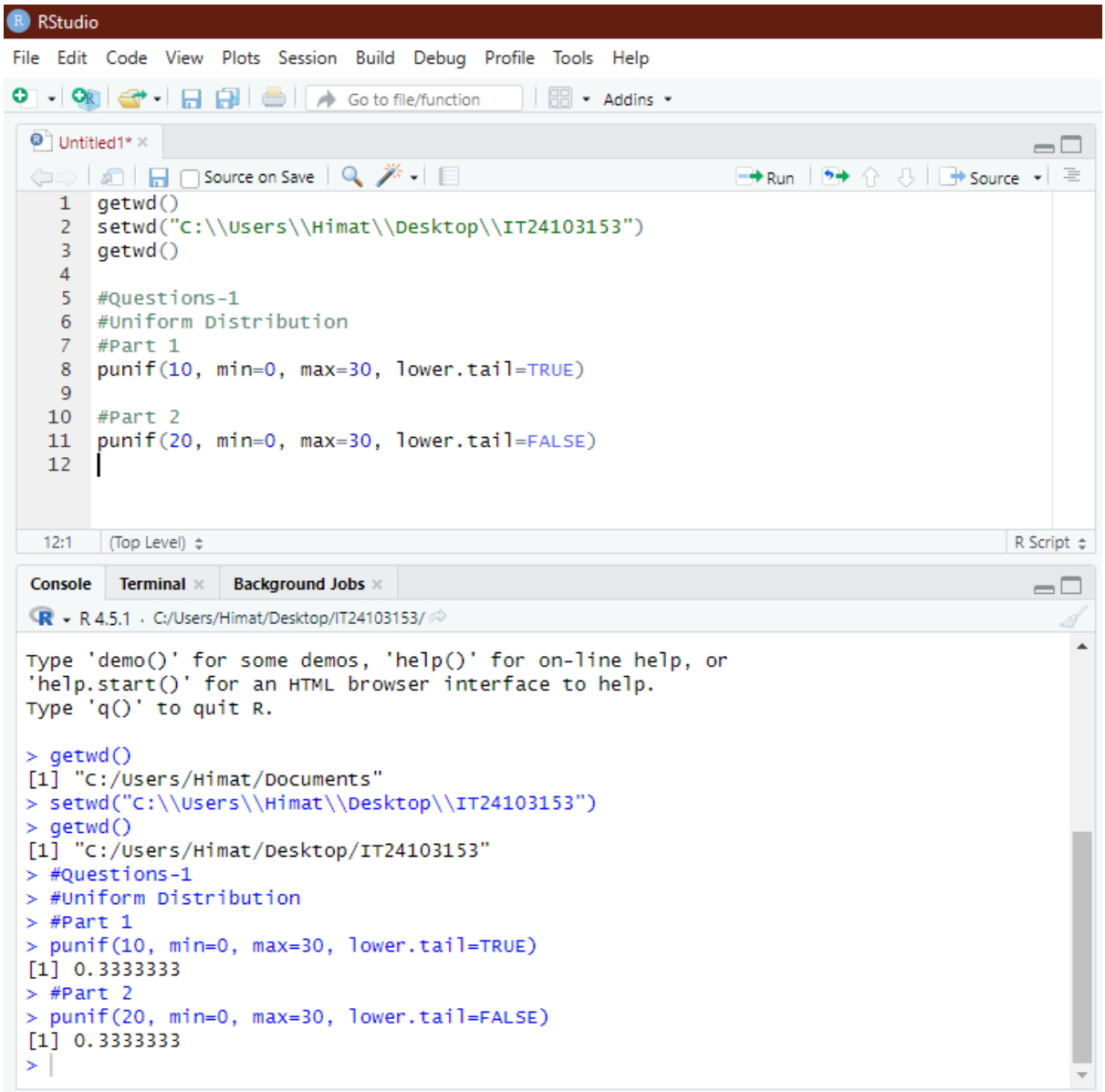
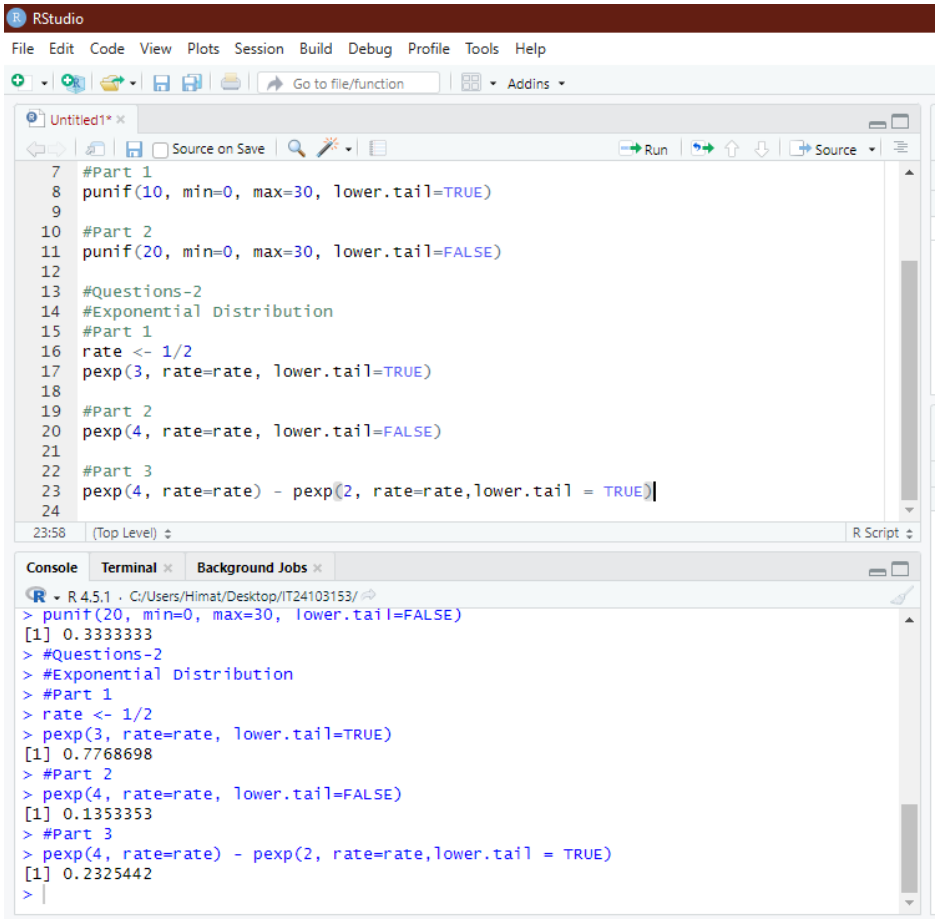
IT2120 - Probability and Statistics

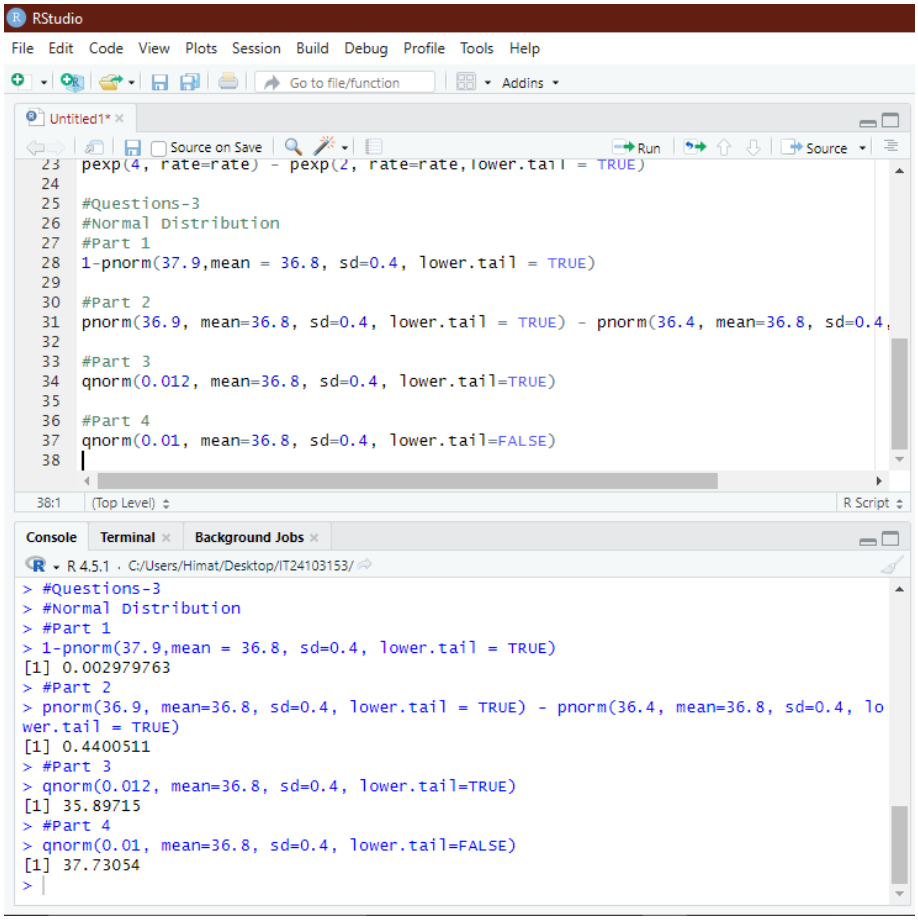
Lab Sheet-07

IT24103153

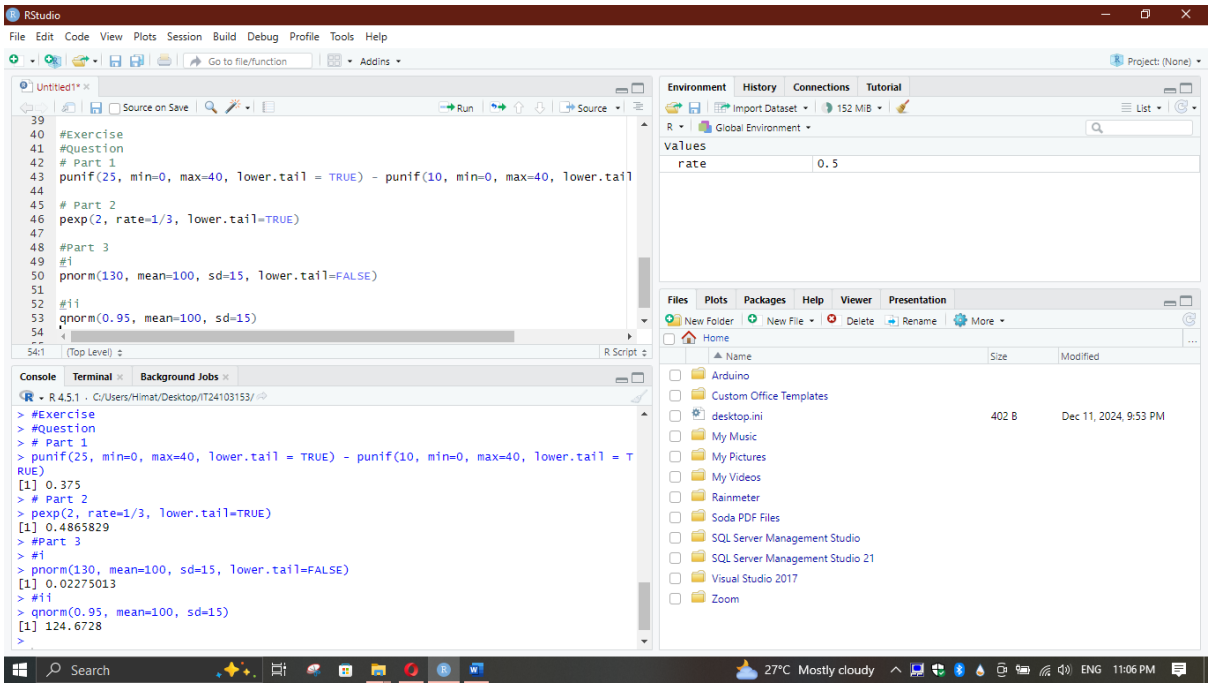
Dassanayake H.N.




RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Untitled1*
Source on Save
Run
Source
7 #Part 1
8 punif(10, min=0, max=30, lower.tail=TRUE)
9
10 #Part 2
11 punif(20, min=0, max=30, lower.tail=FALSE)
12
13 #Questions-2
14 #Exponential Distribution
15 #Part 1
16 rate <- 1/2
17 pexp(3, rate=rate, lower.tail=TRUE)
18
19 #Part 2
20 pexp(4, rate=rate, lower.tail=FALSE)
21
22 #Part 3
23 pexp(4, rate=rate) - pexp(2, rate=rate,lower.tail = TRUE)
24
23:58 (Top Level)
R Script
Console Terminal Background Jobs
R 4.5.1 · C:/Users/Himat/Desktop/IT24103153/
> punif(20, min=0, max=30, lower.tail=FALSE)
[1] 0.3333333
> #Questions-2
> #Exponential Distribution
> #Part 1
> rate <- 1/2
> pexp(3, rate=rate, lower.tail=TRUE)
[1] 0.7768698
> #Part 2
> pexp(4, rate=rate, lower.tail=FALSE)
[1] 0.1353353
> #Part 3
> pexp(4, rate=rate) - pexp(2, rate=rate,lower.tail = TRUE)
[1] 0.2325442
>


RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Untitled1*
Source on Save
Run
Source
23 pexp(4, rate=rate) - pexp(2, rate=rate,lower.tail = TRUE)
24
25 #Questions-3
26 #Normal Distribution
27 #Part 1
28 1-pnorm(37.9,mean = 36.8, sd=0.4, lower.tail = TRUE)
29
30 #Part 2
31 pnorm(36.9, mean=36.8, sd=0.4, lower.tail = TRUE) - pnorm(36.4, mean=36.8, sd=0.4,
32
33 #Part 3
34 qnorm(0.012, mean=36.8, sd=0.4, lower.tail=TRUE)
35
36 #Part 4
37 qnorm(0.01, mean=36.8, sd=0.4, lower.tail=FALSE)
38
38:1 (Top Level)
R Script
Console Terminal Background Jobs
R 4.5.1 · C:/Users/Himat/Desktop/IT24103153/
> #Questions-3
> #Normal Distribution
> #Part 1
> 1-pnorm(37.9,mean = 36.8, sd=0.4, lower.tail = TRUE)
[1] 0.002979763
> #Part 2
> pnorm(36.9, mean=36.8, sd=0.4, lower.tail = TRUE) - pnorm(36.4, mean=36.8, sd=0.4, lo
wer.tail = TRUE)
[1] 0.4400511
> #Part 3
> qnorm(0.012, mean=36.8, sd=0.4, lower.tail=TRUE)
[1] 35.89715
> #Part 4
> qnorm(0.01, mean=36.8, sd=0.4, lower.tail=FALSE)
[1] 37.73054
>

Exercise


RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Untitled1*
Source on Save
Run
Source
#Exercise
#Question
Part 1
punif(25, min=0, max=40, lower.tail = TRUE) - punif(10, min=0, max=40, lower.tail
# Part 2
pexp(2, rate=1/3, lower.tail=TRUE)
#Part 3
#i
pnorm(130, mean=100, sd=15, lower.tail=FALSE)
#ii
qnorm(0.95, mean=100, sd=15)
54:1 (Top Level) R Script
Console Terminal Background Jobs
R 4.5.1 · C:/Users/Himat/Desktop/IT24103153/
> #Exercise
> #Question
> # Part 1
> punif(25, min=0, max=40, lower.tail = TRUE) - punif(10, min=0, max=40, lower.tail = T
RUE)
[1] 0.375
> # Part 2
> pexp(2, rate=1/3, lower.tail=TRUE)
[1] 0.4865829
> #Part 3
> #i
> pnorm(130, mean=100, sd=15, lower.tail=FALSE)
[1] 0.02275013
> #ii
> qnorm(0.95, mean=100, sd=15)
[1] 124.6728
Environment History Connections Tutorial
Import Dataset 152 MiB
Global Environment
values
rate 0.5
Files Plots Packages Help Viewer Presentation
New Folder New File Delete Rename More
Home
Name Size Modified
Arduino
Custom Office Templates
desktop.ini 402 B Dec 11, 2024, 9:53 PM
My Music
My Pictures
My Videos
Rainmeter
Soda PDF Files
SQL Server Management Studio
SQL Server Management Studio 21
Visual Studio 2017
Zoom
Search
27°C Mostly cloudy
ENG 11:06 PM