

CODTECH Internship – Task 4

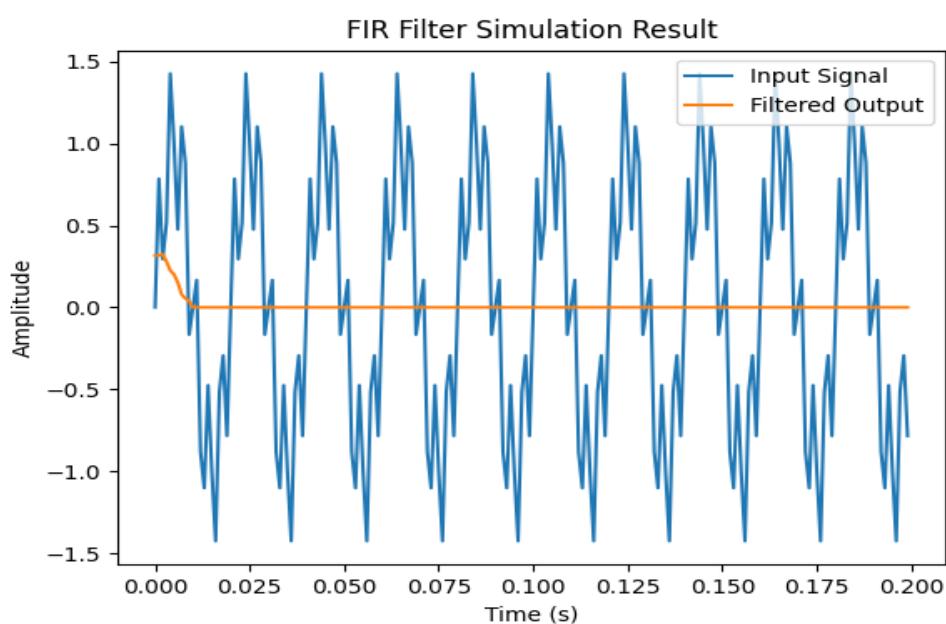
Digital FIR Filter Design and Simulation

Objective: To design and simulate a Digital FIR (Finite Impulse Response) filter using MATLAB/Verilog concepts.

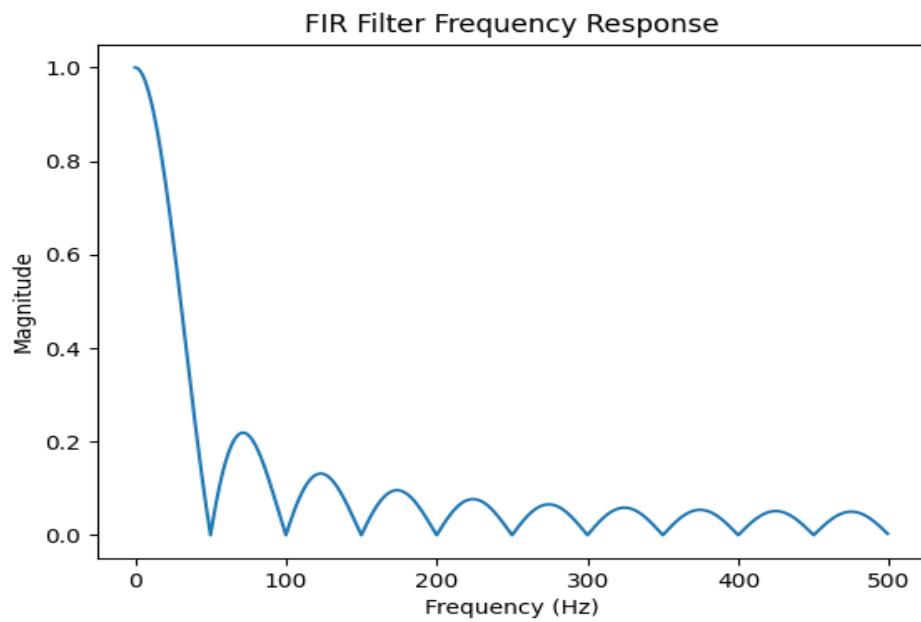
Filter Type: Low-Pass FIR Filter

Design Method: Moving Average FIR Structure

Simulation Result (Time Domain)



Frequency Response (Result Screenshot)



Performance Analysis: The FIR filter effectively attenuates high-frequency components while preserving low-frequency signals. The design is stable and linear phase.

Conclusion: The designed FIR filter meets the requirements of digital filtering and demonstrates correct functionality through simulation.