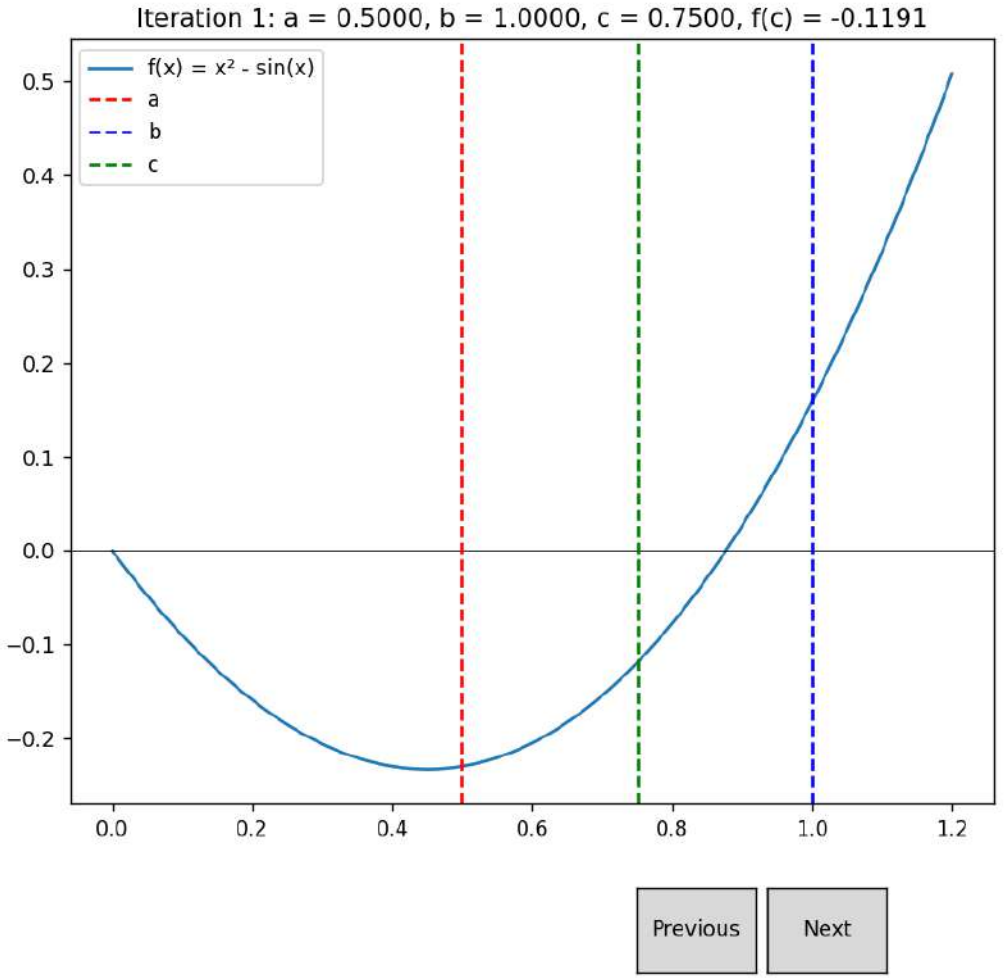
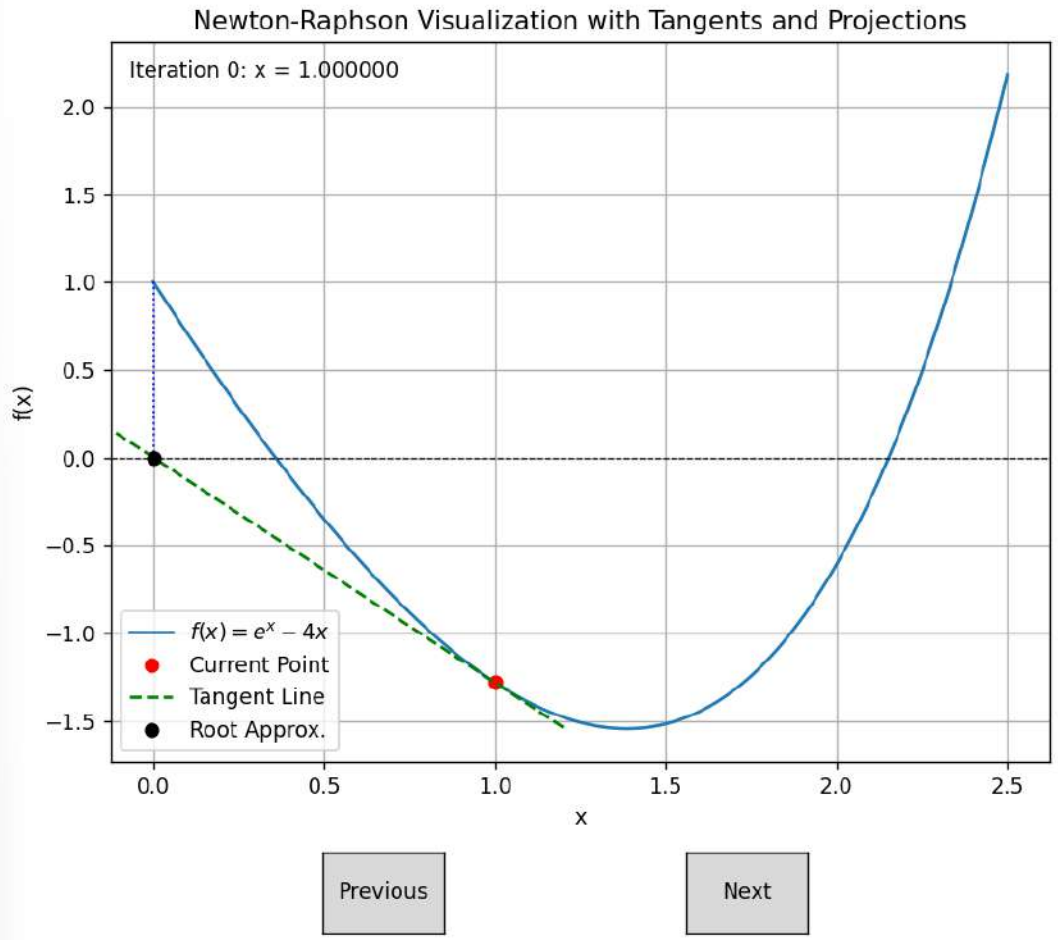
```
PS D:\python_proj\MCSC> uv run bisectionMethod.py
--------------------------------------------------------------------
iter        a              b              c              f(c)
--------------------------------------------------------------------
  1       0.5000         1.0000         0.7500         -0.1191
  2       0.7500         1.0000         0.8750         -0.0019
  3       0.8750         1.0000         0.9375         0.0728
  4       0.8750         0.9375         0.9062         0.0341
  5       0.8750         0.9062         0.8906         0.0157
  6       0.8750         0.8906         0.8828         0.0068
  7       0.8750         0.8828         0.8789         0.0024
  8       0.8750         0.8789         0.8770         0.0003
  9       0.8750         0.8770         0.8760         -0.0008
  10      0.8760         0.8770         0.8765         -0.0003
  11      0.8765         0.8770         0.8767         -0.0000

The root of the equation f(X) = x^2 - sin(x) = 0 is 0.8767.
```



```
PS D:\python_proj\MCSC> uv run newtonRaphson.py
--------------------------------------------------------------------------
iter     Xn          Xn+1          f(X)
--------------------------------------------------------------------------
 0     1.0000        0.0000        -1.2817
 1     0.0000        0.3333        1.0000
 2     0.3333        0.3572        0.0623
 3     0.3572        0.3574        0.0004
 4     0.3574        0.3574        0.0000

The root of the equation f(X) = e^x - 4x = 0 is 0.3574.
```



```
PS D:\python_proj\MCSC> uv run differenceTable.py
-------------------------------------------------------------------------
                        1st      2nd      3rd      4th
S.N.    x       y      Order    Order    Order    Order
-------------------------------------------------------------------------
 0    -1.0   0.3679   0.0387   0.0041   0.0004   0.0000
 1    -0.9   0.4066   0.0428   0.0045   0.0005   0.0000
 2    -0.8   0.4493   0.0473   0.0050   0.0005   0.0001
 3    -0.7   0.4966   0.0522   0.0055   0.0006   0.0001
 4    -0.6   0.5488   0.0577   0.0061   0.0006   0.0001
 5    -0.5   0.6065   0.0638   0.0067   0.0007   0.0001
 6    -0.4   0.6703   0.0705   0.0074   0.0008   0.0001
 7    -0.3   0.7408   0.0779   0.0082   0.0009   0.0001
 8    -0.2   0.8187   0.0861   0.0091   0.0010   0.0001
 9    -0.1   0.9048   0.0952   0.0100   0.0011   0.0001
 10    0.0   1.0000   0.1052   0.0111   0.0012   0.0001
 11    0.1   1.1052   0.1162   0.0122   0.0013   0.0001
 12    0.2   1.2214   0.1285   0.0135   0.0014   0.0001
 13    0.3   1.3499   0.1420   0.0149   0.0016   0.0002
 14    0.4   1.4918   0.1569   0.0165   0.0017   0.0002
 15    0.5   1.6487   0.1734   0.0182   0.0019   0.0002
 16    0.6   1.8221   0.1916   0.0202   0.0021   0.0002
 17    0.7   2.0138   0.2118   0.0223   0.0023
 18    0.8   2.2255   0.2341   0.0246
 19    0.9   2.4596   0.2587
 20    1.0   2.7183
PS D:\python_proj\MCSC>
```

```
PS D:\python_proj\MCSC> uv run newtonsInterpolation.py
Using Newton's Forward Interpolation   f(0.21): 1.6646
Using Newton's Backward Interpolation  f(0.29): 1.7081
PS D:\python_proj\MCSC>
```

```
PS D:\python_proj\MCSC> uv run Lagrange.py
From Lagrange Interpolation, y(2) = 16.0
PS D:\python_proj\MCSC>
```