MEDS Training 2025

Tasks for Exponential and Square Root Implementation

Task Description

1. Implement the **exponential function (exp(x))**
   - Do not use any built-in functions like exp()
   - Use a method such as the Taylor series to calculate the result manually
2. Implement the **square root function (sqrt(x))**
   - Do not use any built-in functions like sqrt()
   - Use an algorithm like the binary search to approximate the result

Programming Languages

- Implement both functions in:
  - Python
  - C
  - SystemVerilog

Simulation Tools (for SystemVerilog only)

- Run and test the SystemVerilog implementations using:
  Verilator (with a C++ testbench)