DEADLINE 21/12/2023

Submit your libraries through github and your explanation through google drive or readme

Assignment: Creating Calculator Libraries and Application

Objective: You are tasked with creating both a static library (**liboperation.a**) and a shared library (**liboperation.so**) for a simple calculator. The calculator functionalities should be implemented in separate files for addition, subtraction, multiplication, division, and modulus operations.

- Files to Create (for each operation):
  - addition.c: Implementation of addition.
  - subtraction.c: Implementation of subtraction.
  - multiplication.c: Implementation of multiplication.
  - division.c: Implementation of division.
  - modulus.c: Implementation of modulus.

- Library Names:
  - Static Library: liboperation.a
  - Shared Library: liboperation.so

- **In Additional:**
  - Create a **main.c** file that includes the calculator application created in your previous assignment.

- **Compilation Instructions:**
  - Compile the application both **statically** and **dynamically**. Using **ONLY** the **-static** flag exclusively for static compilation and the **-shared** flag for dynamic compilation.

❖ **Comparison Steps:**

- After compilation, compare the static and dynamic versions using the following commands:
  - Using ldd command:

    For the **dynamic** use: **ldd** your_executable_dynamic

    For the **static** use: **ldd** your_executable_static

  - Using file command:
  - Using objdump command:
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Note: Observe and document the differences between the static and dynamic versions in terms of dependencies, file types, and object information.

This assignment provides clear instructions on creating the calculator libraries, compiling the application both statically and dynamically, and comparing them using specific commands.

Refer to the slides to create a library or readme file in my repo.