Mendoza, Princess Catherine Adame
BSIT – SM – 4109

IT 414 – SYSTEMS QUALITY ASSURANCE

LABORATORY ACTIVITY 3
Software Testing Exercises

Exercise 1: Finding Defects
ζ   The name field lacks character validation.
ζ   The register button should be positioned at the bottom instead of the side.
ζ   The register button's label should use "R" instead of "r".
ζ   There's no option for users to refresh the captcha.
ζ   The captcha is extremely difficult to read.
ζ   Special characters are allowed in the user ID Field.
ζ   The confirm password field hides its content in encrypted mode.
ζ   There is no cancel button to abort the procedure.
ζ   There is no close button to exit the page.
ζ   The page title contains a misspelling of "Registration"
ζ   The page title should be "New User Registration" instead of "New Registration"
ζ   Field lengths and labels should be consistent throughout the entire form.
ζ   The country field should be provided, requiring alphanumeric passwords or displaying password strength.

Exercise 2: Writing Test Scenarios
Step 1: In a cashier-less checkout, scan all five items, and your card, and make the payment.
Step 2: The scanners must capture relevant information accurately.
Step 3: Ensure that all purchased items have barcodes for easy scanning.
Step 4: Verify that the necessary software and printers are in working order.
Step 5: After scanning all items, generate a bill and provide it to the customer.
Step 6: Offer multiple payment options, including cash, credit/debit cards, and coupons.
Step 7: Secure card transactions to protect customer data.
Step 8: If paying cash, ensure the cashier has sufficient change to balance the bill.
Step 9: The cashier should assist the customer if any item can't be scanned.
Step 10: Implement a system at the exit to verify that customers only leave with items that have been paid for.

Exercise 3: Providing Suggestions
1. Instead of asking "What is your e-mail address?" it should simply say "e-mail address."
2. Enable sign-in using both e-mail and user ID.
3. Instead of asking if the user is a new customer, the system should automatically check their status based on the provided e-mail address or user ID.

4. Most users assume the system uses a secure server, so the button should just say "Sign In."
5. Include a help link for customers who encounter issues.
6. Make the page title less prominent.
7. A close button should be available.
8. A cancel button should be available.
9. Instead of "If you've forgotten your password, click on the 'Forgot Password' link."
10. Create a new button specifically for the Secure Server.

Exercise 4: Make a summary report on STLC Phases using the answers to these questions.
1. STLC Stages:
   o Requirements Analysis
   o Test Planning
   o Test Environment Configuration
   o Test Case and Script Development
   o Selection of Test Approach and Strategy
   o Choosing Testing Tools
   o Verification of Test Cases and Scripts
   o Recording Defects
   o Retesting Defects
   o Generating Defect Reports

2. Entry and Exit Criteria:
   o Entry Criteria: Conditions necessary to initiate a phase.
   o Exit Criteria: Conditions required to conclude a phase.

3. Entry Conditions for Requirements Analysis:
   o Availability and approval of requirement documents.
   o A clear grasp of the application's purpose.

4. Activities in Requirements Analysis Phase:
   o Reviewing and scrutinizing project requirements.
   o Crafting the Requirement Traceability Matrix.

5. Actions in Test Planning:
   o Defining testing scope and objectives.
   o Identifying test deliverables and resource needs.
   o Formulating a test strategy.

6. Outputs of Test Planning:
   o The Test Plan document.

7. Test Environment Setup:
   o Preparing the testing environment with the necessary hardware and software configurations.

8. Creation of Test Cases and Test Scripts:
   o Developing test cases and scripts.

9. Selection of Test Approach and Strategy:
   o Determining the overarching testing approach and strategy.

10. Picking Testing Tools:
    o Choosing suitable testing tools for automation or management.

11. Verification of Test Cases and Test Scripts:
    o Ensuring the correctness and comprehensiveness of test cases and scripts.

12. Logging of Defects:
    o Documenting defects when test cases fail.

13. Retesting Defects:
    o Repeating failed test cases after defect rectifications.

14. Generation of Defect Reports:
    o Producing reports detailing discovered defects.

15. Distinctions Between STLC and SDLC:
    o STLC concentrates on testing, while SDLC encompasses the full software development process.
    o STLC commences after the development phase of SDLC.
    o SDLC concerns software construction, whereas STLC revolves around verifying and validating it.

16. Significance of STLC in the V-Model:
    o The V-model underscores the interplay between the development and testing phases.
    o STLC guarantees that testing activities align with corresponding development phases systematically.
    o This alignment enhances testing efficiency and effectiveness, diminishing the chances of defects infiltrating the production environment.