**Testing Strategy Worksheet**

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| **Project Name**  Milestone 2 | **Author**  Khassan Suleimanov |
| **Computing Environment**  The software will run on a standard desktop or laptop with an up-to-date operating system (e.g., Windows, macOS). The software will be developed and tested using a C++ compiler. The development environment may include an IDE such as Visual Studio. | **Software Type**  Logistics and Delivery Management Software. |
| **User Demographics**  Employees of the delivery company, primarily dispatchers and logistics coordinators. Customers who want their packages delivered. | **Assumptions**  Vans will follow predefined routes and can only diverge to deliver packages. The software will only be used in the specified 25x25 grid city map. The vans can’t go through buildings. |
| **Purpose of Test**  To ensure that the software correctly assigns packages to trucks based on weight, volume, and delivery proximity. | **Phases of Testing**  Unit Testing. Integration Testing. System Testing |
| **Scope of Testing**  What will be tested or not tested  Functional testing of the route optimization algorithm.  Performance testing of the algorithm under various load conditions. Security testing to ensure data integrity and privacy. Integration testing of the algorithm with existing components.  Click or tap here to enter text. | **Critical Success Factors**  Packages are correctly assigned to the most suitable truck.  Software handles edge cases and invalid inputs gracefully. |
| **Testing Types**  Types of testing  Functional Testing, end-to-end testing, regression testing, white box testing | **Tester Profiles**  Roles to conduct test  Software Developers Quality Assurance (QA) Engineers |
| **Development/ Test Tools**  Tools and environment needed  C++ Compiler  IDE - Visual Studio | |
| **Business / Operational Concerns**  Business reasons for the test  To ensure efficient package delivery and optimal truck usage.  To improve customer satisfaction by minimizing delivery times. | |
| **Risks**  **Business**  Risks to business  Incorrect package assignments could lead to delayed deliveries and dissatisfied customers. Incorrect calculations of weight can bring legal sanctions to the company.  **Technical**  Technical risks to the project  Bugs in the shortest path algorithm could lead to incorrect diversions. Bugs in the logic for choosing the optimal van could lead to the incorrect van being chosen.  **Project**  Other Risks to the project  Delays in development could impact the project timeline. | |
| **Other**  Any other notes  Regular feedback from initial users should be incorporated to improve the software iteratively. | |