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### LAB-1

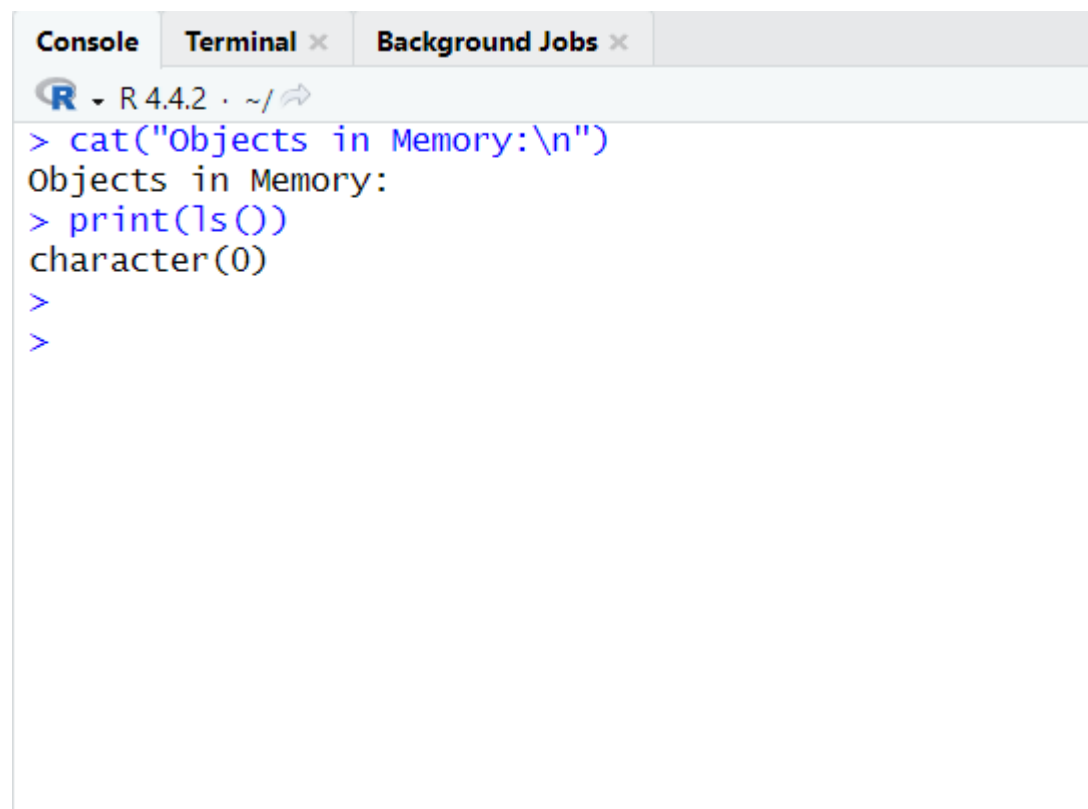
1. Write a R program to take input from the user (name and age) and display the values. Also print the version of R installation.

```
> name <- "Ravi Kumar"
> age <- 30
>
> cat("Your Name:", name, "\n")
Your Name: Ravi Kumar
> cat("Your Age:", age, "\n")
Your Age: 30
> cat("R Version:", R.version.string, "\n")
R Version: R version 4.4.2 (2024-10-31 ucrt)
>
> |
```



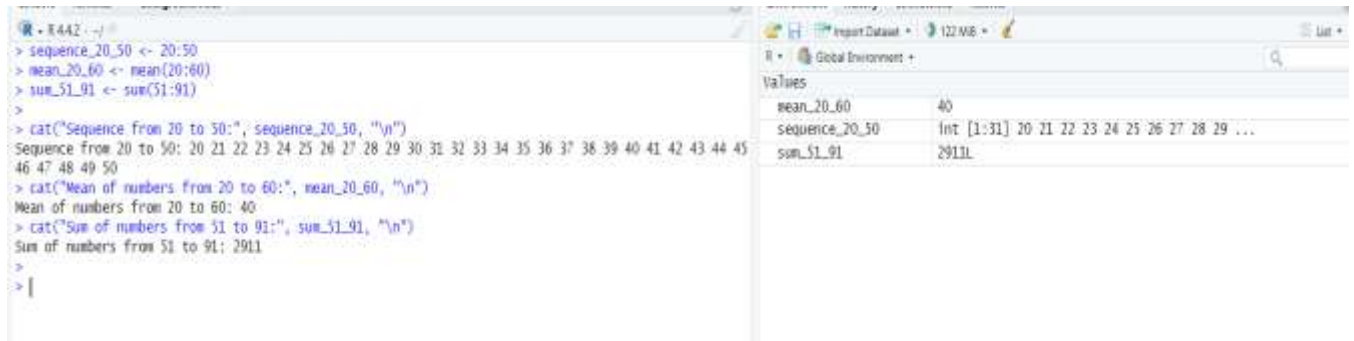
Global Environment	
Values	
age	30
name	"Ravi Kumar"

2. Write a R program to get the details of the objects in memory



```
Console Terminal x Background Jobs x
R 4.4.2 · ~/
> cat("Objects in Memory:\n")
Objects in Memory:
> print(ls())
character(0)
>
>
```

3. Write a R program to create a sequence of numbers from 20 to 50 and find the mean of numbers from 20 to 60 and sum of numbers from 51 to 91.



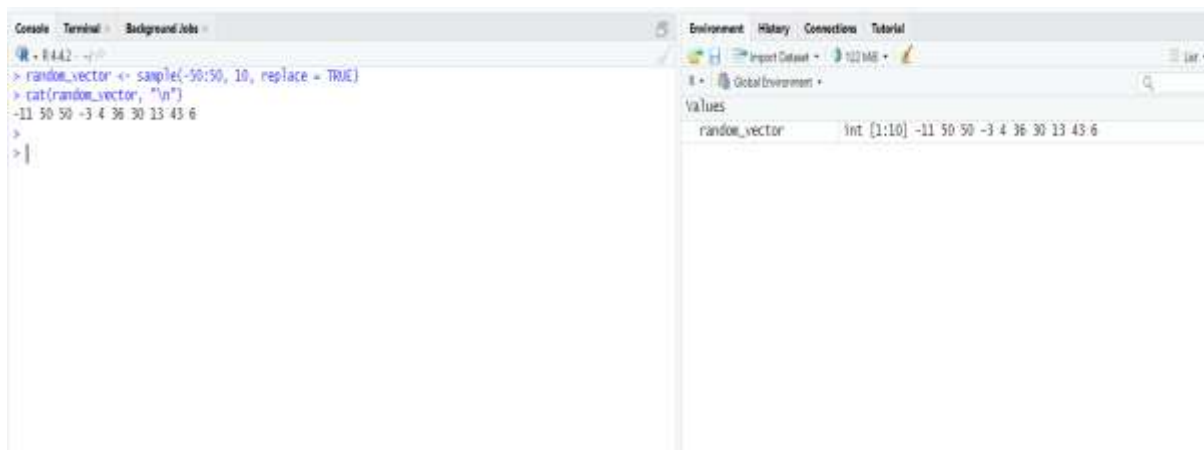
The screenshot shows the R Studio interface. The console on the left displays the following R code and its output:

```
> sequence_20_50 <- 20:50
> mean_20_60 <- mean(20:60)
> sum_51_91 <- sum(51:91)
>
> cat("Sequence from 20 to 50:", sequence_20_50, "\n")
Sequence from 20 to 50: 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45
46 47 48 49 50
> cat("Mean of numbers from 20 to 60:", mean_20_60, "\n")
Mean of numbers from 20 to 60: 40
> cat("Sum of numbers from 51 to 91:", sum_51_91, "\n")
Sum of numbers from 51 to 91: 2911
>
> |
```

The Environment pane on the right shows the following values:

Variable	Value
mean_20_60	40
sequence_20_50	Int [1:31] 20 21 22 23 24 25 26 27 28 29 ...
sum_51_91	2911

4. Write a R program to create a vector which contains 10 random integer values between -50 and +50.



The screenshot shows the R Studio interface. The console on the left displays the following R code and its output:

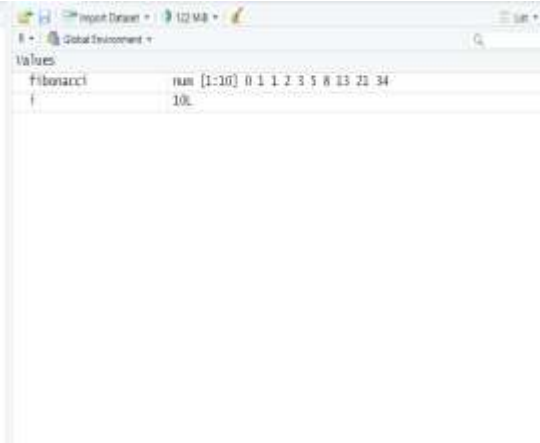
```
> random_vector <- sample(-50:50, 10, replace = TRUE)
> cat(random_vector, "\n")
-11 50 50 -3 4 36 30 13 43 6
>
> |
```

The Environment pane on the right shows the following values:

Variable	Value
random_vector	Int [1:10] -11 50 50 -3 4 36 30 13 43 6

5. Write a R program to get the first 10 Fibonacci numbers.

```
R442 -> |
> fibonacci <- numeric(10)
> fibonacci[1] <- 0
> fibonacci[2] <- 1
>
> for (i in 3:10) {
+   fibonacci[i] <- fibonacci[i - 1] + fibonacci[i - 2]
+ }
>
> cat(fibonacci, "\n")
0 1 1 2 3 5 8 13 21 34
>
> |
```



Values	
fibonacci	num [1:10] 0 1 1 2 3 5 8 13 21 34
i	10L