Lab Report No 2



Digital Signal Processing

Submitted By:

Registration No:

Section:

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

Student Signature:

Department of Computer Systems Engineering

University of Engineering and Technology Peshawar

**CSE 402L: Digital Signal Processing**

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| --- | --- | --- | --- | --- |
| **Demonstration of Concepts** | **Poor (Does not meet expectation (1))**  The student failed to demonstrate a clear understanding of the assignment concepts | **Fair (Meet Expectation (2-3))**  The student demonstrated a clear understanding of some of the assignment concepts | **Good (Exceeds Expectation (4-5)**  The student demonstrated a clear understanding of the assignment concepts | **Score**  **30%** |
| **Accuracy** | The student completed ( <50%) tasks and provided MATLAB code and/or Simulink models with errors. Outputs shown are not correct in form of graphs (no labels) and/or tables along with incorrect analysis or remarks. | The student completed partial tasks (50% - <90%) with accurate MATLAB code and/or Simulink models. Correct outputs are shown in form of graphs (without labels) and/or tables along with correct analysis or remarks. | The student completed all required tasks (90%-100%) with accurate MATLAB code and/or Simulink models. Correct outputs are shown in form of labeled graphs and/or tables along with correct analysis or remarks. | **30%** |
| **Following Directions** | The student clearly failed to follow the verbal and written instructions to successfully complete the lab | The student failed to follow the some of the verbal and written instructions to successfully complete all requirements of the lab | The student followed the verbal and written instructions to successfully complete requirements of the lab | **20%** |
| **Time Utilization** | The student failed to complete even part of the lab in the allotted amount of time | The student failed to complete the entire lab in the allotted amount of time | The student completed the lab in its entirety in the allotted amount of time | **20%** |

Lab 7: Simulink Training

Title: Simulink training to demonstrate the use of Simulink products

Visit the following website: <https://www.mathworks.com/learn/tutorials/simulink-onramp.html> and perform the following tasks and attach the Certificate/ Progress Report acquired from MathWorks as part of the lab Report

Objectives

1. Course Overview
   1. Familiarize yourself with the course.
2. Simulink Graphic Environment
   1. Learn about Simulink blocks and signals.
3. Inspecting Signals
   1. Visualize signal values during simulation.
4. Use Basic Algorithms
   1. Use math and logic operators to write algorithms.
5. Obtaining Help
   1. Access documentation from Simulink.
6. Project- Automotive Performance Modes
   1. Practice working with math and logic operators.
7. Simulink and Matlab
   1. Use MATLAB variables and functions in Simulink.
8. Dynamic systems in Simulink
   1. Review dynamic systems and learn how they relate to Simulink.
9. Discrete Systems
   1. Model discrete-time systems.
10. Continuous Systems
    1. Model continuous-time systems
11. Simulation Time
    1. Choose the simulation duration.
12. Project- Modeling a Thermostat
    1. Practice your understanding of discrete dynamic systems.
13. Project – Peregrine Falcon Dive
    1. Practice your understanding of continous dynamic systems.
14. Conclusions