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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Data Science for Engineers (course)

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Course  
outline

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How does an  
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work? ()

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Week 0 ()

Week 1 ()

- Data science for engineers Course philosophy and expectation (unit?)

# Week 1: Assignment 1

The due date for submitting this assignment has passed.

Due on 2024-02-07, 23:59 IST.

Assignment submitted on 2024-01-30, 11:22 IST

1) Which of the following variable names are **INVALID** in R?

1 point

- ☒ 1\_variable
- ☐ variable\_1
- ☒ \_variable
- ☒ variable@

Yes, the answer is correct.

Score: 1

Accepted Answers:

*1\_variable*

*\_variable*

*variable@*

2) The function ls() in R will

1 point

- ☐ set a new working directory path
- ☒ list all objects in our working environment
- ☐ display the path to our working directory
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*list all objects in our working environment*



unit=21&lesso  
n=22)

● Introduction to  
R (unit?  
unit=21&lesso  
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● Introduction to  
R (Continued)  
(unit?  
unit=21&lesso  
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● Variables and  
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○ Data frames  
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n=26)

○ Recasting and  
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(unit?  
unit=21&lesso  
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○ Arithmetic, Logi  
cal and Matrix  
operations in R  
(unit?  
unit=21&lesso  
n=28)

○ Advanced  
programming  
in R :  
Functions  
(unit?  
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○ Advanced  
Programming  
in R :  
Functions  
(Continued)  
(unit?  
unit=21&lesso  
n=30)

○ Control  
structures  
(unit?)

Consider the following code snippet. Based on this, answer questions 3 and 4.

```
1 ID = c(1, 2, 3, 4)
2
3 Patient_name = c("Ram", "Shyam", "Nandini", "Maya")
4
5 num.patient = 4
6
7 patient_list = list(num.patient, ID, Patient_name)
8
```

3) Which of the following command is used to access the value "Shyam"?

1 point

- ☐ print(patient\_list[3][2])  
☐ print(patient\_list[[3]][1])  
☒ print(patient\_list[[3]][2])  
☐ print(patient\_list[[2]][2])

Yes, the answer is correct.

Score: 1

Accepted Answers:

*print(patient\_list[[3]][2])*

4) The output of the code given below is

1 point

```
for (i in patient_list[1]){
  for (j in i){
    print(j)
  }
}
```

☐

```
[[1]] "Ram"
[1] "Shyam"
[1] "Nandini"
[1] "Maya"
```

☒

```
[[1]] 4
```

☐

```
[[1]] 1
[1] 2
[1] 3
[1] 4
```

☐ Code will throw an error

Yes, the answer is correct.



unit=21&less  
n=31)

- Data visualization in R Basic graphics (unit=21&less  
n=32)

- Common doubts asked on R Language (Week-1) (unit=21&less  
n=33)

- Practice: Week 1: Assignment 1 (Non Graded) (assessment? name=183)

**Quiz: Week 1: Assignment 1 (assessment? name=191)**

- Week 1 Feedback Form : Data Science For Engineers (unit=21&less  
n=153)

- Week 1: Solution (unit=21&less  
n=167)

**Week 2 ()**

**Week 3 ()**

**Week 4 ()**

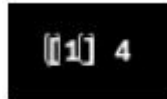
**Week 5 ()**

**Week 6 ()**

**Week 7 ()**

Score: 1

Accepted Answers:



5) What is the output of following code?

1 point

```
1 x = 10 + 5 %% 3
2
3 print(typeof(x))
4
```

- ☒ double
- ☐ integer
- ☐ list
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

*double*

6) State whether the given statement is True or False.

1 point

The library reshape2 is based around two key functions named **melt** and **cast**.

- ☒ True
- ☐ False

Yes, the answer is correct.

Score: 1

Accepted Answers:

*True*

7) What is the output of following code?

1 point

```
A = matrix(c(9:1), 3, 3)
print(A[3, 2])
```

- ☐ 6
- ☒ 4
- ☐ 2
- ☐ 8

Yes, the answer is correct.

Score: 1

Accepted Answers:

*4*

Create the data frame using the code given below and answer questions 8 and 9.



Week 8 ()

Text  
Transcripts ()

Download  
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Session -  
Jan 2024 ()

```
student_data = data.frame(student_id=c(1:4),  
student_name=c('Ram','Harish','Pradeep','Rajesh'))
```

8) Choose the correct command to add a column named **student\_dept** to the dataframe **student\_data**.

1 point

- ☒ `student_data$student_dept=c("Commerce", "Biology", "English", "Tamil")`
- ☒ `student_data["student_dept"]= c("Commerce","Biology", "English","Tamil")`
- ☐ `student_dept= student_data[c("Commerce","Biology","English","Tamil")]`
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

```
student_data$student_dept=c("Commerce", "Biology", "English", "Tamil")
```

```
student_data["student_dept"]= c("Commerce","Biology", "English","Tamil")
```

9) Choose the correct command to access the element **Tamil** in the dataframe **student\_data**.

1 point

- ☐ `student_data[[4]]`
- ☐ `student_data[[4]][3]`
- ☒ `student_data[[3]][4]`
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

```
student_data[[3]][4]
```

10) The command to check if a value is of numeric data type is \_\_\_\_.

1 point

- ☐ `typeof()`
- ☒ `is.numeric()`
- ☐ `as.numeric()`
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

```
is.numeric()
```

