Game

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```
knitr::opts_chunk$set(echo = TRUE)
```

```
library(readxl)
categories <- read_excel("C:/Users/andyw/Desktop/Game.xlsm")
cat_modified <- categories[-nrow(categories),]
```

```
categories[sample(nrow(categories), 4),]
```

```
# A tibble: 4 x 1
  Categories
  <chr>
1 Nationalities
2 Singers
3 Album Covers
4 Scientists
```

```
replicate(3, categories[sample(nrow(categories), 4),])
```

```
$Categories
[1] "Plants"               "Former Heads of State" "Reptiles"
[4] "Nationalities"

$Categories
[1] "Food/Cuisines"        "Authors"               "Birds"
[4] "Current Heads of State"

$Categories
[1] "Composers"     "Actresses"     "Logos"         "Nationalities"
```

```
n=1
for (i in 1:n){
  print(i)
  results <- replicate(1, categories[sample(nrow(categories), 4),])
  print(results)
}
```

```
[1] 1
$Categories
[1] "Birds"         "Food/Cuisines" "Reptiles"      "Activists"
```

```
n=190
for (i in 1:n){
  results_df <- data.frame(replicate(1, categories[sample(nrow(categories), 4),]))
  colnames(results_df) <- NULL
  cat("Pool #", i)
  print(results_df, row.names=FALSE)
  cat("\n")
}
```

Pool # 1
                Mammals
              Actresses
   Former Heads of State
        Historic Photos

Pool # 2
         Movie Stills
    Fruits/Vegetables
       Historic Photos
              Singers

Pool # 3
         Flags
       Fishes
    Activists
       Singers

Pool # 4
         Singers
    Album Covers
          Birds
          Logos

Pool # 5
            Art
          Birds
    Movie Stills
          Logos

Pool # 6
          Random
          Fishes
           Birds
    Nationalities

Pool # 7
        Movie Characters
                   Logos
    Current Heads of State
           Nationalities

Pool # 8
      Actors
      Plants
      Random
    Athletes

Pool # 9
       Scientists
        Reptiles
    Nationalities

Album Covers

Pool # 10
TV Characters
Fruits/Vegetables
Inventors
Activists

Pool # 11
Random
Authors
TV Characters
Food/Cuisines

Pool # 12
Actresses
Actors
Fishes
Authors

Pool # 13
TV Characters
Random
Fruits/Vegetables
Insects

Pool # 14
Nationalities
Current Heads of State
Album Covers
Scientists

Pool # 15
Video Game Characters
Logos
Birds
Reptiles

Pool # 16
Video Game Characters
Birds
Directors
Plants

Pool # 17
Singers
Insects
Composers
Historic Photos

Pool # 18
Mammals

```
      Movie Stills
            Random
            Fishes


Pool # 19
   Movie Stills
               Art
         Authors
         Mammals


Pool # 20
                    Insects
    Former Heads of State
                       Art
              Reptiles


Pool # 21
   Directors
        Logos
        Flags
      Actors


Pool # 22
   Movie Characters
     Historic Photos
       Food/Cuisines
                 Art


Pool # 23
   Directors
     Athletes
        Fishes
   Landmarks


Pool # 24
   Scientists
       Singers
         Birds
           Art


Pool # 25
   Album Covers
         Fishes
          Flags
        Authors


Pool # 26
                 Fishes
              Directors
             Scientists
    Former Heads of State
```

```
Pool # 27
        Reptiles
      Composers
              Art
  Nationalities

Pool # 28
        TV Characters
           Scientists
                Fishes
  Musical Instruments

Pool # 29
      Actresses
  Movie Stills
      Inventors
        Insects

Pool # 30
      Movie Stills
   Historic Photos
         Actresses
         Composers

Pool # 31
   Musical Instruments
             Athletes
        Food/Cuisines
                Flags

Pool # 32
                  Random
             Landmarks
           Movie Stills
  Video Game Characters

Pool # 33
                   Birds
          TV Characters
  Video Game Characters
               Athletes

Pool # 34
          Art
   Actresses
       Birds
     Mammals

Pool # 35
            Flags
         Actresses
   Historic Photos
```

Nationalities

Pool # 36
 Current Heads of State
                    Logos
                 Fishes
                 Random

Pool # 37
                 Fishes
 Video Game Characters
             Reptiles
                 Birds

Pool # 38
        Inventors
        Actresses
          Actors
 Historic Photos

Pool # 39
        Food/Cuisines
           Landmarks
 Musical Instruments
     Movie Characters

Pool # 40
            Actresses
               Plants
 Video Game Characters
       Movie Characters

Pool # 41
   Movie Characters
  Fruits/Vegetables
      Movie Stills
             Birds

Pool # 42
              Authors
            Actresses
 Video Game Characters
               Random

Pool # 43
  Reptiles
    Fishes
        Art
     Flags

Pool # 44
      Movie Stills

```
     Fruits/Vegetables
              Reptiles
                Plants


Pool # 45
        Movie Characters
               Actresses
  Video Game Characters
                   Fishes


Pool # 46
   Video Game Characters
            Movie Stills
                   Birds
     Musical Instruments


Pool # 47
   Video Game Characters
               Directors
       Fruits/Vegetables
                 Authors


Pool # 48
            Movie Stills
                     Art
               Inventors
   Video Game Characters


Pool # 49
    Former Heads of State
   Current Heads of State
              Scientists
                  Random


Pool # 50
   Video Game Characters
                 Singers
           Nationalities
               Directors


Pool # 51
   Video Game Characters
                   Fishes
    Former Heads of State
        Movie Characters


Pool # 52
     Mammals
   Landmarks
   Actresses
      Random
```

```
Pool # 53
        Fishes
     Landmarks
     Composers
 Nationalities

Pool # 54
              Athletes
           Scientists
 Former Heads of State
               Actors

Pool # 55
 Composers
   Singers
  Reptiles
    Actors

Pool # 56
  Former Heads of State
 Current Heads of State
          Food/Cuisines
                 Fishes

Pool # 57
 Activists
    Random
       Art
     Flags

Pool # 58
  Movie Stills
           Art
 TV Characters
      Athletes

Pool # 59
           Reptiles
       Album Covers
 Musical Instruments
                Flags

Pool # 60
            Activists
 Former Heads of State
              Reptiles
            Directors

Pool # 61
    Reptiles
    Athletes
 Movie Stills
```

Fishes

Pool # 62
Birds
Singers
Scientists
Random

Pool # 63
Activists
Fishes
Mammals
Athletes

Pool # 64
Authors
TV Characters
Directors
Reptiles

Pool # 65
Flags
Directors
Mammals
Album Covers

Pool # 66
Actresses
Art
Directors
Fishes

Pool # 67
Singers
Directors
Mammals
Inventors

Pool # 68
Musical Instruments
Current Heads of State
Birds
Flags

Pool # 69
Authors
Art
Inventors
Nationalities

Pool # 70
Random

Logos
Fruits/Vegetables
Actors

Pool # 71
Scientists
Mammals
Movie Characters
Singers

Pool # 72
Flags
Movie Characters
Actresses
Birds

Pool # 73
Actors
Historic Photos
Athletes
Food/Cuisines

Pool # 74
Former Heads of State
Fruits/Vegetables
Mammals
Art

Pool # 75
Movie Stills
TV Characters
Nationalities
Random

Pool # 76
Fruits/Vegetables
Actresses
Former Heads of State
Reptiles

Pool # 77
Singers
Movie Stills
Birds
Flags

Pool # 78
Fishes
Video Game Characters
Scientists
Historic Photos

```
Pool # 79
            Directors
              Actors
             Mammals
  Musical Instruments


Pool # 80
 Former Heads of State
               Actors
              Singers
          Album Covers


Pool # 81
 Current Heads of State
              Composers
   Former Heads of State
      Fruits/Vegetables


Pool # 82
     Actors
    Authors
   Athletes
  Landmarks


Pool # 83
      Landmarks
        Mammals
       Athletes
  Nationalities


Pool # 84
 Video Game Characters
               Insects
             Inventors
                   Art


Pool # 85
    Authors
     Flags
  Landmarks
   Reptiles


Pool # 86
     Reptiles
          Art
    Actresses
  Album Covers


Pool # 87
 Former Heads of State
                 Logos
          Album Covers
```

TV Characters

Pool # 88
 Video Game Characters
              Composers
                Singers
               Reptiles

Pool # 89
          Random
           Flags
 Food/Cuisines
 Nationalities

Pool # 90
 Historic Photos
          Insects
        Landmarks
        Composers

Pool # 91
 Historic Photos
        Landmarks
            Logos
           Actors

Pool # 92
 Nationalities
         Actors
          Fishes
      Directors

Pool # 93
      Food/Cuisines
 Fruits/Vegetables
          Authors
      Nationalities

Pool # 94
 Video Game Characters
             Authors
          Scientists
        TV Characters

Pool # 95
   Historic Photos
             Birds
 Fruits/Vegetables
         Directors

Pool # 96
  Actors

Logos
Singers
Plants

Pool # 97
Athletes
Nationalities
Movie Stills
Authors

Pool # 98
Actresses
Art
Reptiles
Fishes

Pool # 99
Birds
Nationalities
Authors
Activists

Pool # 100
Scientists
Fruits/Vegetables
Historic Photos
Birds

Pool # 101
Musical Instruments
Movie Stills
Birds
Actresses

Pool # 102
Album Covers
Musical Instruments
Movie Stills
Former Heads of State

Pool # 103
Video Game Characters
Historic Photos
Composers
Food/Cuisines

Pool # 104
Movie Stills
Insects
Actors
Nationalities

Pool # 105
                    Inventors
              Food/Cuisines
                      Actors
    Former Heads of State

Pool # 106
 Reptiles
   Singers
     Plants
     Actors

Pool # 107
          Actresses
 Fruits/Vegetables
              Flags
             Plants

Pool # 108
                     Flags
             Composers
    Current Heads of State
               Directors

Pool # 109
 Video Game Characters
    Musical Instruments
             Composers
                  Birds

Pool # 110
            Directors
 Musical Instruments
            Inventors
       Movie Stills

Pool # 111
    Insects
 Inventors
     Logos
     Fishes

Pool # 112
           Album Covers
 Former Heads of State
 Video Game Characters
                 Plants

Pool # 113
              Flags
           Reptiles
          Composers

Musical Instruments

Pool # 114
 Video Game Characters
            Landmarks
      Historic Photos
               Authors

Pool # 115
         Flags
     Composers
 TV Characters
   Album Covers

Pool # 116
           Random
              Art
           Fishes
 Movie Characters

Pool # 117
 Musical Instruments
             Fishes
            Authors
    Movie Characters

Pool # 118
       Insects
 TV Characters
        Actors
   Album Covers

Pool # 119
 Album Covers
        Logos
       Fishes
    Inventors

Pool # 120
      Reptiles
   Album Covers
   Movie Stills
 Nationalities

Pool # 121
              Random
 Former Heads of State
            Activists
             Reptiles

Pool # 122
 Fruits/Vegetables

Nationalities
Scientists
Art

Pool # 123
Random
Movie Stills
Video Game Characters
Nationalities

Pool # 124
Art
Flags
Video Game Characters
Current Heads of State

Pool # 125
Fruits/Vegetables
Logos
Movie Stills
Insects

Pool # 126
Actors
Musical Instruments
Directors
Fishes

Pool # 127
Directors
Album Covers
Current Heads of State
Movie Characters

Pool # 128
Insects
Plants
Historic Photos
Fruits/Vegetables

Pool # 129
Singers
Inventors
Album Covers
Directors

Pool # 130
Random
Composers
Scientists
Video Game Characters

```
Pool # 131
      Athletes
 Album Covers
    Actresses
         Birds

Pool # 132
   Authors
      Birds
 Landmarks
    Actors

Pool # 133
 Video Game Characters
           Directors
           Composers
     Movie Characters

Pool # 134
         Birds
    Movie Stills
 Historic Photos
      Composers

Pool # 135
            Plants
 Musical Instruments
   Fruits/Vegetables
           Reptiles

Pool # 136
 Nationalities
     Directors
     Composers
 Food/Cuisines

Pool # 137
  Activists
    Mammals
     Fishes
  Scientists

Pool # 138
          Movie Stills
         TV Characters
                 Logos
 Current Heads of State

Pool # 139
       Fishes
     Mammals
 Movie Stills
```

Flags

Pool # 140
Mammals
Plants
Nationalities
Fruits/Vegetables

Pool # 141
Logos
Activists
Singers
Current Heads of State

Pool # 142
Musical Instruments
Landmarks
Album Covers
Movie Stills

Pool # 143
Random
Landmarks
Singers
Scientists

Pool # 144
Birds
Plants
Food/Cuisines
Fishes

Pool # 145
Insects
Actors
Actresses
Art

Pool # 146
Food/Cuisines
Fruits/Vegetables
Athletes
Inventors

Pool # 147
Insects
Current Heads of State
Plants
Food/Cuisines

Pool # 148
Movie Stills

Random
Singers
Logos

Pool # 149
Authors
Art
Inventors
Musical Instruments

Pool # 150
Composers
Activists
Insects
Singers

Pool # 151
Movie Characters
Fishes
Art
Logos

Pool # 152
Fishes
Album Covers
Mammals
Composers

Pool # 153
Historic Photos
Activists
Actors
Fruits/Vegetables

Pool # 154
Directors
Composers
Athletes
Scientists

Pool # 155
Mammals
TV Characters
Musical Instruments
Inventors

Pool # 156
Inventors
Movie Characters
Fruits/Vegetables
Scientists

Pool # 157
              Logos
             Authors
            Actresses
  Former Heads of State

Pool # 158
  Fruits/Vegetables
              Birds
           Composers
           Activists

Pool # 159
          Directors
       Movie Stills
  Fruits/Vegetables
            Singers

Pool # 160
             Composers
             Inventors
  Former Heads of State
              Singers

Pool # 161
      Historic Photos
  Musical Instruments
              Actors
           Activists

Pool # 162
    Musical Instruments
  Former Heads of State
            Scientists
         Album Covers

Pool # 163
  Current Heads of State
               Logos
          Nationalities
               Plants

Pool # 164
              Birds
    Movie Characters
           Activists
  Former Heads of State

Pool # 165
          Actors
       Inventors
           Birds

Nationalities

Pool # 166
 Fruits/Vegetables
              Art
         Singers
          Fishes

Pool # 167
     TV Characters
         Mammals
           Birds
 Fruits/Vegetables

Pool # 168
 Former Heads of State
       Historic Photos
           Scientists
   Musical Instruments

Pool # 169
       TV Characters
            Actors
 Musical Instruments
        Movie Stills

Pool # 170
   TV Characters
 Historic Photos
          Actors
       Directors

Pool # 171
            Reptiles
 Current Heads of State
         Album Covers
     Fruits/Vegetables

Pool # 172
           Birds
           Flags
  Movie Characters
 Fruits/Vegetables

Pool # 173
     Composers
 TV Characters
     Inventors
    Scientists

Pool # 174
          Flags

                    Actresses
              Album Covers
      Musical Instruments

Pool # 175
                  Plants
               Actresses
      Fruits/Vegetables
                    Birds

Pool # 176
               Composers
        Movie Characters
                 Authors
      Fruits/Vegetables

Pool # 177
                      Art
      Current Heads of State
                    Logos
                Directors

Pool # 178
                  Insects
          Movie Characters
      Former Heads of State
                   Plants

Pool # 179
        Mammals
         Fishes
      Athletes
          Logos

Pool # 180
                Inventors
                 Reptiles
      Video Game Characters
                Activists

Pool # 181
           Birds
          Actors
      Inventors
         Singers

Pool # 182
            Authors
             Plants
          Composers
      Nationalities

```
Pool # 183
        Athletes
           Flags
  TV Characters
      Composers


Pool # 184
      Album Covers
            Insects
          Landmarks
  Movie Characters


Pool # 185
   TV Characters
      Composers
            Plants
       Actresses


Pool # 186
    Movie Stills
    Album Covers
           Random
   Food/Cuisines


Pool # 187
            TV Characters
    Former Heads of State
   Current Heads of State
              Movie Stills


Pool # 188
                  Random
          TV Characters
   Video Game Characters
       Fruits/Vegetables


Pool # 189
   Former Heads of State
          TV Characters
          Food/Cuisines
                     Art


Pool # 190
    Former Heads of State
                    Birds
             Scientists
    Current Heads of State
```

```
#Special Round #1
n1=1
n2=1
n3=1
n_mean <- mean(c(n1,n2,n3))
n_rounded <- round(n_mean,0)

n=n_rounded
for (i in 1:n){
  results_df <- data.frame(replicate(1, cat_modified[sample(nrow(cat_modified), 2),]))
  colnames(results_df) <- NULL
  cat("Pool #", i)
  print(results_df, row.names=FALSE)
  cat("\n")
}
```

```
Pool # 1
  Reptiles
 Actresses
```

```
#Special Round #2
n=1
players = c("Abaz", "Amanda", "Basma")

for(i in 1:n){
  player_name <- sample(players,size = 1)
  cat(i, player_name)
  cat("\n")
  cat("\n")
}
```

```
1 Basma
```

```
for (i in 1:n){
  results_df <- data.frame(replicate(1, cat_modified[sample(nrow(cat_modified), 2),]))
  colnames(results_df) <- NULL
  cat("Pool #", i)
  print(results_df, row.names=FALSE)
  cat("\n")
}
```

```
Pool # 1
 Musical Instruments
            Actors
```