**Test Plan**

**Scope**:

Test Objective:

* Validation of the “diff” Linux command implemented using Longest Common Subsequence algorithm.

Test Scenarios:

* Scenarios related to the command:
  1. Write “diff” command without any options or arguments.
  2. Write “diff” command with wrong option and no arguments.
  3. Write “diff” command with “-u” option and no arguments.
  4. Write “diff” command with “--help” option and no arguments.
  5. Write “diff” command with an option with 1st argument only.
  6. Write “diff” command with an option with both arguments.
* Scenarios to test reading input from files:
  1. Create a driver code to test reading the input from files.
* Scenarios related to validate the LCS algorithm:
  1. Create a driver code to test the LCS algorithm.

**Assumptions:**

* Assume that we implemented the diff command for **unified** format.

**Schedules:**

* Test Scenario Preparation:
  + In case validation of full “diff” command:
    - Create 2 text files with input.
  + In case of validation of reading from files:
    - Create the driver code.
    - Create 2 text files with input.
  + In case of validation of LCS algorithm:
    - Create the driver code.
* Test case data sets:
  + Please refer to Test Cases.txt file.
* Test execution:
  + Test Cases that covers the command scenario:
    - Write “diff” on command window. (scenario 1)
    - Write “diff -x” on command window. (scenario 2)
    - Write “diff -u” on command window. (scenario 3)
    - Write “diff -u File1.txt” on command window. (scenario 5)

Expected Output: Usage message.

* + - Write “diff --help” on command window. (scenario 4)

Expected Output: Help message.

* + - Write “diff -u File1.txt File.txt” on command window. (scenario 6)

Expected Output: Command is successfully executed and the difference between files is displayed.

You can run different sets of data for each file, check out Test Cases.txt file.

**Roles and Responsibilities:**

* Hazem Mekawy.
  + Test Planning.
  + Unit Testing.
  + Integration Testing.
  + System Testing.

**Deliverables:**

* Test Plan Document.

**Tools:**

* gcc compiler.
* Windows command window.

**Exit criteria:**

* All test cases were tested with no failures.
* Full validation of the system.