

## Question 7

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3/5/2021

### Question 7

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

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##
##           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  $p\text{-value} < 0.05$  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