

ACADGILD ASSIGNMENT 1.1

1. Please mention true or false for the below statements

A) Prescriptive Analytics is used to predict the future outcomes

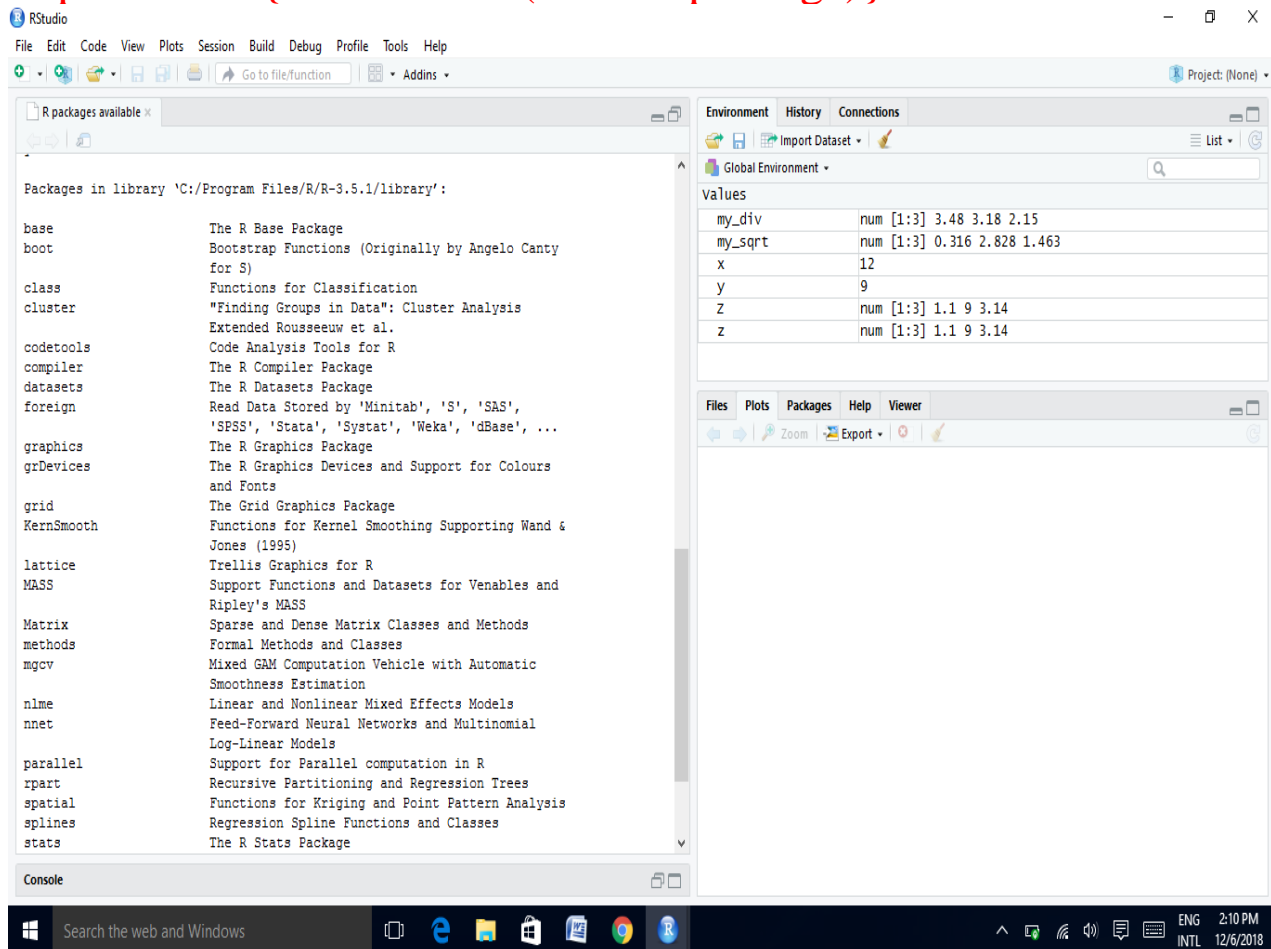
Answer: False

Explanation: Prescriptive Analytics, which use optimization and simulation algorithms to advice on possible outcomes and answer: “What should we do?”

B) Base R packages are installed automatically

Answer: True

Explanation: {Screen shot (base R package)}



2. What is Recycling of elements in a vector?

Answer: When applying an operation to two vectors that requires them to be the same length, R automatically recycles, or repeats, elements of the shorter one, until it is long enough to match the longer Vector.

3. Give an example of recycling of elements?

Answer:

Example

Suppose we have two Vectors `c(1,2,4)` , `c(6,0,9,10,13)`, where the first one is shorter with only 3 elements. Now if we sum these two, we will get a warning message as follows.

```
> c(1,2,4) + c(6,0,9,10,13)
```

```
[1] 7 2 13 11 15
```

Warning message:

In `c(1, 2, 4) + c(6, 0, 9, 10, 13)` : longer object length is not a multiple of shorter object length

Here R , Sum those Vectors by Recycling or repeating the elements in shorter one, until it is long enough to match the longer one as follows..

```
> c(1,2,4,1,2 ) + c(6,0,9,10,13)
```

```
[1] 7 2 13 11 15
```

Explanation

Screenshot example of recycling of elements

The screenshot displays the RStudio interface with a script editor, environment pane, and console. The script editor contains the following R code:

```
1 setwd("C:/Users/Rajesh Chowdary/Desktop/acadgild")
2 getwd()
3 # vector
4 c(1,2,4) + c(6,0,9,10,13)
5
6 c(1,2,4,1,2) + c(6,0,9,10,13)
7
8 |
```

The environment pane on the right shows the Global Environment with the following values:

Variable	Value
my_div	num [1:3] 3.48 3.18 2.15
my_sqrt	num [1:3] 0.316 2.828 1.463
x	7
y	9
z	num [1:3] 1.1 9 3.14
z	num [1:3] 1.1 9 3.14

The console shows the execution of the code, including a warning message for the recycling operation:

```
function ()
.Internal(getwd())
<bytecode: 0x00000000e36bd80>
<environment: namespace:base>
> getwd()
[1] "C:/Users/Rajesh Chowdary/Desktop/acadgild"
> x<-7
> # vector
> c(1,2,4) + c(6,0,9,10,13)
[1] 7 2 13 11 15
Warning message:
In c(1, 2, 4) + c(6, 0, 9, 10, 13) :
  longer object length is not a multiple of shorter object length
> c(1,2,4,1,2) + c(6,0,9,10,13)
[1] 7 2 13 11 15
>
```