Homework 2
CSCE 587
Fall 2016
Due: 09/15/2016 via Dropbox
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```
> attach("/Users/Sendurr/Dropbox/Transfer/CSCE587 - Big Data/IntermediateR.RData")
The following objects are masked from file:/Users/Sendurr/Dropbox/Transfer/CSCE587 - Big
Data/IntermediateR.RData (pos = 3):

    numbers, scores, sudokus

The following objects are masked from file:/Users/Sendurr/Dropbox/Transfer/CSCE587 - Big
Data/IntermediateR.RData (pos = 4):

    numbers, scores, sudokus

The following objects are masked from file:/Users/Sendurr/Dropbox/Transfer/CSCE587 - Big
Data/IntermediateR.RData (pos = 5):

    numbers, scores, sudokus

The following objects are masked from file:/Users/Sendurr/Dropbox/Transfer/CSCE587 - Big
Data/IntermediateR.RData (pos = 6):

    numbers, scores, sudokus

The following objects are masked from file:/Users/Sendurr/Dropbox/Transfer/CSCE587 - Big
Data/IntermediateR.RData (pos = 7):

    numbers, scores, sudokus

The following objects are masked from file:/Users/Sendurr/Dropbox/Transfer/CSCE587 - Big
Data/IntermediateR.RData (pos = 8):

    numbers, scores, sudokus

> no_of_sudo = dim(sudokus)[3]
> no_of_column = dim(sudokus)[2]
> no_of_row = dim(sudokus)[1]
> result=c();
> # function to check unique numbers
> validate = function(a){
+   x = unique(a,incomparables = TRUE);
+   if (length(x) == 9){
```

```
+    return(TRUE);
+   }
+   else{
+    return(FALSE);
+   }
+ }
>
> # loop all the given sudoku sets
> for (i in 1:no_of_sudo){
+   #column check
+   for (j in 1:no_of_column){
+     a=sudokus[,j,i];
+     check = validate(a);
+     if(check == FALSE){
+       break;
+     }
+   }
+   if(check == FALSE){
+     next;
+   }
+   #row check
+   for (j in 1:no_of_row){
+     a=sudokus[j,,i];
+     check = validate(a);
+     if(check == FALSE){
+       break;
+     }
+   }
+   if(check == FALSE){
+     next;
+   }
+   #matrix check
+   for (j in 1:(no_of_column/3)){
+     col_end = j*3;
+     col_start = col_end -2;
+     for (k in 1:(no_of_row/3)){
+       row_end = k*3;
+       row_start = row_end -2;
+       a=sudokus[row_start:row_end,col_start:col_end,1];
+       check = validate(as.vector(a));
+       if(check == FALSE){
+         break;
+       }
+     }
+     if(check == FALSE){
+       break;
```

```
+     }
+   }
+   result=append(result,i);
+ }
>
> print("The genuine sudoku sets are given below thru their index.")
[1] "The genuine sudoku sets are given below thru their index."
> print(result);
[1]  1 13 16 19 23 28 37
```