Eddie Aguilar

function newton\_raphson

M = ["Iteracion" "x0" "f(x0)" "f'(x0)" "x2" "Err"]

y = input("Ingresa la funcion a resolver: ", "s")

derivada = input("Ingresa la derivada de esta función: ", "s")

x0 = input("Ingresa tu valor inicial: ")

Er = input("Ingresa el error que quieres alcanzar: ")

iter = 0

N(1,1) = iter;

N(1,2) = x0;

x = x0;

fx0 = eval(y);

dx0 = eval(derivada);

N(1,3) =fx0;

N(1,4) =dx0;

x1 = x0 - (fx0/dx0);

N(1,5) = x1;

N(1,6) = 1;

N(1,1) = iter;

error = 1;

i = 1;

while error>Er

iter = iter + 1;

x0 = N(i,5);

x = x0;

fx0 = eval(y);

dx0 = eval(derivada);

x1 = x0 - (fx0/dx0);

error = abs((x1 - x0)/x1);

N(i+1,1) = iter;

N(i+1,2) = x0;

N(i+1,3) = fx0;

N(i+1,4) = dx0;

N(i+1,5) = x1;

N(i+1,6) = error;

i = i+1;

end

disp(M)

disp(N)

end

A screenshot of a computer

Description automatically generated