Capítulo 1

Task 10: Customize Exception Handler

1.1 Task Description

The goal of this task is to implement a custom page fault handler that prints "Falha de paginação"whenever a page fault occurs. This involves overriding the weak implementation of `page_fault_handler` provided in `helper.c`.

1.2 Planned Implementation

1. Define the custom handler:

   - Implement a function with the following prototype:

     ```
     void page_fault_handler(struct state *s);
     ```

   - The function should print "Falha de paginação"using the `puts()` function.

   - Optionally, include additional debugging information such as the faulting address (`cr2`) and error code.

2. Integrate the handler:

   - Ensure the custom handler is linked into the project by including it in the appropriate `main.c` file.

   - Replace the weak implementation of `page_fault_handler` in `helper.c`.

3. Test the handler:

   - Trigger a page fault by accessing an unmapped memory address.

- Verify that the custom handler is invoked and the message "Falha de paginação"is displayed.

- Confirm that the system does not crash and gracefully handles the exception.

1.3 Expected Outcome

- The custom page fault handler should replace the weak implementation in `helper.c`.

- When a page fault occurs, the message "Falha de paginação"should be printed to the console.

- Additional debugging information (if implemented) should provide insights into the fault.

1.4 Implementation Details

(To be filled after implementation)

1.5 Challenges

(To be filled after implementation)

1.6 Final Outcome

(To be filled after implementation)