Testing Strategy Worksheet

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| **Project Name**   * SFT221 – Project * Group 5 * Milestone 3 - Software Validation and Testing | **Author**   * Samin Sorayya (on behalf of the entire group) * Editor: Mostafa Hasanalipourshahrabadi |
| **Computing Environment**   * Personal laptop | **Software Type**   * VS unit testing |
| **User Demographics**   * Delivery company employees * Customers using the delivery services. | **Assumptions**   * Users have basic computer skills. * Users have the necessary hardware and software environment for running the delivery management software. * Users are familiar with the city map and address system. |
| **Purpose of Test**   * To ensure the correct and reliable functioning of the delivery management software. * To verify accurate assignment of shipments to trucks based on their capacity, proximity to destinations, and available routes. | **Phases of Testing**   * Unit Testing: Testing individual parts of the software separately. * Integration Testing: Testing how different parts of the software work together. * System Testing: Testing the complete delivery management system to make sure it behaves as expected. * Acceptance Testing: Testing the system against user requirements. |
| **Scope of Testing**   * All implemented functions and their associated test cases. * Handling of different inputs and scenarios. | **Critical Success Factors**   * Accurate and efficient assignment of shipments to trucks based on capacity, proximity, and available routes. * Proper handling of invalid inputs and error conditions. * Clear and thorough documentation of test cases, results, and any changes made. |
| **Testing Types**   * Functional Testing: Testing if the software functions correctly. * Boundary Testing: Testing extreme values to make sure the software handles them properly. * Error Handling Testing: Testing how the software handles errors and reports them. * Performance Testing: Testing the software's performance under different workloads. * Usability Testing: Testing how user-friendly and easy to use the software is. | **Tester Profiles**   * Software developers who understand programming and algorithms. * Quality assurance analysts who know software testing techniques. |
| **Development/ Test Tools**   * Programming Language: C * Integrated Development Environments (IDEs): Visual Studio, GitHub * Version Control System: Git * Issue Tracking and Project Management: Jira * Testing Frameworks: Visual Studio Debugger, Excel | |
| **Business / Operational Concerns**   * Timely delivery of shipments to customers. * Efficient utilization of truck capacity. * Minimization of delivery routes and diversions. * Compliance with safety regulations for cargo transportation. | |
| **Risks**  **Business**   * Delayed or incorrect deliveries due to inaccurate shipment assignments. * Unfulfilled shipments due to insufficient truck capacity.   **Technical**   * Compatibility issues with different computer setups. * Performance problems with heavy workloads or complex routing. * Complexities in algorithms lead to incorrect route calculations.   **Project**   * Delays in completing tasks or meeting deadlines. * Incomplete or inconsistent documentation affecting software understanding and maintenance. | |
| **Other** | |