

IT24104102

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PS Labsheet 06

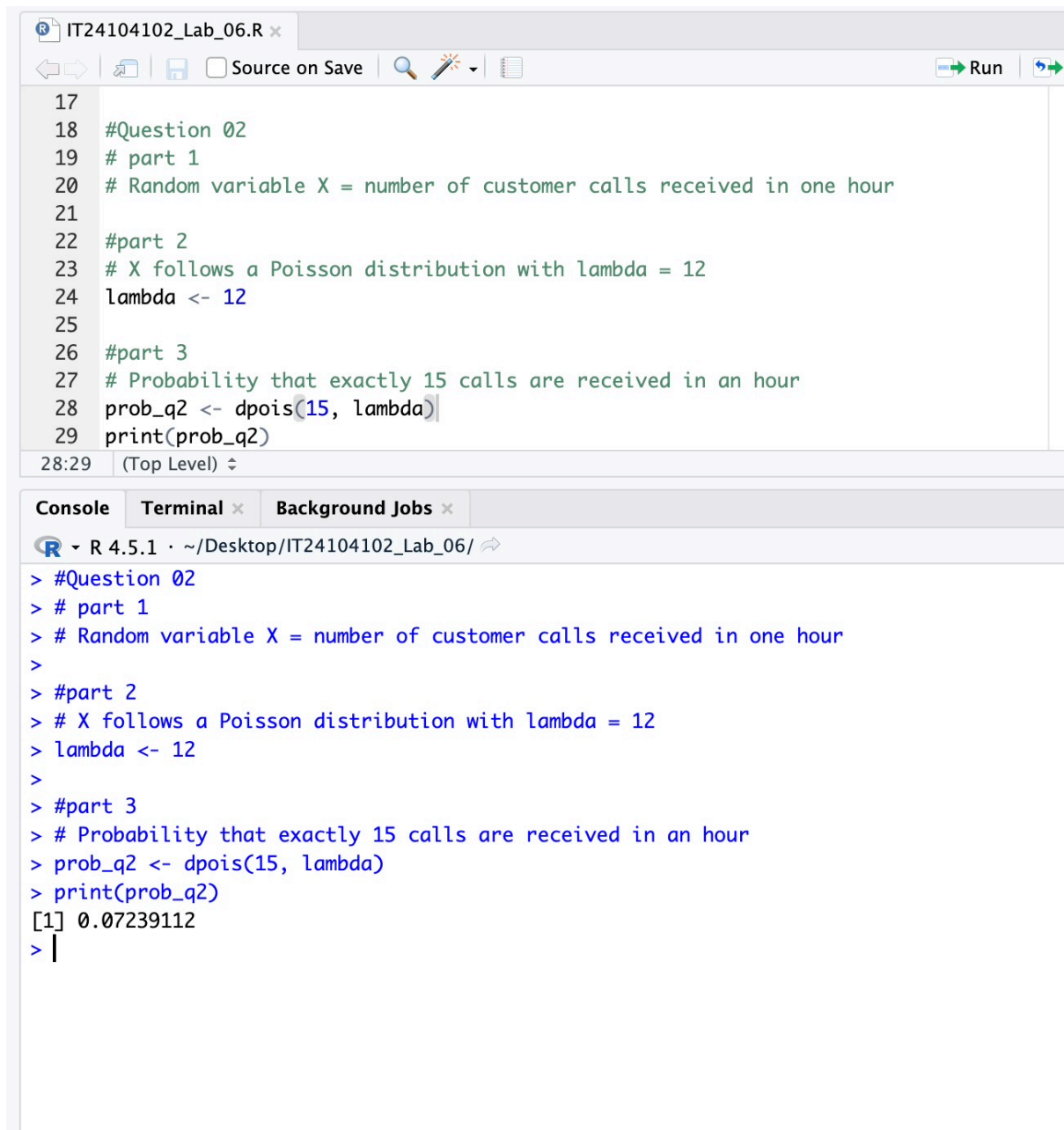
Exercise

Question 01

```
IT24104102_Lab_06.R x
← → |  |  | Source on Save | 🔍 | 🎨 | 📄
1  setwd("/Users/kavinduumayanga/Desktop/IT24104102_Lab_06")
2
3
4  #Question 01
5  #part 1
6
7  n <- 50
8  p <- 0.85
9
10 # Probability at least 47 pass
11 prob <- sum(dbinom(47:50, size=n, prob=p))
12 prob
13
14 #part 2
15 prob <- 1 - pbinom(46, size=n, prob=p)
16 prob
17
17:1 (Top Level) ⚡
```

```
Console Terminal x Background Jobs x
R - R 4.5.1 · ~/Desktop/IT24104102_Lab_06/ ↗
> setwd("/Users/kavinduumayanga/Desktop/IT24104102_Lab_06")
> #Question 01
> #part 1
>
> n <- 50
> p <- 0.85
>
> # Probability at least 47 pass
> prob <- sum(dbinom(47:50, size=n, prob=p))
> prob
[1] 0.04604658
>
> #part 2
> prob <- 1 - pbinom(46, size=n, prob=p)
> prob
[1] 0.04604658
>
```

Question 02



The screenshot shows an RStudio interface with a script editor and a console. The script editor contains R code for a Poisson distribution problem. The console shows the execution of the code, including comments and the final output of the probability calculation.

```
IT24104102_Lab_06.R x
Source on Save
Run

17
18 #Question 02
19 # part 1
20 # Random variable X = number of customer calls received in one hour
21
22 #part 2
23 # X follows a Poisson distribution with lambda = 12
24 lambda <- 12
25
26 #part 3
27 # Probability that exactly 15 calls are received in an hour
28 prob_q2 <- dpois(15, lambda)
29 print(prob_q2)

28:29 (Top Level) ↕

Console Terminal x Background Jobs x
R 4.5.1 · ~/Desktop/IT24104102_Lab_06/ ↗
> #Question 02
> # part 1
> # Random variable X = number of customer calls received in one hour
>
> #part 2
> # X follows a Poisson distribution with lambda = 12
> lambda <- 12
>
> #part 3
> # Probability that exactly 15 calls are received in an hour
> prob_q2 <- dpois(15, lambda)
> print(prob_q2)
[1] 0.07239112
> |
```