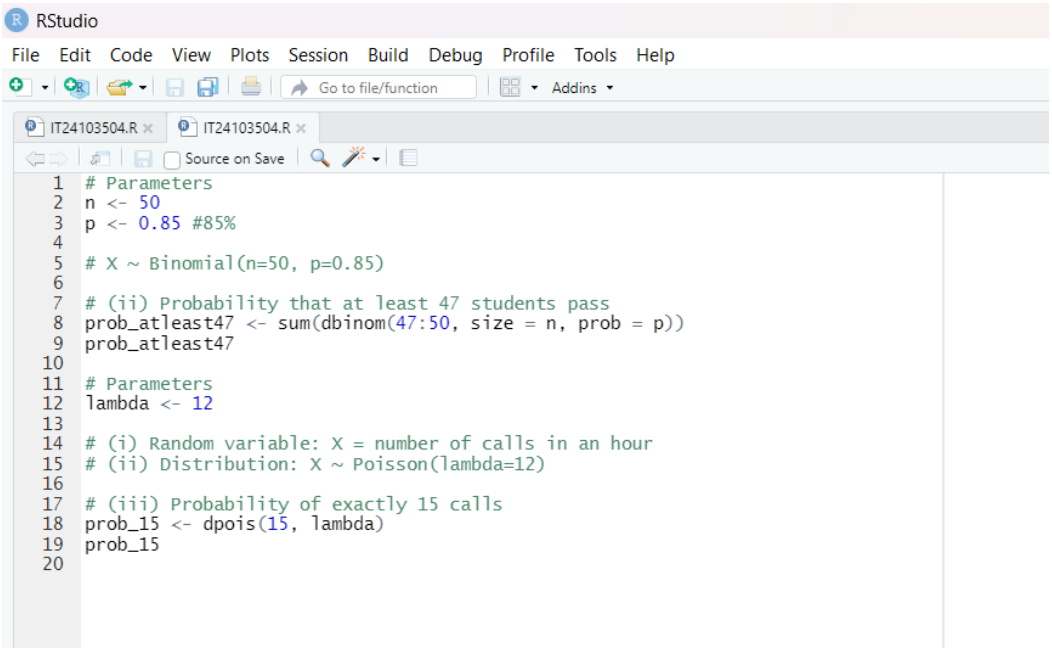
Faculty of Computing

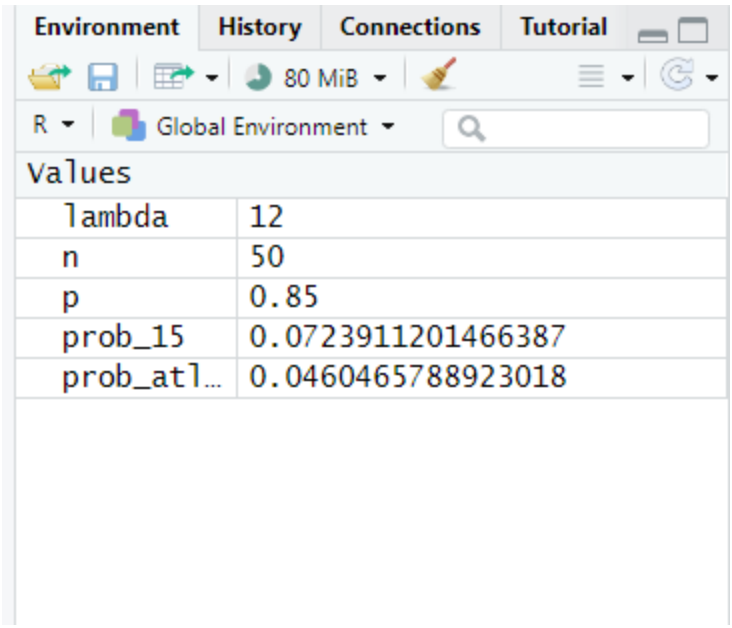
Year 2 Semester 1 (2025)

IT2120 - Probability and Statistics **Lab Sheet 06**

IT24103504

Exercise






```
20:1  (Top Level)
Console  Terminal  Jobs
R 4.5.1 · ~/
> # Parameters
> n <- 50
> p <- 0.85 #85%
>
> # X ~ Binomial(n=50, p=0.85)
>
> # (ii) Probability that at least 47 students pass
> prob_atleast47 <- sum(dbinom(47:50, size = n, prob = p))
> prob_atleast47
[1] 0.04604658
>
> # Parameters
> lambda <- 12
>
> # (i) Random variable: X = number of calls in an hour
> # (ii) Distribution: X ~ Poisson(lambda=12)
>
> # (iii) Probability of exactly 15 calls
> prob_15 <- dpois(15, lambda)
> prob_15
[1] 0.07239112
>
```