the median body temperature seem to be 98.6 degrees?

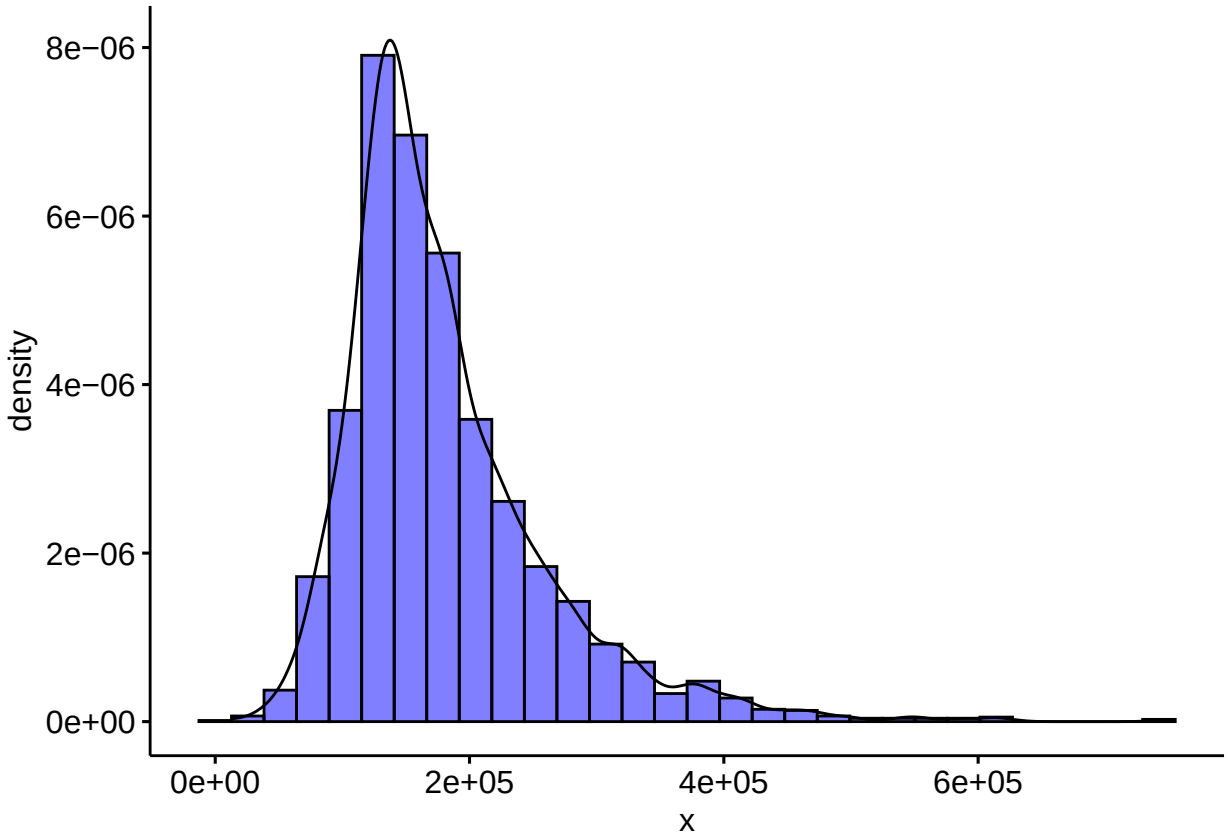
No, the median temperature seems to be lower than 98.6. There does seem to be 3 outliers, two lower and one upper

```
ggboxplot(normtemp$temperature) +
  geom_hline(yintercept = 98.6) +
  coord_flip()
```

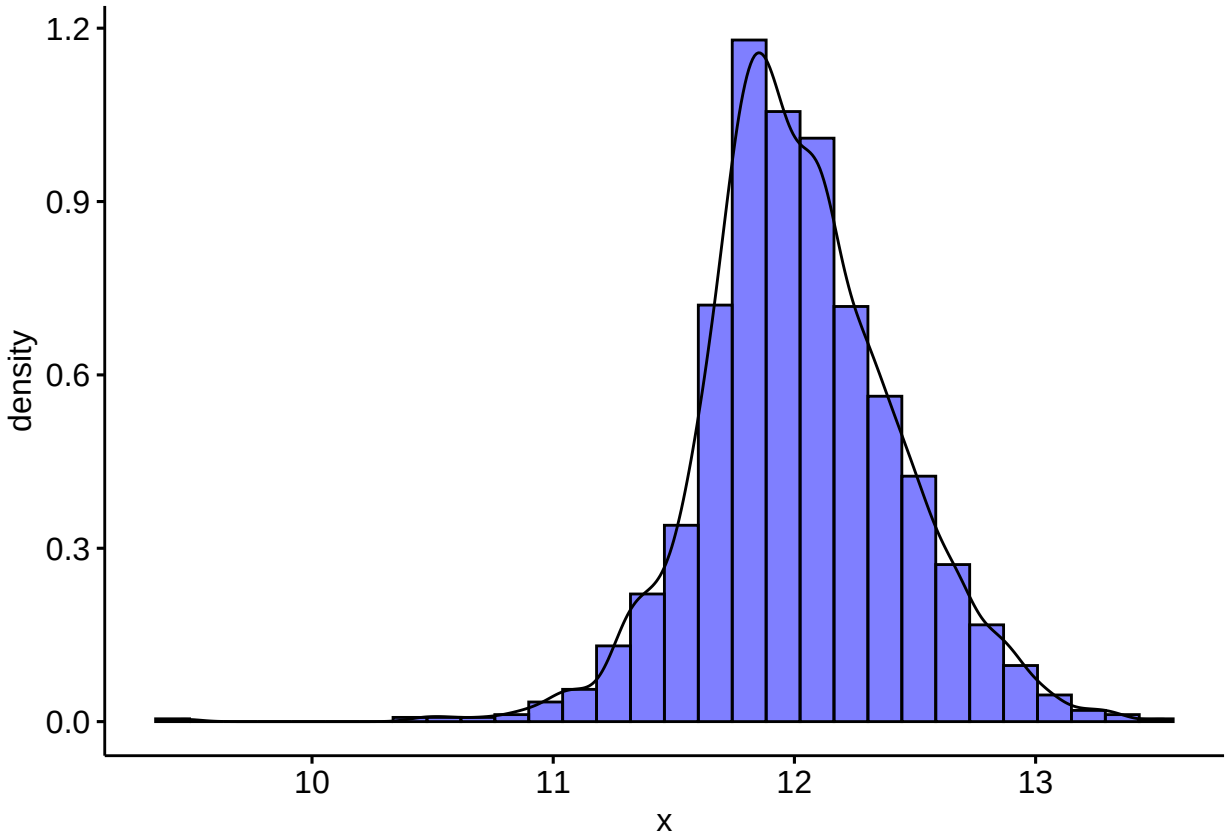


Using the Ameshousing dataset from our in-class examples, run some distributional analysis on Sale_Price, Log(Sale_Price), and Gr_Liv_Area ### Create histograms of these three variables

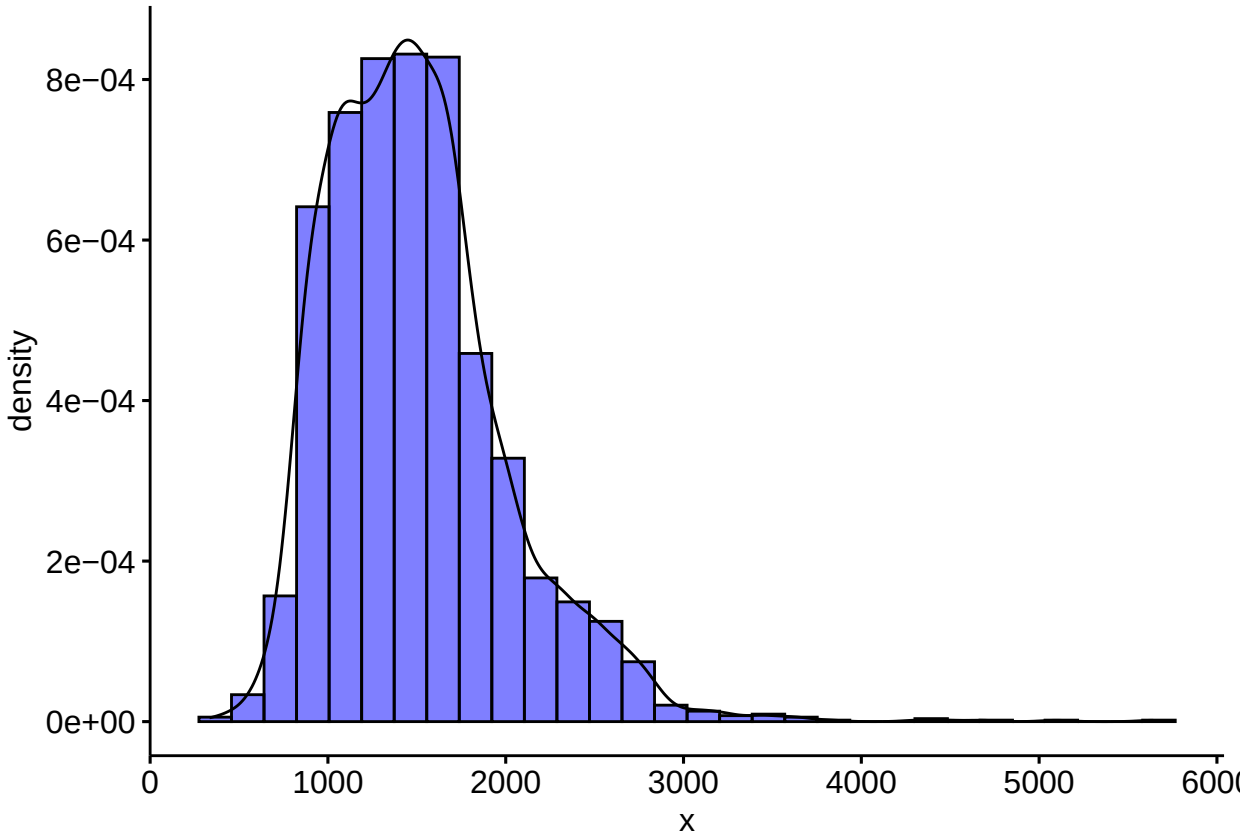
```
library(AmesHousing)
ames <- make_ordinal_ames()
gghistogram(ames$Sale_Price, y='density', fill = 'blue', alpha = 0.5) +
  geom_density(alpha = 0.5)
```




```
gghistogram(log(ames$Sale_Price), y='density', fill = 'blue', alpha = 0.5) +
  geom_density(alpha = 0.5)
```



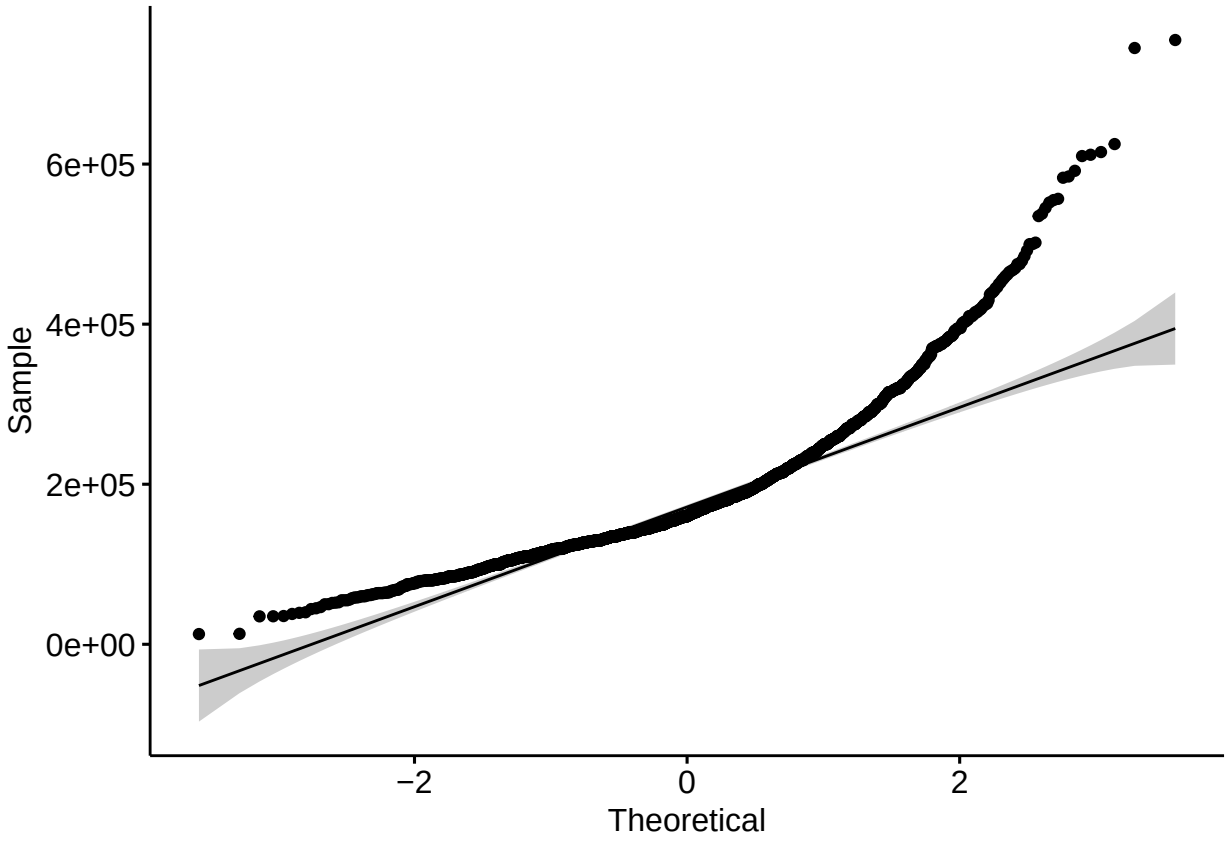

```
gghistogram(ames$Gr_Liv_Area, y='density', fill = 'blue', alpha = 0.5) +
  geom_density(alpha = 0.5)
```



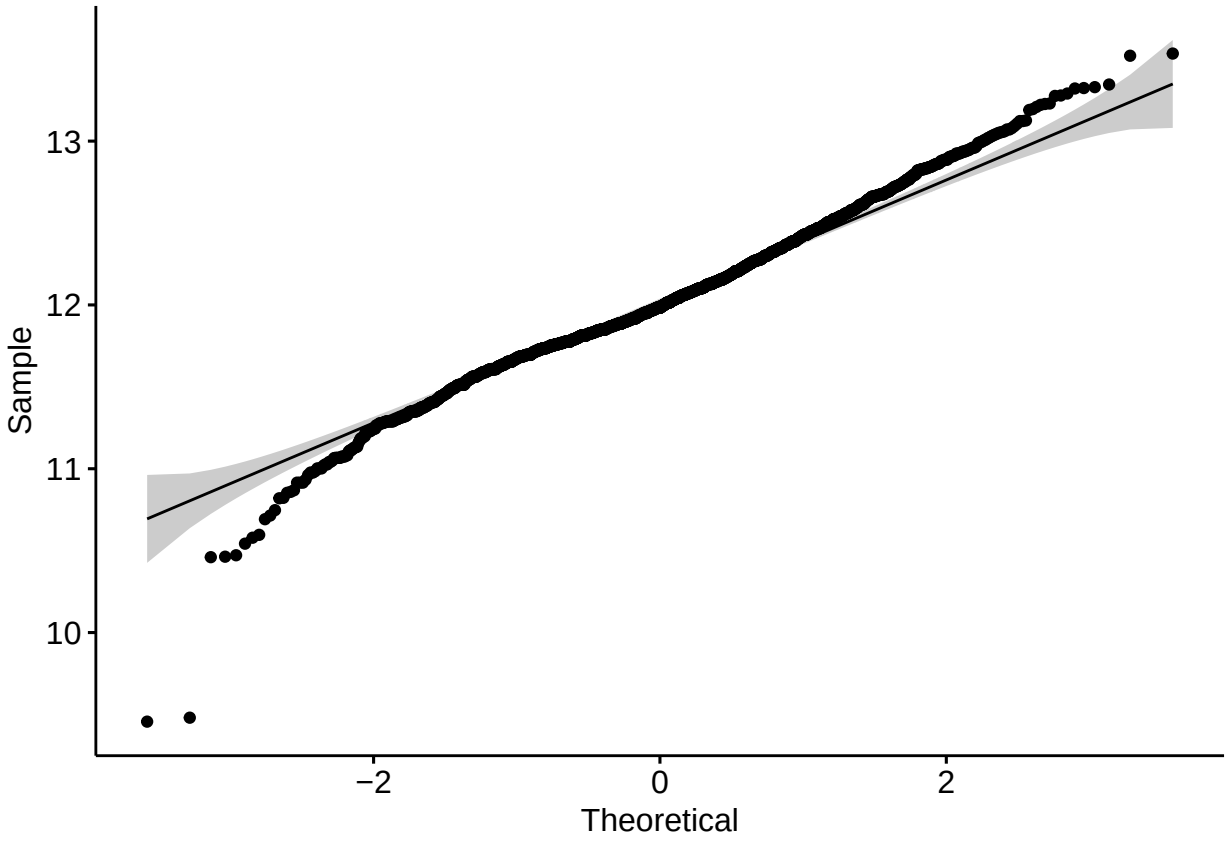
Create a QQ Plot for both Sale_Price and Log(Sale_Price). Based on these exploratory procedures, which version of the price information (Sale_Price or Log(Sale_Price)) would you say is closer to being normally distributed?

The log of Sale_Price looks closer to Normal than the unchanged Sale_Price distribution.

```
ggqqplot(ames$Sale_Price)
```




```
ggqqplot(log(ames$Sale_Price))
```



Using the Ameshousing dataset from our in-class examples, determine the following:

What type of variables are each of these columns (Nominal, Ordinal, or Continuous/Quantitative)? Keep in mind that the way they are represented in the R dataset may not be appropriate, so you should make this determination using your own judgement based on the data you are looking at.

- Overall_Qual: Ordinal
- Lot_Shape: Ordinal
- Heating_QC: Ordinal
- Lot_Area: Quantitative

```
str(ames)
```

```
## tibble [2,930 x 81] (S3: tbl_df/tbl/data.frame)
##  $ MS_SubClass       : Factor w/ 16 levels "One_Story_1946_and_Newer_All_Styles",..: 1 1 1 1 6 6 12 1
##  $ MS_Zoning         : Factor w/ 7 levels "Floating_Village_Residential",..: 3 2 3 3 3 3 3 3 3 3 ...
##  $ Lot_Frontage      : num [1:2930] 141 80 81 93 74 78 41 43 39 60 ...
##  $ Lot_Area          : int [1:2930] 31770 11622 14267 11160 13830 9978 4920 5005 5389 7500 ...
##  $ Street            : Factor w/ 2 levels "Grvl","Pave": 2 2 2 2 2 2 2 2 2 2 ...
##  $ Alley             : Factor w/ 3 levels "Gravel","No_Alley_Access",..: 2 2 2 2 2 2 2 2 2 2 ...
##  $ Lot_Shape         : Ord.factor w/ 4 levels "Irregular"<"Moderately_Irregular"<..: 3 4 3 4 3 3 4 3
##  $ Land_Contour      : Ord.factor w/ 4 levels "Low"<"HLS"<"Bnk"<..: 4 4 4 4 4 4 4 2 4 4 ...
```

```
##  $ Utilities         : Ord.factor w/ 4 levels "ELO"<"NoSeWa"<..: 4 4 4 4 4 4 4 4 4 4 ...
##  $ Lot_Config        : Factor w/ 5 levels "Corner","CulDSac",..: 1 5 1 1 5 5 5 5 5 5 ...
##  $ Land_Slope        : Ord.factor w/ 3 levels "Sev"<"Mod"<"Gtl": 3 3 3 3 3 3 3 3 3 3 ...
##  $ Neighborhood      : Factor w/ 29 levels "North_Ames","College_Creek",..: 1 1 1 1 7 7 17 17 17 7 .
##  $ Condition_1       : Factor w/ 9 levels "Artery","Feedr",..: 3 2 3 3 3 3 3 3 3 3 ...
##  $ Condition_2       : Factor w/ 8 levels "Artery","Feedr",..: 3 3 3 3 3 3 3 3 3 3 ...
##  $ Bldg_Type         : Factor w/ 5 levels "OneFam","TwoFmCon",..: 1 1 1 1 1 1 5 5 5 1 ...
##  $ House_Style       : Factor w/ 8 levels "One_and_Half_Fin",..: 3 3 3 3 8 8 3 3 3 8 ...
##  $ Overall_Qual      : Ord.factor w/ 10 levels "Very_Poor"<"Poor"<..: 6 5 6 7 5 6 8 8 8 7 ...
##  $ Overall_Cond      : Ord.factor w/ 10 levels "Very_Poor"<"Poor"<..: 5 6 6 5 5 6 5 5 5 5 ...
##  $ Year_Built        : int [1:2930] 1960 1961 1958 1968 1997 1998 2001 1992 1995 1999 ...
##  $ Year_Remod_Add    : int [1:2930] 1960 1961 1958 1968 1998 1998 2001 1992 1996 1999 ...
##  $ Roof_Style        : Factor w/ 6 levels "Flat","Gable",..: 4 2 4 4 2 2 2 2 2 2 ...
##  $ Roof_Matl         : Factor w/ 8 levels "ClyTile","CompShg",..: 2 2 2 2 2 2 2 2 2 2 ...
##  $ Exterior_1st      : Factor w/ 16 levels "AsbShng","AsphShn",..: 4 14 15 4 14 14 6 7 6 14 ...
##  $ Exterior_2nd      : Factor w/ 17 levels "AsbShng","AsphShn",..: 11 15 16 4 15 15 6 7 6 15 ...
##  $ Mas_Vnr_Type      : Factor w/ 5 levels "BrkCmn","BrkFace",..: 5 4 2 4 4 2 4 4 4 4 ...
##  $ Mas_Vnr_Area      : num [1:2930] 112 0 108 0 0 20 0 0 0 0 ...
##  $ Exter_Qual        : Ord.factor w/ 5 levels "Poor"<"Fair"<..: 3 3 3 4 3 3 4 4 4 3 ...
##  $ Exter_Cond        : Ord.factor w/ 5 levels "Poor"<"Fair"<..: 3 3 3 3 3 3 3 3 3 3 ...
##  $ Foundation        : Factor w/ 6 levels "BrkTil","CBlock",..: 2 2 2 2 3 3 3 3 3 3 ...
##  $ Bsmt_Qual         : Ord.factor w/ 6 levels "No_Basement"<..: 4 4 4 4 5 4 5 5 5 4 ...
##  $ Bsmt_Cond         : Ord.factor w/ 6 levels "No_Basement"<..: 5 4 4 4 4 4 4 4 4 4 ...
##  $ Bsmt_Exposure     : Ord.factor w/ 5 levels "No_Basement"<..: 5 2 2 2 2 2 3 2 2 2 ...
##  $ BsmtFin_Type_1    : Ord.factor w/ 7 levels "No_Basement"<..: 5 4 6 6 7 7 7 6 7 2 ...
##  $ BsmtFin_SF_1      : num [1:2930] 2 6 1 1 3 3 3 1 3 7 ...
##  $ BsmtFin_Type_2    : Ord.factor w/ 7 levels "No_Basement"<..: 2 3 2 2 2 2 2 2 2 2 ...
##  $ BsmtFin_SF_2      : num [1:2930] 0 144 0 0 0 0 0 0 0 0 ...
##  $ Bsmt_Unf_SF       : num [1:2930] 441 270 406 1045 137 ...
##  $ Total_Bsmt_SF     : num [1:2930] 1080 882 1329 2110 928 ...
##  $ Heating           : Factor w/ 6 levels "Floor","GasA",..: 2 2 2 2 2 2 2 2 2 2 ...
##  $ Heating_QC        : Ord.factor w/ 5 levels "Poor"<"Fair"<..: 2 3 3 5 4 5 5 5 5 4 ...
##  $ Central_Air       : Factor w/ 2 levels "N","Y": 2 2 2 2 2 2 2 2 2 2 ...
##  $ Electrical        : Ord.factor w/ 5 levels "Mix"<"FuseP"<..: 5 5 5 5 5 5 5 5 5 5 ...
##  $ First_Flr_SF      : int [1:2930] 1656 896 1329 2110 928 926 1338 1280 1616 1028 ...
##  $ Second_Flr_SF     : int [1:2930] 0 0 0 0 701 678 0 0 0 776 ...
##  $ Low_Qual_Fin_SF   : int [1:2930] 0 0 0 0 0 0 0 0 0 0 ...
##  $ Gr_Liv_Area       : int [1:2930] 1656 896 1329 2110 1629 1604 1338 1280 1616 1804 ...
##  $ Bsmt_Full_Bath    : num [1:2930] 1 0 0 1 0 0 1 0 1 0 ...
##  $ Bsmt_Half_Bath    : num [1:2930] 0 0 0 0 0 0 0 0 0 0 ...
##  $ Full_Bath         : int [1:2930] 1 1 1 2 2 2 2 2 2 2 ...
##  $ Half_Bath         : int [1:2930] 0 0 1 1 1 1 0 0 0 1 ...
##  $ Bedroom_AbvGr     : int [1:2930] 3 2 3 3 3 3 2 2 2 3 ...
##  $ Kitchen_AbvGr     : int [1:2930] 1 1 1 1 1 1 1 1 1 1 ...
##  $ Kitchen_Qual      : Ord.factor w/ 5 levels "Poor"<"Fair"<..: 3 3 4 5 3 4 4 4 4 4 ...
##  $ TotRms_AbvGrd     : int [1:2930] 7 5 6 8 6 7 6 5 5 7 ...
##  $ Functional        : Ord.factor w/ 8 levels "Sal"<"Sev"<"Maj2"<..: 8 8 8 8 8 8 8 8 8 8 ...
##  $ Fireplaces        : int [1:2930] 2 0 0 2 1 1 0 0 1 1 ...
##  $ Fireplace_Qu      : Ord.factor w/ 6 levels "No_Fireplace"<..: 5 1 1 4 4 5 1 1 4 4 ...
##  $ Garage_Type       : Factor w/ 7 levels "Attchd","Basment",..: 1 1 1 1 1 1 1 1 1 1 ...
##  $ Garage_Finish     : Ord.factor w/ 4 levels "No_Garage"<"Unf"<..: 4 2 2 4 4 4 4 3 3 4 ...
##  $ Garage_Cars       : num [1:2930] 2 1 1 2 2 2 2 2 2 2 ...
##  $ Garage_Area       : num [1:2930] 528 730 312 522 482 470 582 506 608 442 ...
##  $ Garage_Qual       : Ord.factor w/ 6 levels "No_Garage"<"Poor"<..: 4 4 4 4 4 4 4 4 4 4 ...
```

```
##  $ Garage_Cond       : Ord.factor w/ 6 levels "No_Garage"<"Poor"<..: 4 4 4 4 4 4 4 4 4 4 ...
##  $ Paved_Drive       : Ord.factor w/ 3 levels "Dirt_Gravel"<..: 2 3 3 3 3 3 3 3 3 3 ...
##  $ Wood_Deck_SF      : int [1:2930] 210 140 393 0 212 360 0 0 237 140 ...
##  $ Open_Porch_SF     : int [1:2930] 62 0 36 0 34 36 0 82 152 60 ...
##  $ Enclosed_Porch    : int [1:2930] 0 0 0 0 0 0 170 0 0 0 ...
##  $ Three_season_porch: int [1:2930] 0 0 0 0 0 0 0 0 0 0 ...
##  $ Screen_Porch      : int [1:2930] 0 120 0 0 0 0 0 144 0 0 ...
##  $ Pool_Area         : int [1:2930] 0 0 0 0 0 0 0 0 0 0 ...
##  $ Pool_QC           : Ord.factor w/ 6 levels "No_Pool"<"Poor"<..: 1 1 1 1 1 1 1 1 1 1 ...
##  $ Fence             : Ord.factor w/ 5 levels "No_Fence"<"Minimum_Wood_Wire"<..: 1 4 1 1 4 1 1 1 1 1
##  $ Misc_Feature      : Factor w/ 6 levels "Elev","Gar2",..: 3 3 2 3 3 3 3 3 3 3 ...
##  $ Misc_Val          : int [1:2930] 0 0 12500 0 0 0 0 0 0 0 ...
##  $ Mo_Sold           : int [1:2930] 5 6 6 4 3 6 4 1 3 6 ...
##  $ Year_Sold         : int [1:2930] 2010 2010 2010 2010 2010 2010 2010 2010 2010 2010 ...
##  $ Sale_Type         : Factor w/ 10 levels "COD","Con","ConLD",..: 10 10 10 10 10 10 10 10 10 10 ...
##  $ Sale_Condition    : Factor w/ 6 levels "Abnorml","AdjLand",..: 5 5 5 5 5 5 5 5 5 5 ...
##  $ Sale_Price        : int [1:2930] 215000 105000 172000 244000 189900 195500 213500 191500 236500 18
##  $ Longitude         : num [1:2930] -93.6 -93.6 -93.6 -93.6 -93.6 ...
##  $ Latitude          : num [1:2930] 42.1 42.1 42.1 42.1 42.1 ...
##  - attr(*, "spec")=List of 2
##   ..$ cols   :List of 82
##   .. ..$ Order          : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ PID            : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ MS SubClass    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ MS Zoning      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Lot Frontage   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Lot Area       : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Street         : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Alley          : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Lot Shape      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Land Contour   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Utilities      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Lot Config     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Land Slope     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Neighborhood   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Condition 1    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Condition 2    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Bldg Type      : list()
```

```
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ House Style    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Overall Qual   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Overall Cond   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Year Built     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Year Remod/Add : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Roof Style     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Roof Matl      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Exterior 1st   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Exterior 2nd   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Mas Vnr Type   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Mas Vnr Area   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Exter Qual     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Exter Cond     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Foundation     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Bsmt Qual      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Bsmt Cond      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Bsmt Exposure  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ BsmtFin Type 1 : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ BsmtFin SF 1   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ BsmtFin Type 2 : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ BsmtFin SF 2   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Bsmt Unf SF    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Total Bsmt SF  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Heating        : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Heating QC     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Central Air    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Electrical     : list()
```

```
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ 1st Flr SF     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ 2nd Flr SF     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Low Qual Fin SF: list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Gr Liv Area    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Bsmt Full Bath : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Bsmt Half Bath : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Full Bath      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Half Bath      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Bedroom AbvGr  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Kitchen AbvGr  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Kitchen Qual   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ TotRms AbvGrd  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Functional     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Fireplaces     : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Fireplace Qu   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Garage Type    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Garage Yr Blt  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Garage Finish  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Garage Cars    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Garage Area    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Garage Qual    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Garage Cond    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Paved Drive    : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Wood Deck SF   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Open Porch SF  : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Enclosed Porch : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ 3Ssn Porch     : list()
```

```
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Screen Porch   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Pool Area      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Pool QC        : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Fence          : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Misc Feature   : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Misc Val       : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Mo Sold        : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Yr Sold        : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   .. ..$ Sale Type      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ Sale Condition : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_character" "collector"
##   .. ..$ SalePrice      : list()
##   .. .. ..- attr(*, "class")= chr [1:2] "collector_integer" "collector"
##   ..$ default: list()
##   .. ..- attr(*, "class")= chr [1:2] "collector_guess" "collector"
##   ..- attr(*, "class")= chr "col_spec"
```