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Course outline

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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***

- [x] 1_variable
- [ ] variable_1
- [x] _variable
- [x] 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
- [x] 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

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

```
ID = c(1, 2, 3, 4)

Patient_name = c("Ram", "Shyam", "Nandini", "Maya")

num.patient = 4

patient_list = list(num.patient, ID, Patient_name)
```

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.

Score: 1
Accepted Answers:

```
[1] 4
```

5) What is the output of following code? ***1 point***

```
x = 10 + 5 %% 3

print(typeof(x))
```

- (•) 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 ()

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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***

- [x] student_datastudent_dept=c("Commerce", "Biology", "English", "Tamil")
- [x] 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_datastudent_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()