R Code Output

```
> setwd("\\Users\\Asvin\\Documents\\RData")
> CUIS<-read.table(file = "CUIS2012-SubsetData.txt", header = TRUE, sep = ","
)
> #names(CUIS) <- c("CaseID", "Age of Respondant", "Past 12 months online ord
er", "Concerned CC")
> attach(CUIS)

> names(CUIS)
[1] "CASEID"   "gcagegr6" "ec_q01"   "ps_q02"
> table(gcagegr6)
gcagegr6
   1    2    3    4    5    6
1814 3198 3520 4007 4420 5656
> table(ec_q01)
ec_q01
   1    2    6
9384 8226 5005
> table(ps_q02)
ps_q02
   1    2    3    4    6    7    8    9
3731 7424 5462  755 5005   81   25  132
> CUIS2<-CUIS[which(gcagegr6 <= 6),]
> detach(CUIS)
> attach(CUIS2)

> CUIS3<-CUIS2[which(ec_q01<=3),]
> detach(CUIS2)
> attach(CUIS3)

> table(gcagegr6)
gcagegr6
   1    2    3    4    5    6
1783 3112 3324 3459 3411 2521
> table(ec_q01)
ec_q01
   1    2
9384 8226
> table(ps_q02)
ps_q02
   1    2    3    4    7    8    9
3731 7424 5462  755   81   25  132
> # change the name of gcagegr6 to something meaningful
> Age.Of.Respondant <- gcagegr6
> # change the name of ec_q01 to something meaningful
> Online.Shopping <- ec_q01
> # change the name of ps_q02 to something meaningful
> CC.Concerned <- ps_q02
> # Research Question 1
> # change category names from numbers to names for age of respondant
> Age.Of.Respondant<-factor(Age.Of.Respondant,
+                           levels=c(1,2,3,4,5,6),
+                           labels = c("16 to 24", "25 to 34", "35 to 44", "4
5 to 54", "55 to 64", "65 and older"))
> # change category names from numbers to names for online shopping
> Online.Shopping <-factor(Online.Shopping,
+                          levels = c(1, 2),
+                          labels = c("Yes", "No"))
> # Perform exploratory analysis to see if there is an apparent relationship
between
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> # age of respondant and whether or not respondant has purchased anything on
line in
> # the past 12 months
> # Create table for comparing age and whether or not respondant did online s
hopping in the last 12 months
> Table <- table(Online.Shopping, Age.Of.Respondant)
> Table
                Age.Of.Respondant
Online.Shopping 16 to 24 25 to 34 35 to 44 45 to 54 55 to 64 65 and older
            Yes      959     2037     2050     1836     1607          895
            No       824     1075     1274     1623     1804         1626
> # create margins for each column
> addmargins(Table, 1)
                Age.Of.Respondant
Online.Shopping 16 to 24 25 to 34 35 to 44 45 to 54 55 to 64 65 and older
            Yes      959     2037     2050     1836     1607          895
            No       824     1075     1274     1623     1804         1626
            Sum     1783     3112     3324     3459     3411         2521
> # create margins for each row
> addmargins(Table, 2)
                Age.Of.Respondant
Online.Shopping 16 to 24 25 to 34 35 to 44 45 to 54 55 to 64 65 and older  Su
m
            Yes      959     2037     2050     1836     1607          895 938
4
            No       824     1075     1274     1623     1804         1626 822
6
> # Create barplot to obtain frequency of responses by Whether they online sh
op or not
> barplot(table(Online.Shopping, Age.Of.Respondant), beside = TRUE,
+         main = "Age of the respondant by whether the respondant done online
shopping in the past 12 months",
+         xlab = "Age of the respondant",
+         ylim = c(0,3000),
+         col=rainbow(2))
> # add legend to bar plot
> legend("topright",
+        title = "Done online shopping in the past 12 months?",
+        legend = rownames(table(Online.Shopping, Age.Of.Respondant)),
+        fill = rainbow(2),
+        cex = 0.65)
```
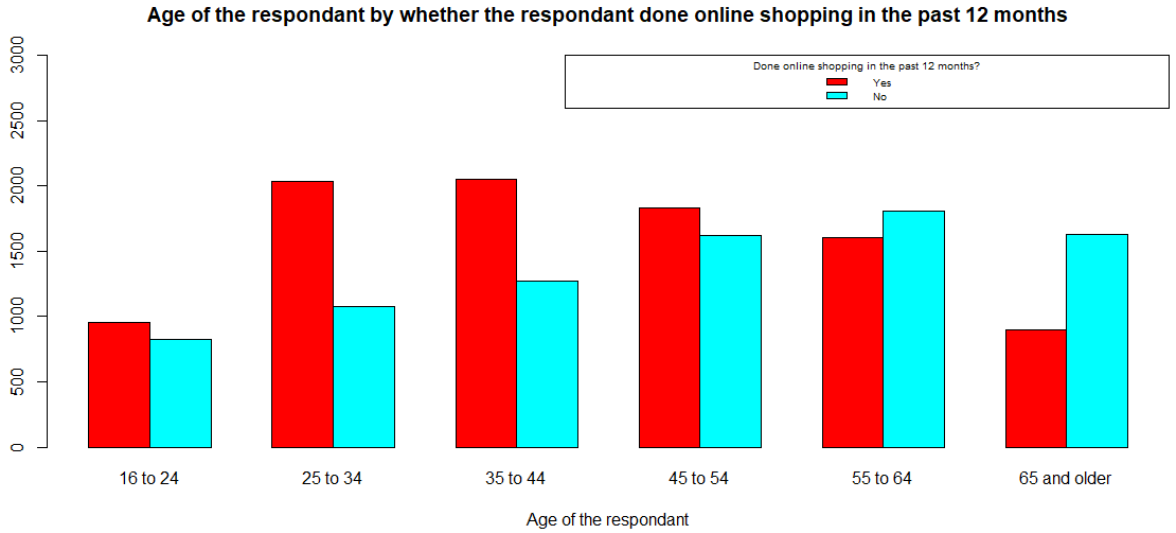
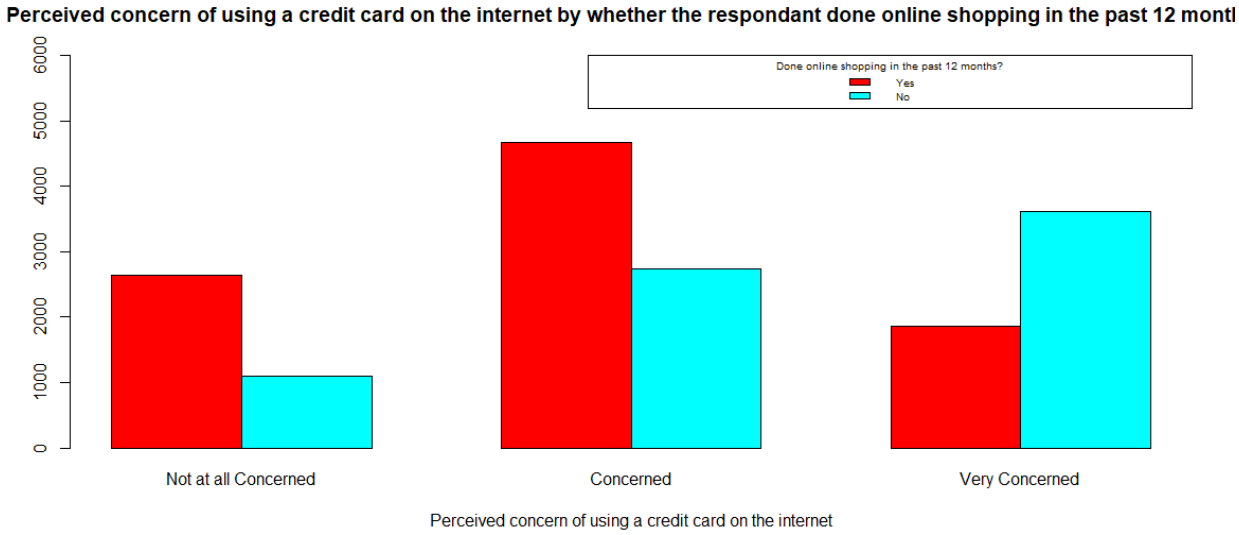




```
> # calculate marginal proportions into the table
> marginal.prop<-prop.table(margin.table(Table, 2))
```

```
> marginal.prop
Age.Of.Respondant
    16 to 24     25 to 34     35 to 44     45 to 54     55 to 64 65 and older
   0.1012493    0.1767178    0.1887564    0.1964225    0.1936968    0.1431573
> marginal.prop<-prop.table(margin.table(Table,1))
> marginal.prop
Online.Shopping
     Yes       No
0.532879 0.467121
> # row proportions
> Row.prop<-prop.table(Table,1)
> Row.prop
                Age.Of.Respondant
Online.Shopping   16 to 24   25 to 34   35 to 44   45 to 54   55 to 64 65 and
older
            Yes 0.10219523 0.21707161 0.21845695 0.19565217 0.17124893   0.09
537511
            No  0.10017019 0.13068320 0.15487479 0.19730124 0.21930464   0.19
766594
> #Column proportions
> Col.Prop<-prop.table(Table,2)
> Col.Prop
                Age.Of.Respondant
Online.Shopping  16 to 24  25 to 34  35 to 44  45 to 54  55 to 64 65 and olde
r
            Yes 0.5378575 0.6545630 0.6167268 0.5307892 0.4711228    0.355017
9
            No  0.4621425 0.3454370 0.3832732 0.4692108 0.5288772    0.644982
1
> #Calculate Joint Proportions
> Joint.Prop<-prop.table(Table)
> Joint.Prop
                Age.Of.Respondant
Online.Shopping   16 to 24   25 to 34   35 to 44   45 to 54   55 to 64 65 and
older
            Yes 0.05445769 0.11567291 0.11641113 0.10425894 0.09125497   0.05
082340
            No  0.04679160 0.06104486 0.07234526 0.09216354 0.10244179   0.09
233390
> # Perform Chi-Squared test of Independence
> chisq.test(Table)

        Pearson's Chi-squared test

data:  Table
X-squared = 651.89, df = 5, p-value < 2.2e-16

> #add margins to the table
> addmargins(Table)
                Age.Of.Respondant
Online.Shopping 16 to 24 25 to 34 35 to 44 45 to 54 55 to 64 65 and older   S
um
            Yes      959     2037     2050     1836     1607          895  93
84
            No       824     1075     1274     1623     1804         1626  82
26
            Sum     1783     3112     3324     3459     3411         2521 176
10
> detach(CUIS3)
> attach(CUIS)

> names(CUIS)
[1] "CASEID"   "gcagegr6" "ec_q01"   "ps_q02"
> CUIS2<-CUIS[which(ps_q02<=3 & ec_q01 <=5),]
```

```
> detach(CUIS)
> attach(CUIS2)

> table(ec_q01)
ec_q01
   1    2
9168 7449
> table(ps_q02)
ps_q02
   1    2    3
3731 7424 5462
> # Research Question 2
> # change category names from numbers to names for age of respondant
> CC.Concerned<-factor(CC.Concerned,
+                          levels=c(1,2,3),
+                          labels = c("Not at all Concerned", "Concerned", "
Very Concerned"))
> # Perform exploratory analysis to see if there is an apparent relationship
between
> # age of respondant and whether or not respondant has purchased anything on
line in
> # the past 12 months
> # Create table for comparing age and whether or not respondant did online s
hopping in the last 12 months
> Table <- table(Online.Shopping, CC.Concerned)
> Table
               CC.Concerned
Online.Shopping Not at all Concerned Concerned Very Concerned
            Yes                 2635      4679           1854
            No                  1096      2745           3608
> # create margins for each column
> addmargins(Table, 1)
               CC.Concerned
Online.Shopping Not at all Concerned Concerned Very Concerned
            Yes                 2635      4679           1854
            No                  1096      2745           3608
            Sum                 3731      7424           5462
> # create margins for each row
> addmargins(Table, 2)
               CC.Concerned
Online.Shopping Not at all Concerned Concerned Very Concerned  Sum
            Yes                 2635      4679           1854 9168
            No                  1096      2745           3608 7449
> # Create barplot to obtain frequency of responses by Whether they online sh
op or not
> barplot(table(Online.Shopping, CC.Concerned), beside = TRUE,
+         main = "Perceived concern of using a credit card on the internet by
whether the respondant done online shopping in the past 12 months",
+         xlab = "Perceived concern of using a credit card on the internet",
+         ylim = c(0,6000),
+         col=rainbow(2))
> # add legend to bar plot
> legend("topright",
+        title = "Done online shopping in the past 12 months?",
+        legend = rownames(table(Online.Shopping, CC.Concerned)),
+        fill = rainbow(2),
+        cex = 0.65)
```




```
> # calculate marginal proportions into the table
> marginal.prop<-prop.table(margin.table(Table, 2))
> marginal.prop
CC.Concerned
Not at all Concerned            Concerned       Very Concerned
           0.2245291            0.4467714            0.3286995
> marginal.prop<-prop.table(margin.table(Table,1))
> marginal.prop
Online.Shopping
      Yes        No
0.5517241 0.4482759
> # row proportions
> Row.prop<-prop.table(Table,1)
> Row.prop
               CC.Concerned
Online.Shopping Not at all Concerned Concerned Very Concerned
            Yes            0.2874127 0.5103621      0.2022251
            No             0.1471338 0.3685058      0.4843603
> #Column proportions
> Col.Prop<-prop.table(Table,2)
> Col.Prop
               CC.Concerned
Online.Shopping Not at all Concerned Concerned Very Concerned
            Yes            0.7062450 0.6302532      0.3394361
            No             0.2937550 0.3697468      0.6605639
> #Calculate Joint Proportions
> Joint.Prop<-prop.table(Table)
> Joint.Prop
               CC.Concerned
Online.Shopping Not at all Concerned  Concerned Very Concerned
            Yes           0.15857255 0.28157911     0.11157249
            No            0.06595655 0.16519227     0.21712704
> # Perform Chi-Squared test of Independence
> chisq.test(Table)

        Pearson's Chi-squared test

data:  Table
X-squared = 1540.6, df = 2, p-value < 2.2e-16

> #add margins to the table
> addmargins(Table)
               CC.Concerned
```

```
Online.Shopping Not at all Concerned Concerned Very Concerned   Sum
            Yes                2635      4679           1854  9168
            No                 1096      2745           3608  7449
            Sum                3731      7424           5462 16617
> prop.test(c(2635,1096),c(9168,7449),correct = FALSE)

        2-sample test for equality of proportions without continuity correctio
n

data:  c(2635, 1096) out of c(9168, 7449)
X-squared = 464.48, df = 1, p-value < 2.2e-16
alternative hypothesis: two.sided
95 percent confidence interval:
 0.1280099 0.1525479
sample estimates:
   prop 1    prop 2
0.2874127 0.1471338
```