



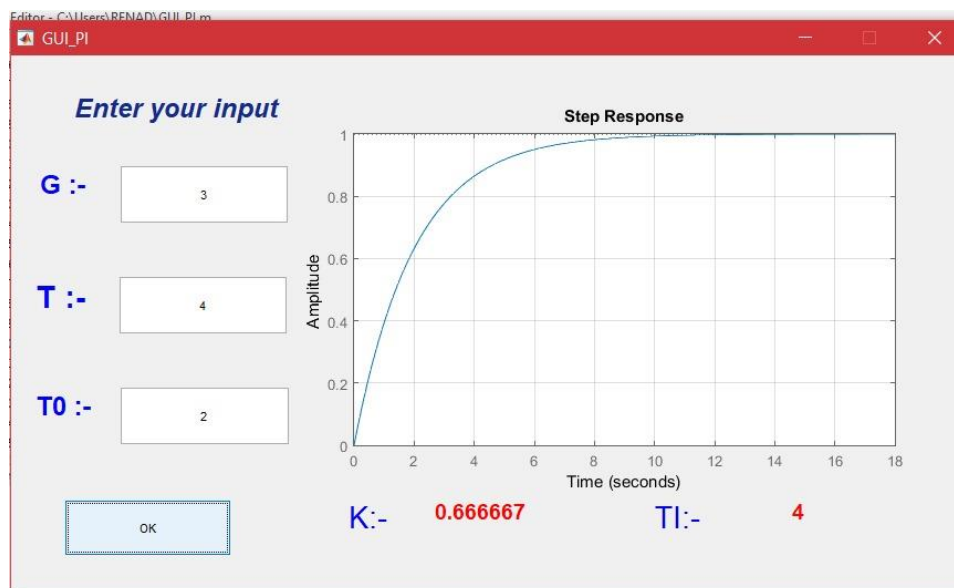
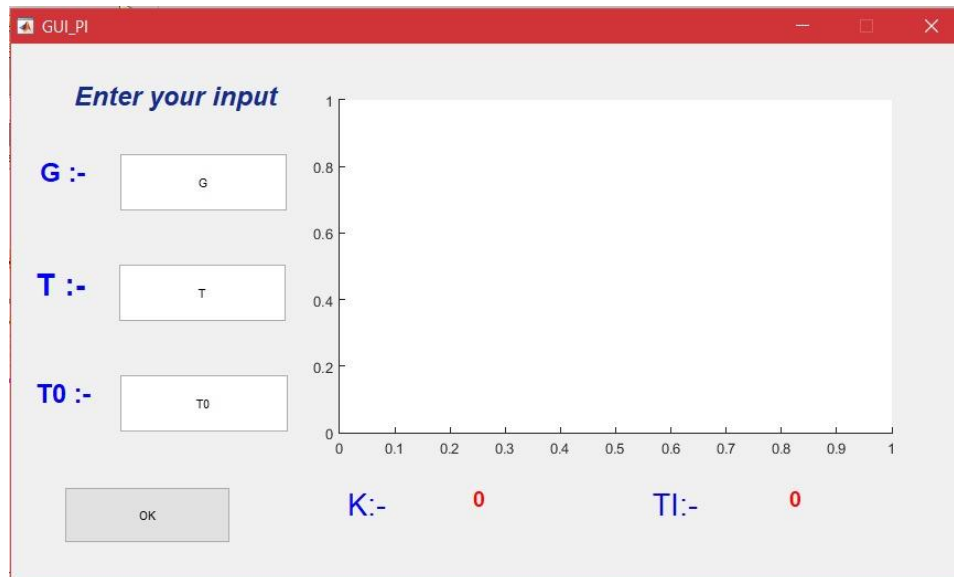
### Control Assignment

Name	code
Nouran Ahmed Fouad	1701596
Renad Mostafa Mohamed	1700553
Salma Sherif Kamel	1700619
Rawan khaled	17e0026
Shaimaa Abdelaziz Ibrahim	1700691
Shrouk Ashraf Salem	1700676

## [DEMO and MATLAB files](#)

### For PI Controller

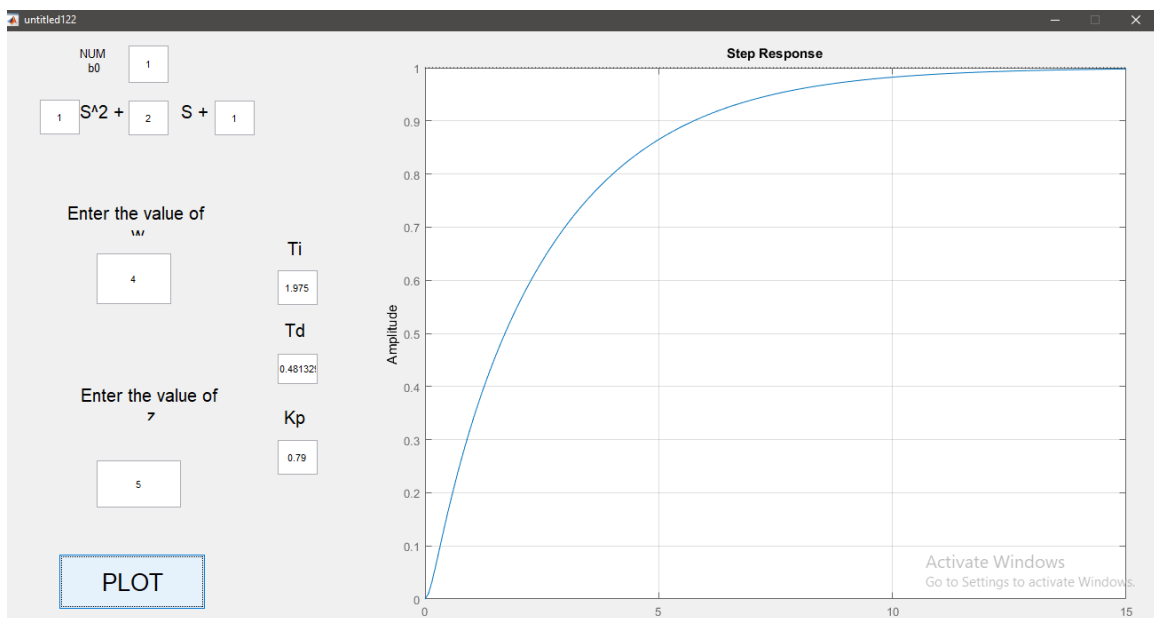
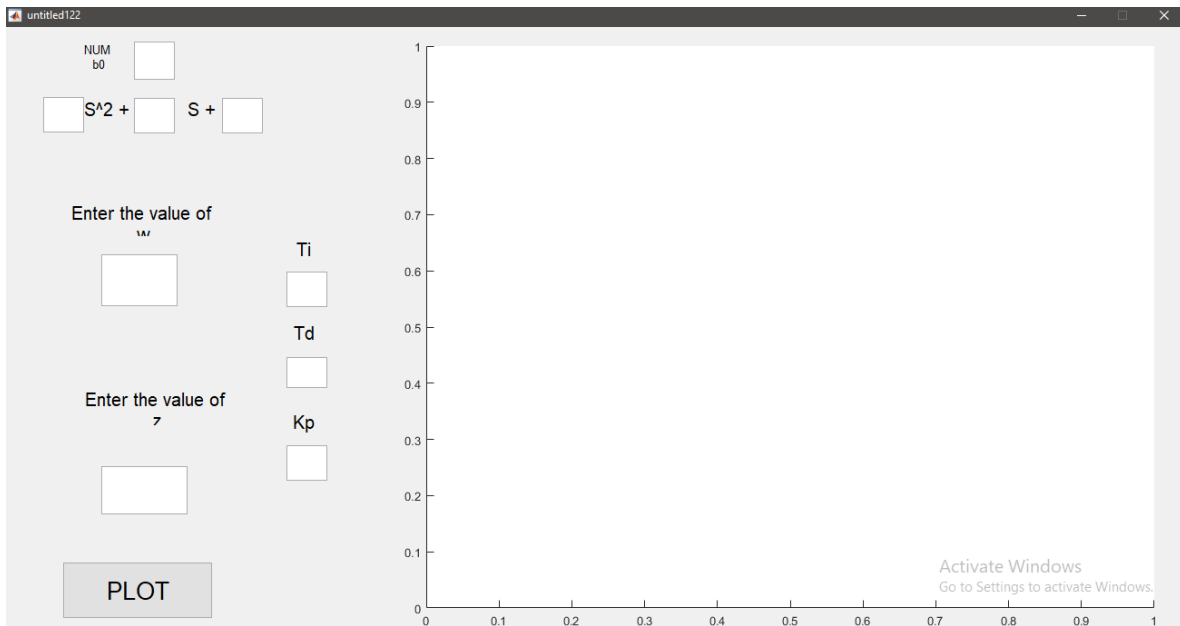
We ask the user to input G, T, T0 And the output will be the k , Ti and the response of the system



Equation used for controller :  $K[1 + \frac{1}{T_i s}]$

## For PID controller

we ask the user to enter the coefficients of the plant, zeta and omega, and output the  $T_i$ ,  $T_d$ ,  $k$



Equation used for controller:  $K[1 + \frac{1}{T_i s} + \frac{T_d s}{1 + \frac{T_d}{N} s}]$

$$T_i = a1 - \frac{1}{2 \cdot z \cdot w} \quad T_d = \frac{a2}{T_i} - \frac{1}{2 \cdot z \cdot w} \quad k = \frac{w \cdot T_i}{2 \cdot z \cdot b0}$$