Mohammed Salim Othman
17LEN4061055
Mechanical Engineering
ENG382 (ASSIGNMENT 2)

Command window

```
clear
clc
close all
format short S
X(1)=0.5;
C=1;
tol=1E-21;
max1=50;
err(1)=0;
syms x
S= exp(-0.5*x)*(4-x)-2;
Sprime=diff(S);
for C=2:max1;
X(C)=(X(C-1))-((subs(S,X(C-1)))/subs
                                (Sprime,X(C)))
C=[C C]
err(C)= abs[X(C)-X(C-1)]*100
If err(C)<=tol;break
break;
   end;
end
```

table = ['c' 'x' 'err']

table =

1	0.5	0
2	0.88889	33.889
3	0.88496	4.6065
4	0.88571	0.0753
5	0.88571	$1.97e^{-0.5}$
6	0.88571	$1.355e^{-12}$
7	0.88571	0