Homework09a

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This file was created on 2020-07-12 and last modified on 2020-07-12.

Note: this solution uses R and SQLite. An alternate solution using SAS and Oracle is also available.

Graded: 3 points, one point deduction if submitted after deadline

–Put your code and the output in a single PDF file

–Use Encounter Table

–Use case expression to classify age <= 40 as 'Group 1', and age > 40 as 'Group 2'

–Use hospital table

–Use coalesce function to return -1 for null values of teaching_ind in hospital table where census_reg = 'West'

Note: Some of the names used in this code are arbitrary and you can choose whatever names you want. To emphasize which names can be modified at your discretion, I am using names of famous statisticians.

The statistician being honored in this code is Barbara A. Bailar.

```
library(sqldf)
```

```
## Loading required package: gsubfn
```

```
## Loading required package: proto
```

```
## Loading required package: RSQLite
```

```
bailar <- dbConnect(SQLite(),
  dbname="../data/hospital.sqlite")
barbara1 <- dbGetQuery(conn=bailar,  "
  select
    teaching_ind,
    coalesce(teaching_ind, -1) as imputed_value
  from hospital
  where census_reg='West'
")

barbara1
```

```
##    TEACHING_IND imputed_value
## 1            NA            -1
## 2            NA            -1
## 3             0             0
## 4            NA            -1
## 5            NA            -1
## 6            NA            -1
## 7            NA            -1
## 8            NA            -1
## 9             0             0
```

```
## 10            1             1
## 11           NA            -1
## 12           NA            -1
## 13           NA            -1
## 14           NA            -1
## 15            0             0
## 16           NA            -1
## 17            0             0
## 18           NA            -1
## 19           NA            -1
## 20           NA            -1
## 21           NA            -1
## 22           NA            -1
## 23           NA            -1
## 24           NA            -1
## 25            0             0
## 26           NA            -1
## 27           NA            -1
## 28            0             0
## 29            0             0
```

```
dbDisconnect(conn=bailar)
```

```
library(sqldf)
bailar <- dbConnect(SQLite(),
  dbname="../data/encounter_db.sqlite")
barbara2 <- dbGetQuery(conn=bailar,  "
  select
    age,
    case
      when age <= 40
        then 'Group 1'
        else 'Group 2'
      end as age_group
  from encounter
")

barbara2
```

```
##     AGE age_group
## 1    52   Group 2
## 2    58   Group 2
## 3    43   Group 2
## 4    55   Group 2
## 5    40   Group 1
## 6    38   Group 1
## 7    42   Group 2
## 8    80   Group 2
## 9    75   Group 2
## 10   74   Group 2
## 11   61   Group 2
## 12   44   Group 2
## 13   45   Group 2
## 14   20   Group 1
## 15   27   Group 1
```

```
## 16   29   Group 1
## 17   42   Group 2
## 18   52   Group 2
## 19   40   Group 1
## 20   41   Group 2
## 21   47   Group 2
## 22   42   Group 2
## 23   31   Group 1
## 24   25   Group 1
## 25   31   Group 1
## 26   20   Group 1
## 27   22   Group 1
## 28   47   Group 2
## 29   61   Group 2
## 30   53   Group 2
## 31   79   Group 2
## 32   78   Group 2
## 33   27   Group 1
## 34   39   Group 1
## 35   39   Group 1
## 36   73   Group 2
## 37   55   Group 2
## 38   46   Group 2
## 39   38   Group 1
## 40   62   Group 2
## 41   22   Group 1
## 42   23   Group 1
## 43   18   Group 1
## 44   51   Group 2
## 45   62   Group 2
## 46   36   Group 1
## 47   30   Group 1
## 48   27   Group 1
## 49   79   Group 2
## 50   60   Group 2
## 51   52   Group 2
## 52   20   Group 1
## 53   53   Group 2
## 54   33   Group 1
## 55   25   Group 1
## 56   20   Group 1
## 57   58   Group 2
## 58   32   Group 1
## 59   72   Group 2
## 60   37   Group 1
## 61   57   Group 2
## 62   46   Group 2
## 63   57   Group 2
## 64   30   Group 1
## 65   69   Group 2
## 66   58   Group 2
## 67   29   Group 1
## 68   31   Group 1
## 69   53   Group 2
```

```
## 70   22   Group 1
## 71   37   Group 1
## 72   44   Group 2
## 73   64   Group 2
## 74   58   Group 2
## 75   47   Group 2
## 76   65   Group 2
## 77   72   Group 2
## 78   65   Group 2
## 79   59   Group 2
## 80   19   Group 1
## 81   36   Group 1
## 82   53   Group 2
## 83   35   Group 1
## 84   41   Group 2
## 85   38   Group 1
## 86   36   Group 1
## 87   40   Group 1
## 88   27   Group 1
## 89   36   Group 1
## 90   43   Group 2
## 91   46   Group 2
## 92   27   Group 1
## 93   33   Group 1
## 94   34   Group 1
## 95   39   Group 1
## 96   61   Group 2
## 97   62   Group 2
## 98   26   Group 1
## 99   58   Group 2
## 100  51   Group 2
## 101  84   Group 2
## 102  22   Group 1
## 103  33   Group 1
## 104  34   Group 1
## 105  21   Group 1
## 106  35   Group 1
## 107  37   Group 1
## 108  44   Group 2
## 109  33   Group 1
## 110  66   Group 2
## 111  50   Group 2
## 112  29   Group 1
## 113  64   Group 2
## 114  37   Group 1
## 115  25   Group 1
## 116  51   Group 2
## 117  58   Group 2
## 118  29   Group 1
## 119  38   Group 1
## 120  67   Group 2
## 121  27   Group 1
## 122  67   Group 2
## 123  51   Group 2
```

```
## 124  65   Group 2
## 125  23   Group 1
## 126  55   Group 2
## 127  20   Group 1
## 128  50   Group 2
## 129  37   Group 1
## 130  44   Group 2
## 131  70   Group 2
## 132  28   Group 1
## 133  26   Group 1
## 134  47   Group 2
## 135  25   Group 1
## 136  47   Group 2
## 137  71   Group 2
## 138  70   Group 2
## 139  47   Group 2
## 140  60   Group 2
## 141  72   Group 2
## 142  32   Group 1
## 143  28   Group 1
## 144  76   Group 2
## 145  34   Group 1
## 146  35   Group 1
## 147  33   Group 1
## 148  53   Group 2
## 149  25   Group 1
## 150  52   Group 2
## 151  60   Group 2
## 152  58   Group 2
## 153  36   Group 1
## 154  28   Group 1
## 155  20   Group 1
## 156  26   Group 1
## 157  35   Group 1
## 158  23   Group 1
## 159  32   Group 1
## 160  39   Group 1
## 161  44   Group 2
## 162  30   Group 1
## 163  57   Group 2
## 164  51   Group 2
## 165  68   Group 2
## 166  59   Group 2
## 167  65   Group 2
## 168  29   Group 1
## 169  46   Group 2
## 170  24   Group 1
## 171  51   Group 2
## 172  22   Group 1
## 173  43   Group 2
## 174  38   Group 1
## 175  38   Group 1
## 176  60   Group 2
## 177  42   Group 2
```

```
## 178  21   Group 1
## 179  64   Group 2
## 180  43   Group 2
## 181  19   Group 1
## 182  56   Group 2
## 183  37   Group 1
## 184  60   Group 2
## 185  35   Group 1
## 186  50   Group 2
## 187  45   Group 2
## 188  64   Group 2
## 189  48   Group 2
## 190  51   Group 2
## 191  54   Group 2
## 192  47   Group 2
## 193  51   Group 2
## 194  38   Group 1
## 195  58   Group 2
## 196  60   Group 2
## 197  50   Group 2
## 198  48   Group 2
## 199  56   Group 2
```

```
dbDisconnect(conn=bailar)
```