



Data Analysis for
Psychology in R1 (2020-
2021)[YR]

Dashboard

Announcements

Course information

Weekly materials

Discussion Boards

Virtual Classroom

FAQs

Study Groups

Padlet (anonymous
feedback)

Library resources

Assessment

My Grades

Student hub

Have your say

Help and support

Week 11: Sampling



Build Content

Assessments

Tools



In Case You Missed It

Due to the LEARN outage on Sunday 22/11/2020 (see Course Announcements), for the remainder of this semester the weekly q released this week, are postponed by a day (both release-date and due-date).

This week's lab-test will be released on Tuesday 01/12/2020 at 12 noon and is due on Tuesday 08/12/2020 at 12 noon.



Lab-Test 1

Availability: Item is hidden from students. It will be available after 01-Dec-2020 12:00.

Attached Files: [dapr1_2021_labtest1.Rmd](#) (4196 KB)

This is your first graded lab test, which counts for 10% of your course grade.

It is due at 12 noon (Edinburgh Time) on Tuesday 08th December 2020.

1. [Read the instructions](#)
2. Download the .Rmd linked above, open it in RStudio, and read the instructions. Then, complete the questions. *Save your file*
3. Go to the [assessment page](#) to find submission links to submit your completed .Rmd file.
(Please note: **Do NOT submit** .html, .pdf, .jpg, .webarchive, or anything other than your .Rmd file. The instructions linked above explain of how to download your .Rmd file to your computer from the rstudio.ppls server in order to upload it to the submission link)

Data Analysis for
 Psychology in R1 (2020-
 2021)[YR]

Dashboard

Announcements

Course information

Weekly materials

Discussion Boards

Virtual Classroom

FAQs

Study Groups

Padlet (anonymous
 feedback) 

Library resources

Assessment

My Grades

Student hub

Have your say

Help and support

Week 11: Sampling ▾

Build Content ▾

Assessments ▾

Tools ▾



In Case You Missed It

Due to the LEARN outage on Sunday 22/11/2020 (see Course Announcements), for the remainder of this semester the weekly q released this week, are postponed by a day (both release-date and due-date).

This week's lab-test will be released on Tuesday 01/12/2020 at 12 noon and is due on Tuesday 08/12/2020 at 12 noon.



Lab-Test 1 ▾

Availability: Item is hidden from students. It will be available after 01-Dec-2020 12:00.

Attached Files:  [dapr1_2021_labtest1.Rmd](#) (100 KB)

This is your first graded lab test. It will be available after 01-Dec-2020 12:00.

It is due at 12 noon (Edinburgh time) on Tuesday 08-Dec-2020.

1. [Read the instructions](#)
2. Download the .Rmd link
3. Go to the [assessment page](#)

(Please note: **Do NOT** submit your answers in the form of how to download your .Rmd file.)

Open Link in New Tab
 Open Link in New Window
 Open Link in Incognito Window

Save Link As...

Copy Link Address

Copy

Search Google for "dapr1_2021_labtest1.Rmd"

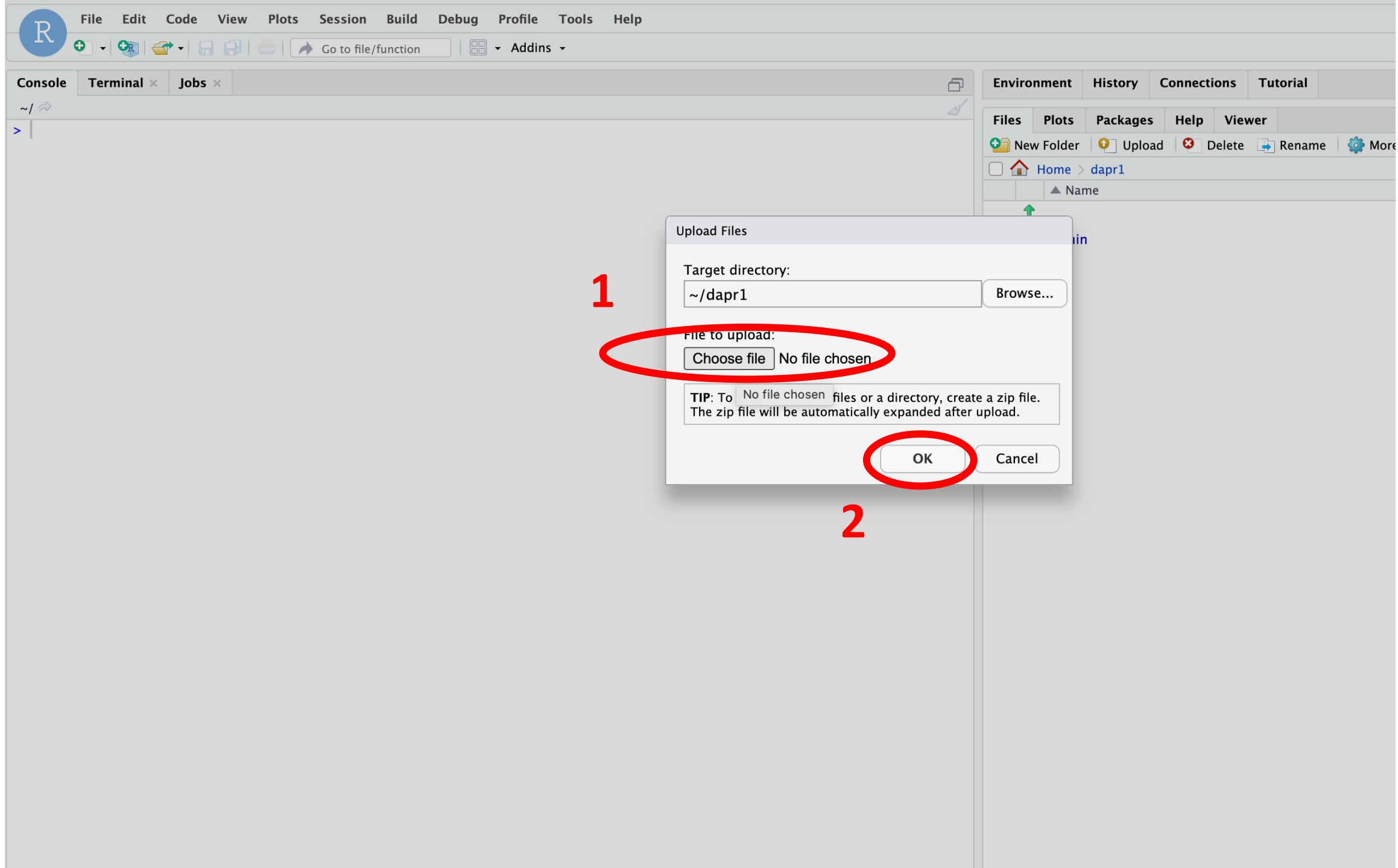
Print...

 Remove Overlay

Inspect

instructions. Then, complete the questions. *Save your file* as a completed .Rmd file.

Upload your .Rmd file to the submission page using other than your .Rmd file. The instructions linked above explain how to upload your file to the submission page.



R

File

Edit

Code

View

Plots

Session

Build

Debug

Profile

Tools

Help

+

+

R

+

📁

💾

🖨

🔍

Go to file/function

+

+

+

+

+

Addins

Console

Terminal x

Jobs x

~/

🔍

>

Environment

History

Connections

Tutorial

Files

Plots

Packages

Help

Viewer

+

📁

New Folder

+

📁

Upload

✖

🗑

↔

🏷

⚙

More

▼

🏠

Home

>

dapr1

▲

Name

📁

..

📁

admin

📄

dapr1_2021_labtest1.Rmd

Read the instructions

```

8
9
10 # Instructions
11 |
12 1. BEFORE clicking the Knit button, enter your exam number without any trailing letters in the two slots above,
13    i.e. next to author and examnumber
14
15 2. Knit the file to read the text description for part A. Alternatively the relevant values v_major and v_minor
16    can be found in your Environment
17
18 3. This is an assessed report and is subject to the University of Edinburgh policy on plagiarism
19
20 4. Similarity checks will be performed and further investigations will be carried on the assignments exceeding
21    a certain similarity threshold.
22
23 5. Run the code chunk below without editing it. This will create data for your report that are linked to your
24    exam number. It will not run if you do not have an exam number inserted where you were asked to insert it.
25
26 ```{r echo=FALSE}
27 if(!is.numeric(params$examnumber)) {
28   stop('You MUST insert your exam number in the two spaces above!')
29 }
30
31 set.seed(params$examnumber)
32
33 v_major <- sample(10^(3:5), 1)
34 v_minor <- sample(2^(5:8), 1)
35 ```
36
37 6. Rename the file from dap1_2021_labtest1.Rmd to YOUR_EXAM_NUMBER.Rmd
38
39    For example: B123456.Rmd
40
41 7. You must only submit this renamed .Rmd file to Turnitin. The file must have extension .Rmd
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99

```

Environment History Connections Tutorial

Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

Home > dap1

Name

..

admin

B123456.Rmd

Console Terminal Jobs

~/

R

FileEditCodeViewPlotsSessionBuildDebugProfileToolsHelp

Go to file/function

Addins

dapr1_2021_labtest1.Rmd

Knit

Insert

Run

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

1:1

title: 'DAPR1: Lab test 1 (assessed)'

author: 'WRITE_EXAM_NUMBER_HERE_WITHOUT_LETTERS'

output: html_document

params:

examnumber: WRITE_EXAM_NUMBER_HERE_WITHOUT_LETTERS

Instructions

1. BEFORE clicking the Knit button, enter your exam number without any trailing letters in the two slots above, i.e. next to `author` and `examnumber`

2. Knit the file to read the text description for part A. Alternatively the relevant values `v_major` and `v_minor` can be found in your Environment

3. This is an assessed report and is subject to the University of Edinburgh policy on plagiarism

4. Similarity checks will be performed and further investigations will be carried on the assignments exceeding a certain similarity threshold.

5. Run the code chunk below without editing it. This will create data for your report that are linked to your exam number. It will not run if you do not have an exam number inserted where you were asked to insert it.

DAPR1: Lab test 1 (assessed)

EnvironmentHistoryConnectionsTutorial

FilesPlotsPackagesHelpViewer

New Folder

Upload

Delete

Rename

More

Home > dapr1

Name

..

admin

dapr1_2021_labtest1.Rmd

ConsoleTerminalJobs

~/

>

R

FileEditCodeViewPlotsSessionBuildDebugProfileToolsHelp

+ - + - + -

Go to file/function

Addins

dapr1_2021_labtest1.Rmd x

Knit

Insert

Run

1 ---
2 title: 'DAPR1: Lab test 1 (assessed)'
3 author: '123456'
4 output: html_document
5 params:
6 examnumber: 123456
7 ---
8 |
9
10 # Instructions
11
12 1. BEFORE clicking the Knit button, enter your exam number without any trailing letters in the two slots above,
13 i.e. next to author and examnumber
14
15 2. Knit the file to read the text description for part A. Alternatively the relevant values v_major and v_minor
16 can be found in your Environment
17
18 3. This is an assessed report and is subject to the University of Edinburgh policy on plagiarism
19
20 4. Similarity checks will be performed and further investigations will be carried on the assignments exceeding
21 a certain similarity threshold.
22
23 5. Run the code chunk below without editing it. This will create data for your report that are linked to your
24 exam number. It will not run if you do not have an exam number inserted where you were asked to insert it.

8:1 (Top Level) R Markdown

ConsoleTerminalJobs

~/>

EnvironmentHistoryConnectionsTutorial

FilesPlotsPackagesHelpViewer

New FolderUploadDeleteRenameMore

Home > dapr1

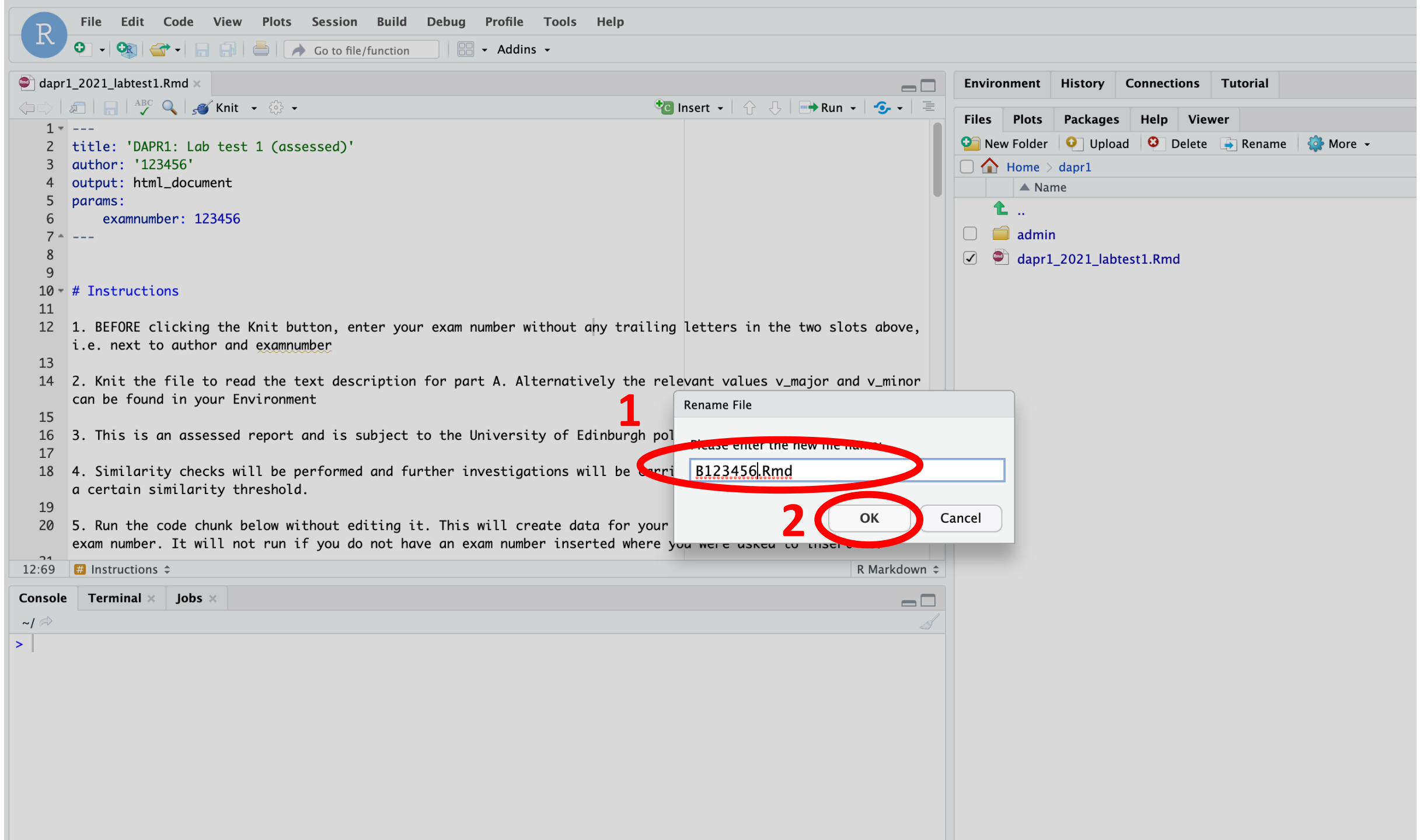
Name

..admindapr1_2021_labtest1.Rmd

1

2

  **dapr1_2021_labtest1.Rmd**





B123456.Rmd



```
34 6. Rename the file from dapr1_2021_labtest1.Rmd to YOUR_EXAM_NUMBER.Rmd
35
36     For example: B123456.Rmd
37
38 7. You must only submit this renamed .Rmd file to Turnitin. The file must have extension .Rmd
```

11:1 # Instructions

R Markdown

Console Terminal x R Markdown x Jobs x

 $\sim / \rightarrow$

>

Environment History Connections Tutorial

Files Plots Packages Help Viewer

 New Folder  Upload  Delete  Rename  More

Home > dapr1

▲ Name

```

  ..
  admin
  B123456.Rmd

```

B123456.Rmd x

Knit

de found in your environment

```
15
16 3. This is an assessed report and is subject to the University of Edinburgh policy on plagiarism
17
18 4. Similarity checks will be performed and further investigations will be carried on the assignments exceeding a
19 certain similarity threshold.
20
21 5. Run the code chunk below without editing it. This will create data for your report that are linked to your exam
22 number. It will not run if you do not have an exam number inserted where you were asked to insert it.
23
24 ```{r echo=FALSE}
25 if(!is.numeric(params$examnumber)) {
26   stop('You MUST insert your exam number in the two spaces above!')
27 }
28
29 set.seed(params$examnumber)
30
31 v_major <- sample(10^(3:5), 1)
32 v_minor <- sample(2^(5:8), 1)
33
34 6. Rename the file from dapr1_2021_labtest1.Rmd to YOUR_EXAM_NUMBER.Rmd
35
36 For example: B123456.Rmd
37
38 7. You must only submit this renamed .Rmd file to Turnitin. The file must have extension .Rmd
39
40
```

11:1 # Instructions R Markdown

Console Terminal x R Markdown x Jobs x

> |

Environment History Connections Tutorial

Files Plots Packages Help Viewer

Publish

INSTRUCTIONS

1. BEFORE clicking the Knit button, enter your exam number without any trailing letters in the two slots above, i.e. next to author and examnumber
2. Knit the file to read the text description for part A. Alternatively the relevant values v_{major} and v_{minor} can be found in your Environment
3. This is an assessed report and is subject to the University of Edinburgh policy on plagiarism
4. Similarity checks will be performed and further investigations will be carried on the assignments exceeding a certain similarity threshold.
5. Run the code chunk below without editing it. This will create data for your report that are linked to your exam number. It will not run if you do not have an exam number inserted where you were asked to insert it.
6. Rename the file from dapr1_2021_labtest1.Rmd to YOUR_EXAM_NUMBER.Rmd
For example: B123456.Rmd
7. You must only submit this renamed .Rmd file to Turnitin. The file must have extension .Rmd

Part A

Insurance companies pay out money in the event of an adverse event or catastrophe. Clearly, they need to assign price to their policies on the basis of the chance of those adverse events happening. The prices they set will cover for the premiums they pay when a customer claims, and also for the administrative overhead (paying employee salaries and operating costs).

The DAPR home insurance company will pay out £100,000 if a natural disaster causes major structural damage, and £20,000 if a natural disaster causes minor structural damage.

R

FileEditCodeViewPlotsSessionBuildDebugProfileToolsHelp

+

+

Go to file/function

Addins

B123456.Rmd

Knit

Insert

Run

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

Question B.2

What is the expected payout for a randomly selected customer?

What is the standard deviation of X?

Answer below:

Question B.3

Using inline R code, answer the following questions.

- Based on the expected payout, how much would you recommend the insurance company charge for their insurance?

- Insurance companies tend to be risk averse and accordingly will plan for a variety of scenarios. In light of the variability in X, how would you update your recommendation on what the company charges its customers?

Answer below (replace BLANK and add any text where the three dots are):

- The expected payout is BLANK, hence ...

- The standard deviation of X is BLANK, hence ...

115:1

Question B.3

R Markdown

Console

Terminal

R Markdown

Jobs

~/

> |

EnvironmentHistoryConnectionsTutorial

FilesPlotsPackagesHelpViewer

DAPR1: Lab test 1 (ass

123456

Instructions

1. BEFORE clicking the Knit button, enter your exam number in the two slots above, i.e. next to author and examnumber

2. Knit the file to read the text description for part A. Alternatively, you can find the file in your Environment

3. This is an assessed report and is subject to the University plagiarism policy

4. Similarity checks will be performed and further investigation will be carried out for assignments exceeding a certain similarity threshold.

5. Run the code chunk below without editing it. This will create a link to your exam number. It will not run if you do not have internet access where you were asked to insert it.

6. Rename the file from dapr1_2021_labtest1.Rmd to YOUR_EXAM_NUMBER

For example: B123456.Rmd

7. You must only submit this renamed .Rmd file to Turnitin.

Part A

Insurance companies pay out money in the event of an adverse event. They need to assign prices to their policies on the basis of the chance of an event occurring. The probability of an event occurring is

