Lab # 06



Fall 2024

**CSE-310L Control Systems Lab**

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Registration No.: 21PWCSE2028

Section: C

“On my honor, as a student of the University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work”

Submitted to:

Dr. Muniba Ashfaq

(1 Dec 2024)

Department of Computer systems engineering

University of Engineering and Technology, Peshawar

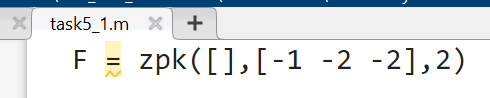
**Objectives:**

The objective of this lab is to learn about:

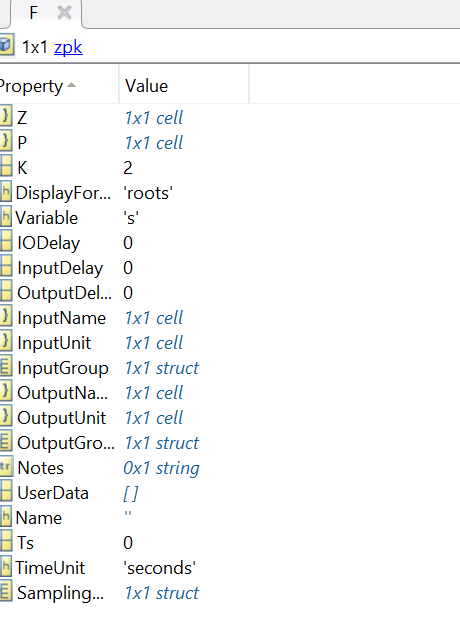
* finding the Laplace and Inverse Laplace transforms using MATLAB

**5.1 Use the MATLAB and Control System Toolbox to form a linear time invariant system transfer function**

**Code:**

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**Output:**

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5.2 Use the MATLAB to get the equation

**Task 8:**

**Code:**

**A screenshot of a computer

Description automatically generated**

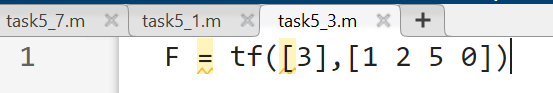
**Output:**

**A white paper with black text

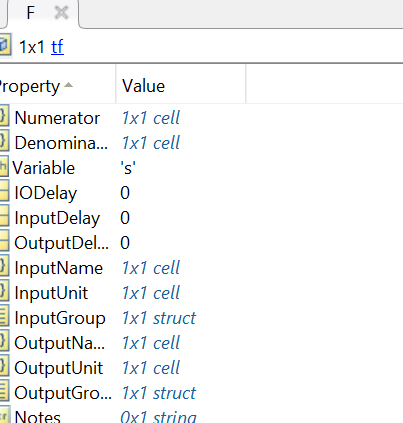
Description automatically generated**

5.3 Use the MATLAB and Control System Toolbox to form a linear time invariant system transfer function

**Code:**

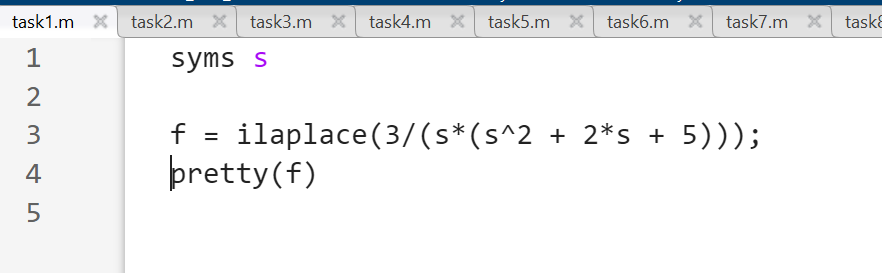
****

**Output:**

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5.4 Use the MATLAB to find the inverse laplace transform of the system transfer function

**Code:**

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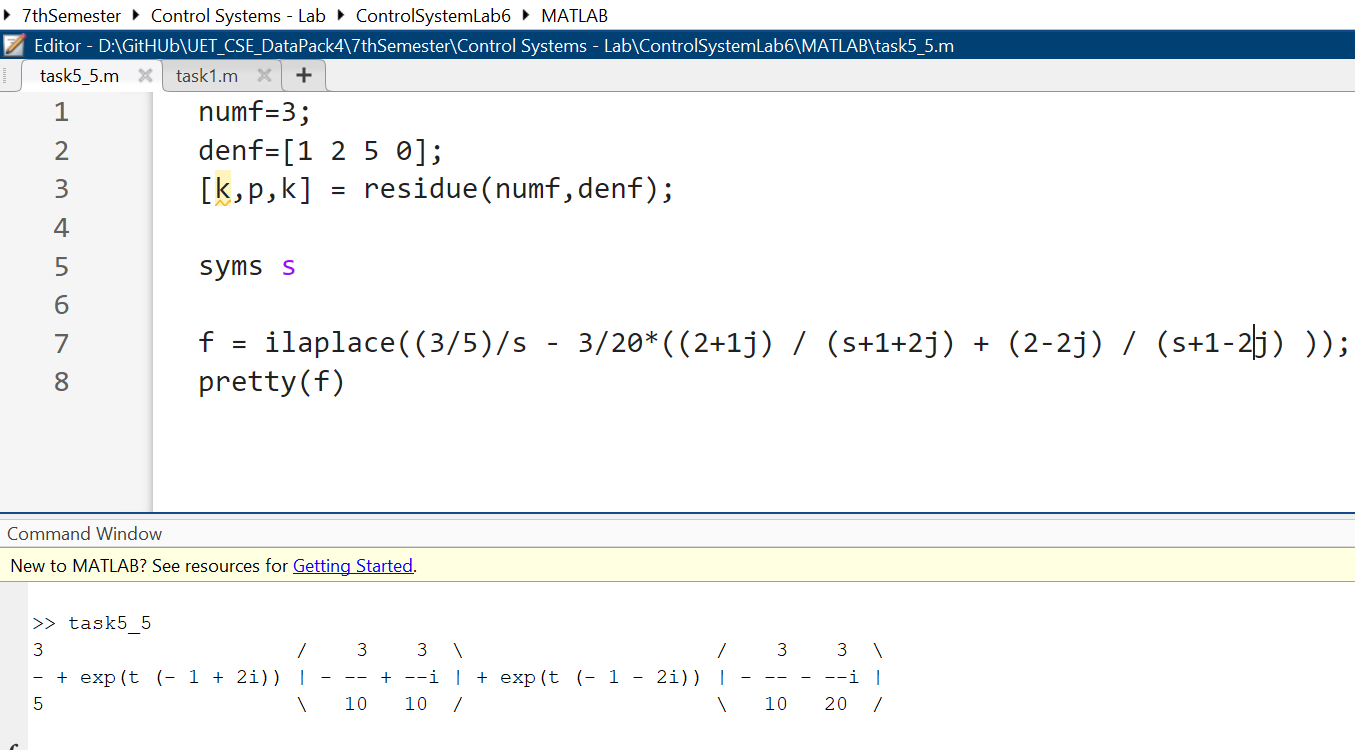
**Output:**

**A math equations and numbers

Description automatically generated with medium confidence**

5.5 Use MATLAB to get the following equation

**Code:**

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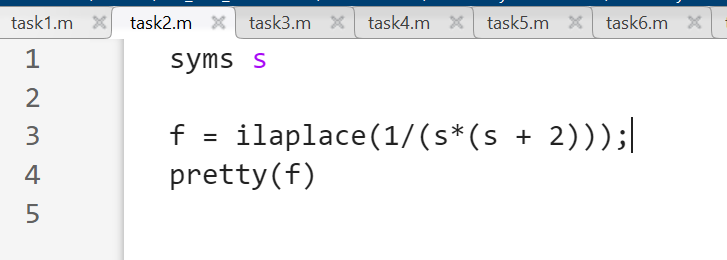
**Output:**

**A screenshot of a computer

Description automatically generated**

5.6 Use the MATLAB to find the inverse laplace transform of the system transfer function

**Code:**

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**Output:**

**A white background with black text

Description automatically generated**

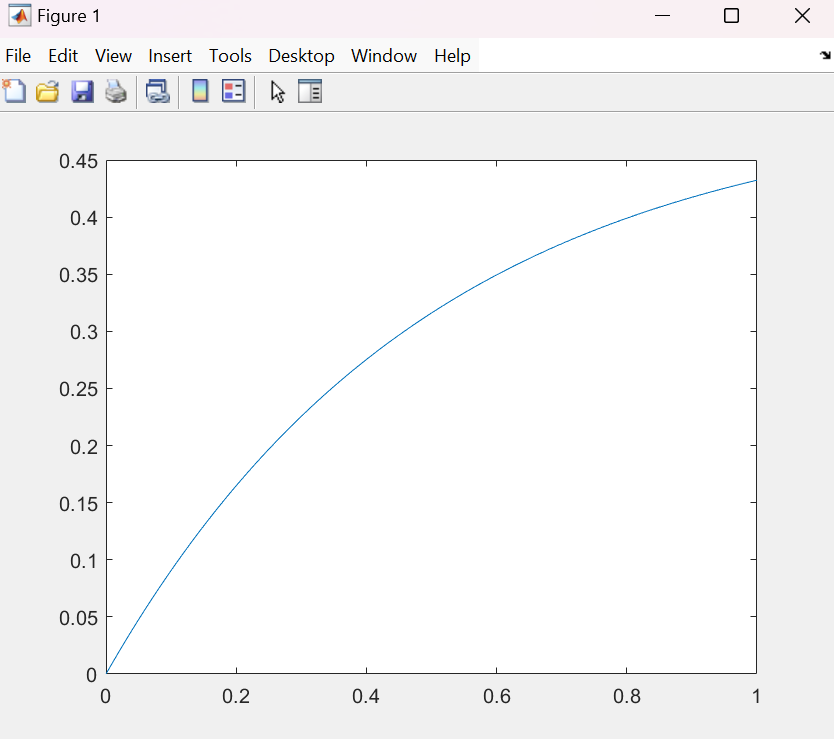
5.7 Use MATLAB to plot the following function for t from 0 to 1 with the intervals of 0.01

**Code:**

**A screenshot of a computer

Description automatically generated**

**Output:**

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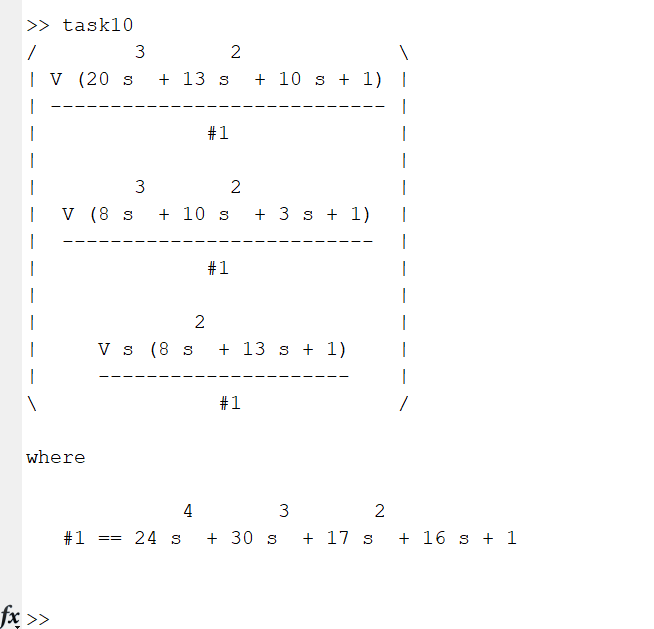
5.8 Use MATLAB and Symbolic Math Toolbox to help you solve the following equation for currents.

**Code:**

**A screenshot of a computer

Description automatically generated**

**Output:**

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**Lab Tasks:**

**Task 1:**

**Code:**

**A screenshot of a computer

Description automatically generated**

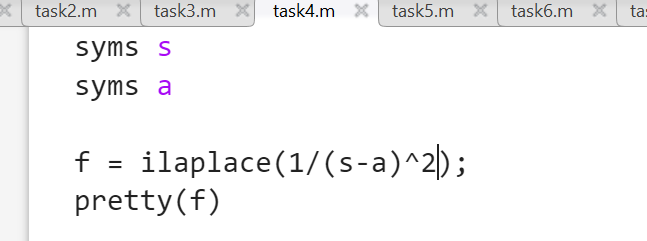
**Output:**

**A number on a white background

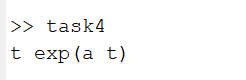
Description automatically generated**

**Task 2:**

**Code:**

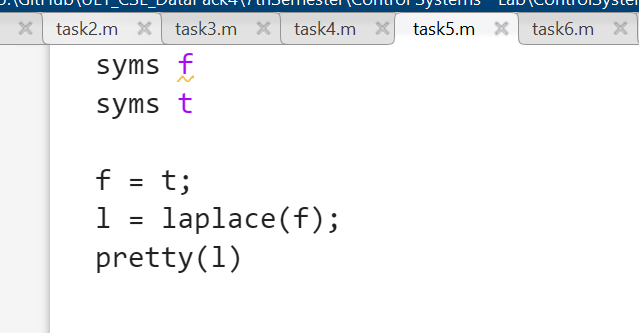
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**Output:**

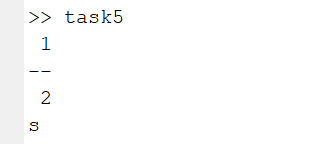
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**Task 3:**

**Code:**

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**Output:**

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**Task 4:**

**Code:**

**A screenshot of a computer

Description automatically generated**

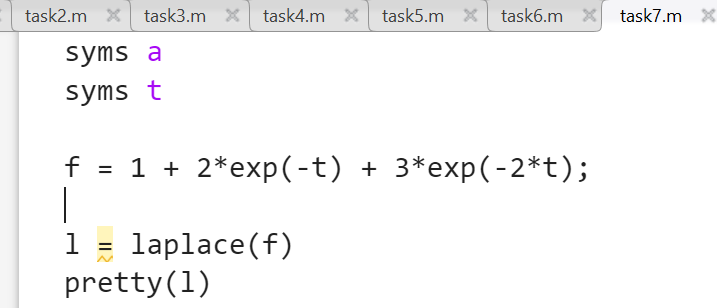
**Output:**

**A white background with black and white clouds

Description automatically generated**

**Task 5:**

**Code:**

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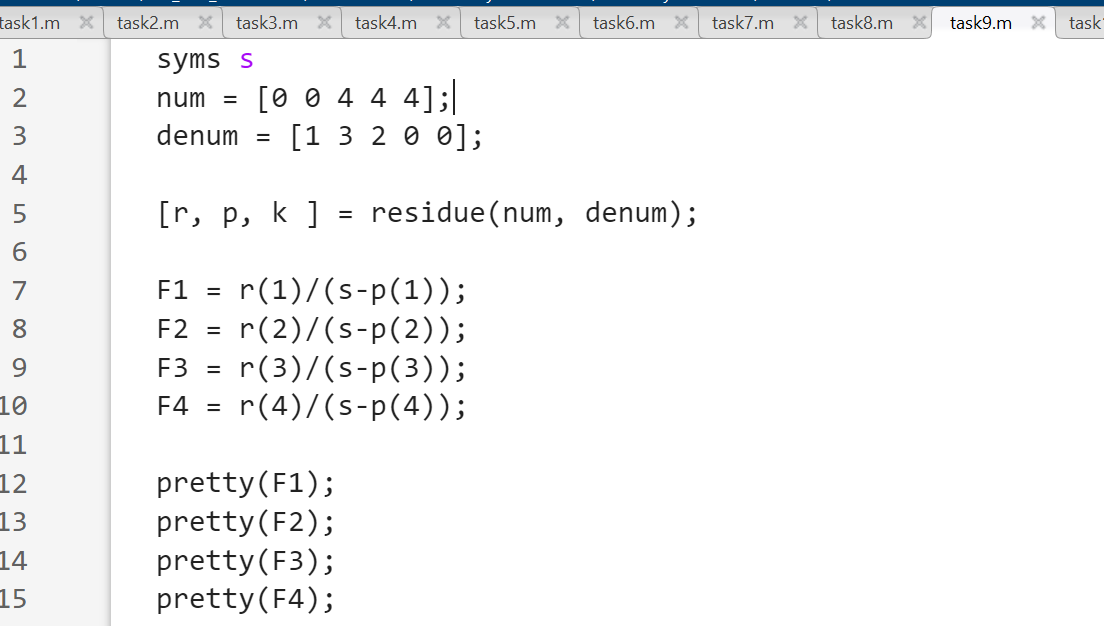
**Output:**

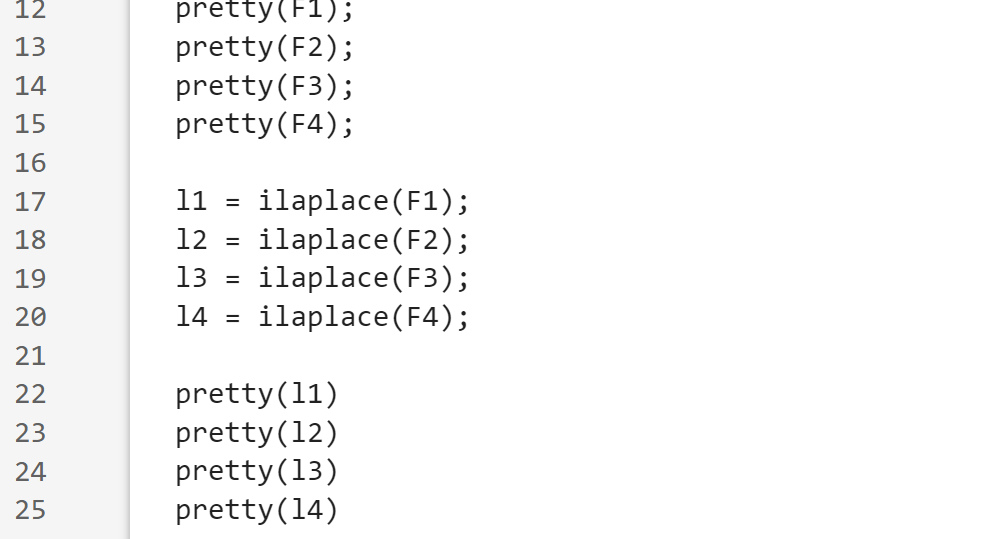
**A screenshot of a computer

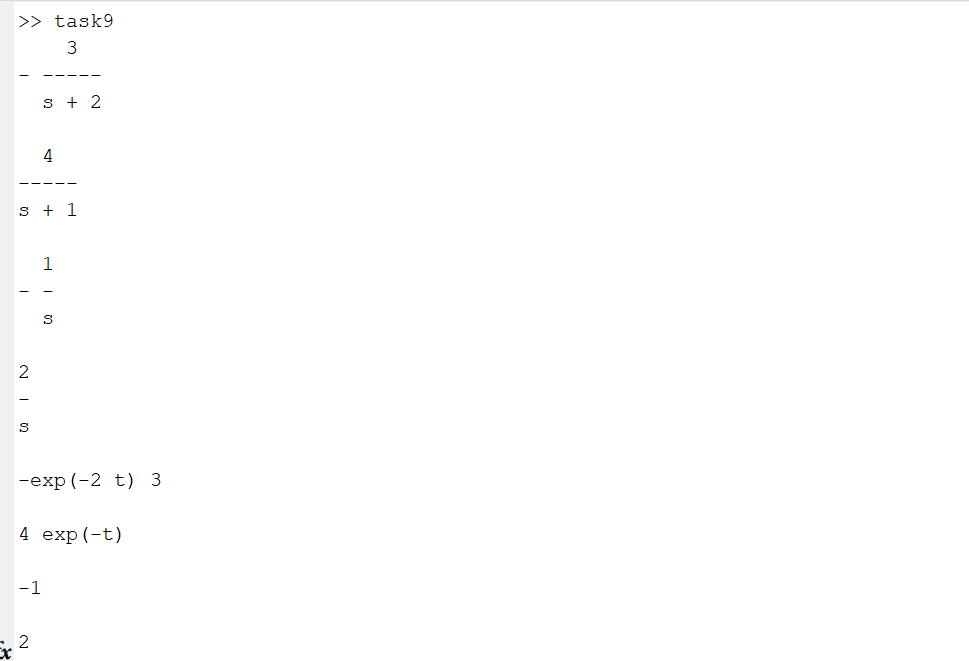
Description automatically generated**

**Task 6:**

**Code:**

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**Output:**

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