Lab 3

1, Please read the train.csv file into R and store the data in a variable called “X”.
https://www.kaggle.com/c/home-depot-product-search-relevance/data

2, Write a function, called “distinct_relevance”, to count how many distinct values are in the column “relevance”? So when we call the function, it returns the desired results:

```
distinct_relevance (vect = X$relevance);
```

3, Write a function, called “count”, to count the number of appearances of a value, e.g. 3, in the column “relevance”, so when we call the function, it returns the desired results:

```
count(vect = X$relevance, value=3);
```

(For Q2 and Q3, please do not use existing R packages or functions.)

4, Compare the results with R function: table()

5. Pi can be computed by adding the following terms (http://en.wikipedia.org/wiki/Pi):

$$\pi = 4\sum_{k=0}^{\infty}\frac{(-1)^k}{2k+1} = \frac{4}{1} - \frac{4}{3} + \frac{4}{5} - \frac{4}{7} + \frac{4}{9} - \frac{4}{11}\cdots.$$

How many terms does it take to get the first 3 digits to be correct, 3.14? Write an R function getPi(N) to compute it, where *N* specifies the first N digits to be correct, and returns #terms.