

Question 7

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H0: The proportion of listings with shared room are the same between London and Copenhagen

H1: The proportion of listings with shared room are not the same between London and Copenhagen

```
##  
##           Shared room  Not Shared  
##   London      0.010492018 0.989507982  
##   Copenhagen 0.004553777 0.995446223  
  
##  
## 2-sample test for equality of proportions with continuity correction  
##  
## data: table(number)  
## X-squared = 62.478, df = 1, p-value = 2.694e-15  
## alternative hypothesis: two.sided  
## 95 percent confidence interval:  
## 0.004707286 0.007169197  
## sample estimates:  
## prop 1     prop 2  
## 0.010492018 0.004553777
```

There is 95% confidence interval that the difference in proportions between London and Copenhagen is between 0.004707286 and 0.007169197. This doesn't include 0. Also since p-value<0.05 there is sufficient evidence that there is statistical significant difference between the proportion of London and Copenhagen. Since the 95% confidence interval is on the positive range we can assume that London has higher proportion of Shared Rooms