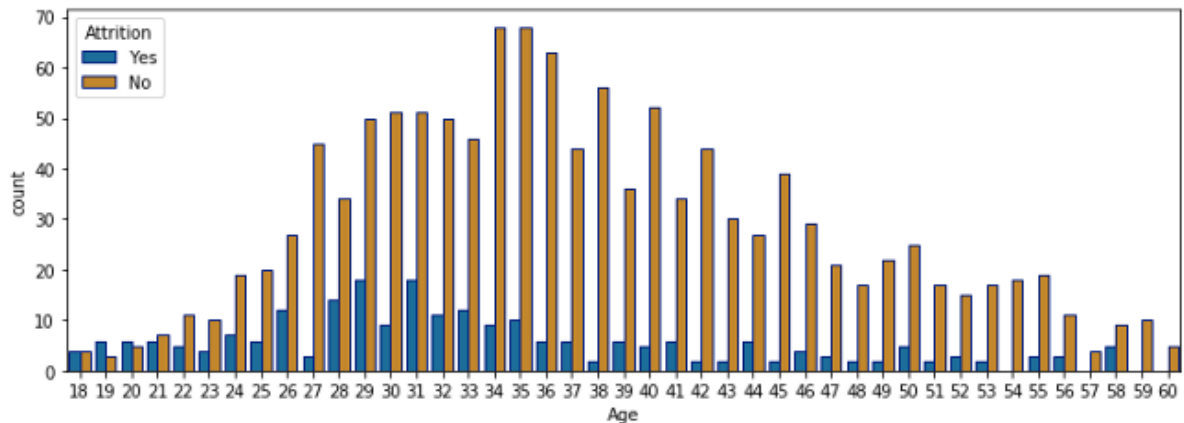


11. Show the number of employees that left and stayed at the company by age.



Here the age with the highest count of employee attrition is age 29 & 31.

The age with the highest retention is age 34 & 35.

12. Print all of the object data types and print their unique values.

```
Attrition : ['Yes' 'No']
No        1233
Yes        237
Name: Attrition, dtype: int64

BusinessTravel : ['Travel_Rarely' 'Travel_Frequently' 'Non-Travel']
Travel_Rarely    1043
Travel_Frequently  277
Non-Travel       150
Name: BusinessTravel, dtype: int64

Department : ['Sales' 'Research & Development' 'Human Resources']
Research & Development  961
Sales                  446
Human Resources         63
Name: Department, dtype: int64

EducationField : ['Life Sciences' 'Other' 'Medical' 'Marketing' 'Technical Degree'
                  'Human Resources']
Life Sciences    606
Medical          464
Marketing        159
Technical Degree  132
Other            82
Human Resources   27
Name: EducationField, dtype: int64

Gender : ['Female' 'Male']
Male     882
Female   588
Name: Gender, dtype: int64

JobRole : ['Sales Executive' 'Research Scientist' 'Laboratory Technician'
           'Manufacturing Director' 'Healthcare Representative' 'Manager'
           'Sales Representative' 'Research Director' 'Human Resources']
Sales Executive      326
Research Scientist   292
Laboratory Technician 259
Manufacturing Director 145
Healthcare Representative 131
Manager             102
Sales Representative   83
Research Director      80
Human Resources        52
Name: JobRole, dtype: int64

MaritalStatus : ['Single' 'Married' 'Divorced']
Married    673
Single     470
Divorced   327
```

13. Remove unneeded columns.

14. Getting the correlation of the columns.

| | Age | DailyRate | DistanceFromHome | Education | EnvironmentSatisfaction | HourlyRate |
|--------------------------|-----------|-----------|------------------|-----------|-------------------------|------------|
| Age | 1.000000 | 0.010661 | -0.001686 | 0.208034 | 0.010146 | 0.024287 |
| DailyRate | 0.010661 | 1.000000 | -0.004985 | -0.016806 | 0.018355 | 0.023381 |
| DistanceFromHome | -0.001686 | -0.004985 | 1.000000 | 0.021042 | -0.016075 | 0.031131 |
| Education | 0.208034 | -0.016806 | 0.021042 | 1.000000 | -0.027128 | 0.016775 |
| EnvironmentSatisfaction | 0.010146 | 0.018355 | -0.016075 | -0.027128 | 1.000000 | -0.049857 |
| HourlyRate | 0.024287 | 0.023381 | 0.031131 | 0.016775 | -0.049857 | 1.000000 |
| JobInvolvement | 0.029820 | 0.046135 | 0.008783 | 0.042438 | -0.008278 | 0.042861 |
| JobLevel | 0.509604 | 0.002966 | 0.005303 | 0.101589 | 0.001212 | -0.027853 |
| JobSatisfaction | -0.004892 | 0.030571 | -0.003669 | -0.011296 | -0.006784 | -0.071335 |
| MonthlyIncome | 0.497855 | 0.007707 | -0.017014 | 0.094961 | -0.006259 | -0.015794 |
| MonthlyRate | 0.028051 | -0.032182 | 0.027473 | -0.026084 | 0.037600 | -0.015297 |
| NumCompaniesWorked | 0.299635 | 0.038153 | -0.029251 | 0.126317 | 0.012594 | 0.022157 |
| PercentSalaryHike | 0.003634 | 0.022704 | 0.040235 | -0.011111 | -0.031701 | -0.009062 |
| PerformanceRating | 0.001904 | 0.000473 | 0.027110 | -0.024539 | -0.029548 | -0.002172 |
| RelationshipSatisfaction | 0.053535 | 0.007846 | 0.006557 | -0.009118 | 0.007665 | 0.001330 |
| StockOptionLevel | 0.037510 | 0.042143 | 0.044872 | 0.018422 | 0.003432 | 0.050263 |
| TotalWorkingYears | 0.680381 | 0.014515 | 0.004628 | 0.148280 | -0.002693 | -0.002334 |
| TrainingTimesLastYear | -0.019621 | 0.002453 | -0.036942 | -0.025100 | -0.019359 | -0.008548 |
| WorkLifeBalance | -0.021490 | -0.037848 | -0.026556 | 0.009819 | 0.027627 | -0.004607 |
| YearsAtCompany | 0.311309 | -0.034055 | 0.009508 | 0.069114 | 0.001458 | -0.019582 |
| YearsInCurrentRole | 0.212901 | 0.009932 | 0.018845 | 0.060236 | 0.018007 | -0.024106 |
| YearsSinceLastPromotion | 0.216513 | -0.033229 | 0.010029 | 0.054254 | 0.016194 | -0.026716 |
| YearsWithCurrManager | 0.202089 | -0.026363 | 0.014406 | 0.069065 | -0.004999 | -0.020123 |

15. Visualizing the correlation by using a heat map.

