

Mateo Galvis López

Análisis Numérico

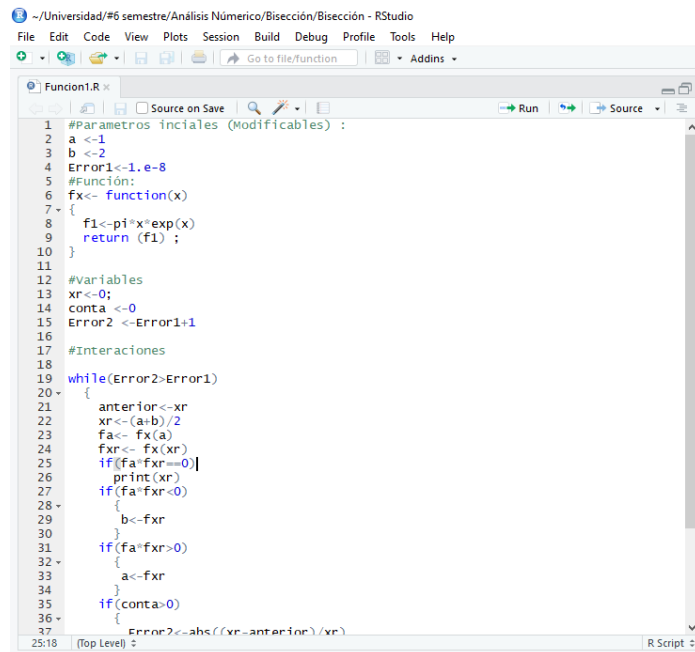
Tarea 1: Bisección

De la siguiente ecuación:

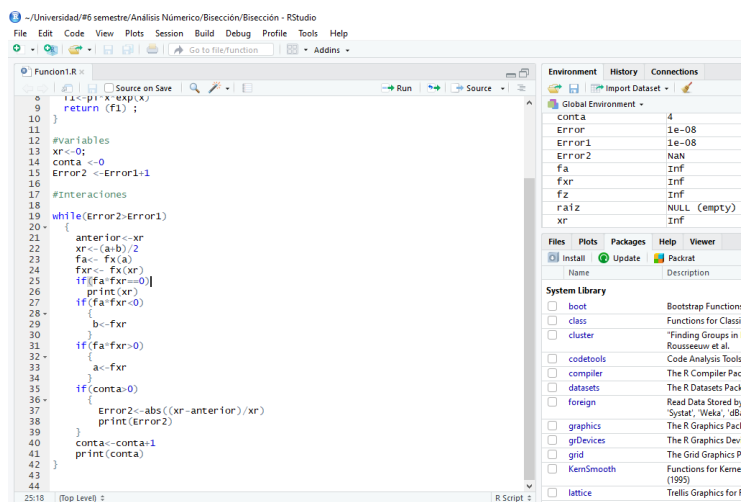
$$f(x) = \pi x e^x$$

Se Realizó el código en R:

Pantallazos:



```
1 #Parametros iniciales (Modificables) :
2 a <- -1
3 b <- 2
4 Error1 <- 1.e-8
5 #Función:
6 fx <- function(x)
7 {
8   f1 <- pi*x*exp(x)
9   return (f1) ;
10 }
11
12 #Variables
13 xr <- 0;
14 conta <- 0
15 Error2 <- Error1+1
16
17 #Interacciones
18 while(Error2>Error1)
19 {
20   anterior <- xr
21   xr <- (a+b)/2
22   fa <- fx(a)
23   fxr <- fx(xr)
24   if(fa*fxr==0){
25     print(xr)
26   }
27   if(fa*fxr<0)
28   {
29     b <- fxr
30   }
31   if(fa*fxr>0)
32   {
33     a <- fxr
34   }
35   if(conta==0)
36   {
37     Error2 <- abs((xr-anterior)/xr)
38   }
39   conta <- conta+1
40   print(conta)
41 }
42
43
44
```



```
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29     b <- fxr
30   }
31   if(fa*fxr>0)
32   {
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34   }
35   if(conta==0)
36   {
37     Error2 <- abs((xr-anterior)/xr)
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40   print(conta)
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```

Environment	History	Connections
Global Environment		
conta	4	
Error1	1e-08	
Error2	1e-08	
Error3	NaN	
fa	Inf	
fxr	Inf	
fz	Inf	
raiz	NULL (empty)	
xr	Inf	

Files	Plots	Packages	Help	Viewer
Install		Update		Packrat
Name				Description
System Library				
<input type="checkbox"/> boot				Bootstrap Functions
<input type="checkbox"/> class				Functions for Classifi
<input type="checkbox"/> cluster				Finding Groups in D
<input type="checkbox"/> codetools				Code Analysis Tools f
<input type="checkbox"/> compiler				The R Compiler Pack
<input type="checkbox"/> datasets				The R Datasets Pack
<input type="checkbox"/> foreign				Read Data Stored by
<input type="checkbox"/> graphics				The R Graphics Pack
<input type="checkbox"/> grDevices				The R Graphics Devi
<input type="checkbox"/> grid				The Grid Graphics Pa
<input type="checkbox"/> KERNSmooth				Functions for KERN
<input type="checkbox"/> lattice				Trillic Graphics for R

