COMANDO GENERAL DEL EJERCITO ESCUELA MILITAR DE INGENIERIA "MCAL. ANTONIO JOSE DE SUCRE" BOLIVIA



PRACTICA #3 "RAGLA FALSA Y PUNTO FIJO"

DOCENTE: Ing. Nirka Mora Mejia

ESTUDIANTE: Leonardo R. Eguino Vasquez

Victor M. Caceres Paco

CARRERA : Ingenieria de sistemas

ASIGNATURA : Investigación Operativa

SEMESTRE: Cuarto

U. ACADEMICA: Cochabamba

GESTION : II/2022

1. Regla Julsa. Lu2 x - x - 1	= 0 [0.1; 0.5] ERDR = 0.5%.
af(b) - bf(a)	
X a + - - - -	
F(6) - F(a)	Causio Ever 5, = 10.37722 -0.42191
1 0.1 0.5 0.42490 (+)(-)=-	Causio Error 5, = 0.37722 ×10
2 0.1 0.42190 0.37722 (+) (-)=-	b=0.37722 11,84% E = 11.84
4 0 1 0 3516 0 27202 (1)(1)	1 -0 53202 [[3406
5 6.1 0.33702 0.32863 (+)(-)=	b=0.32863 2.55%.
6 0.1 0.32863 0.32382 (+7(+)=-	b=0.3238 2 0.5 %
9	5 14 4 1 2 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4
10	
12	
13	
Para X1	Para X2
f(a) = 4.20190 f(b) = -1.01955	f(a) = 4.201a0 f(b) = -0.67715
01(-101055)-0.5(4.20100)	$\chi_{2} = 0.1(-0.67715) - 0.42190(4.20100)$ $(-0.67715) - (4.20100)$
$\chi_1 = 0.1(-1.01055) - 0.5(4.20100)$ $(-1.01055) - (4.20100)$	(-0.67715) - (u. 20140
x ₁ = 0.42140	X2 = 0.37722
Para x3	Para Xu
	Cross (4 2010)
f(a) = 4.20190 f(b) = -0.42674	F(a) = 4.2019. F(b) = -0,25945
0.1(-0.42674) -0.37722(4.2	$y_{4} = \frac{0.1(-0.25au_{5}) - 0.35166(4,2014)}{-0.25au_{5} - 0.25au_{5} - 0.2014}$
×3 = (-0.42674) - (4.201a)	4 -0,25045 -4.2010
$\chi_2 = 0.35166$	/4 = 0.33702
Para X 5	Para 1/2
	(F(g) = 4, 2019
f(a) = 4.2019 f(b) = -0.15412	F(a) = 4.2019 F(b) = -0.0 9026
0.1(+0.15412)-0.33702(4.2010)	$\chi_6 = \frac{0.1(-0.09016) - 0.32863(4.2010)}{-0.00016 - 4.2019}$
$\chi_{5} = \frac{0.1(-0.15432) - 0.33702(4.2010)}{(-0.15432) - 4.2010}$	
X5 = 0.32863	$\chi_6 = 0.32382$
Solverou aproximada:	X \approx 0.32382 //

2. Keyla falsa $f(x) = \sqrt{x'}$ $a f(b) - b f(a)$	1.0-1.011 0-11-1	The second state of
$\gamma_1 = \frac{1}{f(b) - f(a)}$		
(6)		
	Xi fafts Cambra	o Error
	10601 (-)(+)=- b=0.80601 .6861 (-)(+)=- b=0.8686	10.54%
3 0 0,66867 0.6	1289 (-)(+)=- 5=0.64726 1289 (-)(+)=- 5=0.64289	3.310%
4 0 0.64726 0.64 5 0 0.64789 0.64	1289 (-) (+) = - 5=0,64289	0.68%
5 0 0.64289 0.64	(197 (-)(4) = - b=0.64147	0.14 %
Para XI	Para X2	Para X3
f(m) = -1	f(n) = -1	$\int f(a) = -1$
f(a) = -1 f(b) = 2.72204	f(a) = -1 f(b) = 0.20540	f(6) = 0.03308
$\chi_1 = 0$ (4.72204) -3(-1)	X ₂ = -0.80601(-1) 0.20540-(-1)	X3 = 0(0.03308)-0.66862
1 = 1.72204-(-1)		0.03308 -(-1)
X1 = 0.80601	x 2 = 0.66 867	X3 = 0.64726
		H 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Para Xy	Para Xg	
	Fron = -1	a
f(a) = -1 f(b) = 0.00679	f(a) = -1 f(b) = 0.00144	1) by Verrelevis
0(0,00679) - 0.64726(-1)	0(0.00144) - 0.64	1289(-1)
$\chi_{4} = \frac{0(0.00679) - 0.64725(-1)}{0.00679 - (-1)}$	7 X5 = 0(0.00144) - 0.64 0.00144 - (1) 000 00 00 00
Xu = 0.64289	x5 = 0.64197	
Date/S	lución Aportuada	
Rate120	20.64597 4	
		Waluc-116
	1 3 3 3 5 5 5 5 5 5	124 - 144 - 144 - 144
F 127.19 - 124.19		
		81 20 3919136
	V3P 13 10 2 1 1 1 1 1	

a	f(b) - bf f(b) - f(o	(a)				DA I	1 0			01	C-10. W	S at Sec.
a	f(b)-f(0	2)	2 . K					-	-	-		-
The second second second						14		+				-
The second second second			+++			111	++	1-1	011	din	r I-V	- 4-1
n -	6	1 78	F(0	ifch	1 0	ambro	1 1	Troi	- 1			1
0.5		6.67167	(-)	(+)=-	5=0	1.67367			7 X		(SO)	
0.5	0.67367			+)=-		0.66188		870/0				3
0.5	0.66488	0.66660	(-)(+)=-		66660		190%		X I	-	
	0.66631	0.66634	1 (2)							X N	1	-
	0.00032	0.000 NB	1 4 /	.1/2	15 -0	6664	5 1010	Joq	70	014		-
X ⁷				Pa	ra	X2				V		
= -0 6	SOAUD			1		A 10	1110			3.81	_	
		1347801	12 1	F	$(\alpha) =$	0.60	040		- 2	0 1	3 .	-
		0,02042			5) -	0.01	LAC			en t	6 64	um
0.5(0.	04245)-0.	71-0.6064	0)	X	2 = 0.	5(0.0	2043	1-0	1.6 + S	076	0,608	70)
	0.04145	-(-0.60640	>	f				23-	(-0.	60,64	0)	
0.67	367			X	= 0	.6618	8	-				
X3						the same of the sa	TANK			~ - ana *	a digital amining come	
				Po	va ?	4			0	401		
1				1		N / N	0113			1	V C	
= 0.(00466		101	1 6				4		st c	BUCK	
0.5	0.00466)-0.66788(-	0.60646	7	-	1 1 1				1. [0	(41)	T
0	.00466-	(-0.60640)	1 1/	11 = 0	0.5 (0.0	0103)	-0.6	606 (0.600	,40)	
0.66	660							3-1	-0.6	0640)	
			-	X	4=0	.6663	2			Thomas artisting		
Xs					Sol	ociou	ADI	oxi	wad	a.		
							1 31			The		
= -0.	.6064				-	, X &	20.0	666	26.		الزاج	
					+			+	/			13
0.5					+ + -		= 141	3	0=	7 3	12	2
		123-(-0.	5064)	. //		10						
0.6	6626/				100				4		- 3	
					-		11		-13		- 1	
					+			+++	\rightarrow	-		
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9 145									1	(2.3)	10	
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	1000	Co P A	1						84	77 ==	9	
1	980	10/11/9/1						1-1		-1-		
	3 3 4 5				+		++	19	13	4		
1					+		-	1				
0	1322	1 500					++			-		
						- -		17				
1								1	-	1		
	$\begin{array}{c} = & 0.0 \\ 0.5 \\ 0.5 \\ 0.67 \\ \hline \\ 0.66 \\ \hline \\ 0.66 \\ \hline \\ 0.5 \\ \hline \\ = & 0.0 \\ \hline \\ 0.5 \\ \hline \\ = & 0.0 \\ \hline \\ 0.5 \\ \hline \end{array}$	0.5 0.66632 x ₁ = -0.60640 = 0.00145 0.5(0.00145) - 0.00465 0.67367 x ₃ = -0.60640 = 0.00466 0.00466 0.66660 x ₅ = -0.6064 = 0.00023 0.5(0.00013) -	0.5 0.66632 0.66626 X ₁ = -0.60640 = 0.00105 -0.7(-0.60640 0.00105 -0.60640 0.67367 X ₃ = -0.60640 = 0.00466 0.5 (0.00466) - 0.66788(- 0.66660 X ₅ = -0.6064 = 0.00023 = 0.5 (0.00013) - 0.66632(0.5 0.66632 0.66626 (-)(x_1) = -0.60640 = 0.00145 0.5 (0.00145) - 0.7 (-0.60640) 0.04145 + (-0.60640) 0.67367 x_3 = -0.60640 = 0.00466 0.5 (0.00466) - 0.66784(-0.60646) 0.66660 x_5 = -0.6064 = 0.00023 - 0.5 (0.00013) - 0.66632 (-0.6064)	0.5 0.66632 0.66626 (-)(+) = - X_1 Po X_2 Po X_3 Po X_4 Po X_5 Po $X_$	0.5 0.66632 0.66626 (-)(+) = - b = 0 X_1 Po (a) = -0.60640 $f(a) = 0.00145 = 0.5(0.00145) - 0.7(-0.60640) X_2 = 0.5(0.00145) - 0.7(-0.60640) X_2 = 0.00145 = 0.00466 = 0.004$	0.5 0.66632 0.66626 (-)(+) = - b = 0.66626 x_1 Po (a x_2 Po (a x_2	0.5 0.66632 0.66626 (-)(+) = - b = 0.66626 0.66826 0.68826 0.66626 0.68826 0.66626 0.68826 0.66626 0.68826 0.66626 0.68826 0.66626 0.68826 0.66632 0.66664 0.66644 0.	0.5 0.66632 0.66626 (+)(+) = - b = 0.66626 0.0009 x_1 x_2 x_3 x_4 x_5 x_6 x_6	0.5 0.66632 0.66626 (-)(+) = - b = 0.66626 0.00976 x_1 Po (a x_2 Po (a x_2	0.5 0.66632 0.66626 (-)(+) = - b = 0.66626 0.00976 x_1 x_2 x_3 x_4 x_5 x_6 x_6	0.5 0.66632 0.66626 (-)(+) = - b = 0.66626 0.00996 x_1 Po (a x_2 x_3 Po (a x_4 x_4 Po (a) = -0.60640 x_5 0.02125 -0.7(-0.60640) x_6 0.0203 -0.67367 x_7 Po (a x_4 x_8 Po (b) = 0.00033 -0.67367 -0.60640 x_8 Po (c) x_4 x_8 Po (c) x_8 x_8 x_8 x_8 Po (c) x_8 x_8

lnx +2 -x =0	X	1 4		-3+	4	10+0
(sale i l	2	0.6931	Xo	= -2	$\frac{4}{2} = 3.5$	34774
(D)	{3 }4	0.0986		10/ =	3.5	
	29	1-0.01 5	10	10	0.0	9
(9(x) = lux +2)	1 1 1 4 3		. Y -	1 6 4 9 9	X 1 +	0 1-3-6
$g'(x) = \frac{L}{x}$	v -	1000	~	0.12	6)12	
/	VT = ;	3(x0)	XI	3.252	.5)+2	
-1 < 0.28571 < 1				3.202	10	a.b.+ c.b
apto						
$x_i = g(x_i)$	Error					1 1 1 1 1
0 3.5 3.2527	1 2 22	. 0	- 1		imada	Olos II-la
3.25276 3.17450 2 3.17450 3.15673		3	ult l	chlox	Mada	10/10/10/10
3 3.15673 3.14954			XA	3. 14	520 //	
4 3.14954 3.14725	0.00	2.		-		
5 3.14725 3.14653						
6 3.14653 3.14630	0.000	07				
8 3.14623 3.14620	0.000	02				13
	0.0000			-72		
	2 2	x+3=0	10	7 1/2	1 1/2	
5 Punto hijo f(x)=	·x - E	+5-0	DC	iter		
①					4+5	9
$x^3+x-e^x+3=x$		XIY		1X0 =	2 =	2 =4.5
$9(x) = x^3 + x - e^x + 3$		3 9.010			= 4.5/	
$g'(x) = 3x^2 + 1 - e^x$		5 - 20.		0	1,7	t
	100					
-1 < 9(4.5) < 1 -> falso						
9(4.5)=-28.26713	23 A					
6	- K	7			STOL TO	
(2) $x^3 - e^x + 3 = 0$ 9(x)	= -	-	P405		33/0 4.3	
N3 0X 2	X	$\frac{3}{\ell(\chi^2) - (\chi^2)}$	x_11	1201	- 12002-	
$x^{2} = e^{x} - 3$ $x = \frac{e^{x} - 3}{x^{2}}$ $g'(x)$)= 8	(x)-(())	(4.4)	1 1 1/2	AT SC 1
X = 72		X4				
-1<9(4.5)<1->				X:	fai	time.
-1 < 9 (4.5) < 2 - 3	000			4.5	4.54462	
9(4.5)=2.53545				54462	4.59158	
(3) $e^{x} = x^{3} + 3$			3 4	94158	4.60320	0.00252
			1 4.6	10320	4.61055	0.00159
$x = L_{1}(x^{3}+3)$		3	14.0	12055	4.61519	0.00101
			9.6	31812	4.61812	0.00063
$(9(x) = (u(x^3+3))$)		2 U	11997	4.62113	0.00090
$9(x) = \frac{1}{x^{2+3}}(2x)$				62113		0.00025
-1 < 9 (4.5) <1 -> Verde	dero					
	The second secon		4 1	15	1 11 1	~ 4.6211

