USER MANUAL

USER INTERFACE INSTRUCTIONS:

(I)   RUN "UI.FIG"

(II)   ENTER THE COEFFICIENTS OF THE POLYNOMIAL EQUATION IN THE EQUATION INPUT TEXTBOX. EXAMPLE: 1 2 1 FOR X^2+2X+1=0 . THIS MAY ALSO BE ANY VALID MATLAB EXPRESSION LIKE: POLY([1 3 5]) OR [2 5 5] + [2 3 -5]

(III)   SET THE TOLERANCE VALUES. THE ZERO APPROXIMATION SHOULD BE AT LEAST 10^4 TIMES LOWER THAN THE LOWEST COEFFICIENT OF THE POLYNOMIAL. DECREASE THE TOLERANCE AND INCREASE MAX. NO. OF ITERATIONS OF THE NR METHOD TO GET BETTER PRECISION.

(IV)   PRESS SOLVE.

(V)   THE ROOTS WITH THEIR CORRESPONDING MULTIPLICITIES WILL BE SHOWN IN THE TABLE AND THE PLOT OF THE POLYNOMIAL FUNCTION WITH ITS ROOTS AND CRITICAL POINTS WILL BE SHOWN IN THE AXES. THE TIME TAKEN FOR THE SOLUTION AND THE TOTAL NO. OF ITERATIONS IS ALSO SHOWN.

(VI)   TO SET THE VISIBILITY OF ANY ELEMENT OF THE AXES I.E. THE PLOT, ROOTS OR CRITICAL POINTS, CHECK OR UNCHECK THE CORRESPONDING CHECK BOXES.

COMMAND LINE INTERFACE INSTRUCTIONS:

(I)   RUN "COMMAND.M"

(II)   ENTER THE COEFFICIENTS OF THE POLYNOMIAL EQUATION IN THE EQUATION INPUT TEXTBOX. EXAMPLE: 1 2 1 FOR X^2+2X+1=0 . THIS MAY ALSO BE ANY VALID MATLAB EXPRESSION LIKE: POLY([1 3 5]) OR [2 5 5] + [2 3 -5]

(III)   THE ROOTS WITH THEIR CORRESPONDING MULTIPLICITIES WILL BE SHOWN.