Acceptance Testing Alpha

During the acceptance alpha testing of the provided main program, several aspects were evaluated to determine their functionality and effectiveness. Here's a breakdown of what worked and what didn't:

\*\*What Worked:\*\*

1. \*\*Shipment Validation\*\*: The program successfully validated the shipment weight and box size, ensuring they are within the specified range (1-1000 kg) and adhering to valid cargo dimensions.

2. \*\*Invalid Destination Detection\*\*: The program correctly identified and reported invalid destination inputs, displaying error messages for non-existent destinations or incorrect formats.

\*\*What Didn't Work:\*\*

1. \*\*Route Display\*\*: One major drawback was observed in the program's failure to display the valid truck options and their corresponding shortest routes to the destination. This essential feature was missing, preventing users from making informed decisions regarding their shipment.

2. \*\*Route Deviation\*\*: The program also lacked the ability to show deviations in routes, particularly the shortest route to the destination. Without this information, users couldn't assess whether the chosen route had any diversions.

\*\*Improvement Suggestions:\*\*

To enhance the program's functionality based on the white-box acceptance alpha testing:

1. \*\*Route Presentation\*\*: Implement a module that displays the valid truck options along with their respective shortest routes to the destination. This information empowers users to choose the optimal route.

2. \*\*Route Deviation Information\*\*: Incorporate a feature that illustrates any deviations present in the selected route. This transparency enables users to gauge the efficiency and reliability of their chosen route.

3. \*\*Edge Case Testing\*\*: Expand testing to include extreme cases, like the minimum and maximum weight values, to ensure the program handles these scenarios accurately.

4. \*\*Error Handling\*\*: Enhance the error handling mechanism to provide clearer and more user-friendly error messages, aiding users in understanding and rectifying their input mistakes.

Acceptance Testing Beta

During the acceptance beta testing phase of the provided main program, a comprehensive evaluation was conducted to assess its functionality and effectiveness. Here's an overview of the observed outcomes:

\*\*What Worked:\*\*

Program Compilation and Execution: The program successfully compiled and executed, demonstrating its robustness and compatibility with the designated inputs.

Shipment Tracking: The program effectively tracked and displayed the real-time status of shipments, allowing users to monitor their cargo's journey at different stages.

\*\*What Didn't Work:\*\*

Input Error Handling for Coordinates: An issue was encountered with input errors when attempting to locate exact coordinates during the submission of MS05. Users faced difficulties in accurately inputting coordinates, leading to errors in the program's operation.

\*\*Improvement Suggestions:\*\*

To enhance the program's performance based on the white-box acceptance beta testing:  
  
Load Testing: Conduct load testing to assess the program's responsiveness and stability under varying user loads. This will help identify potential performance bottlenecks and ensure the system can handle peak usage periods.

User Training: Provide clear and concise user guides or tutorials to assist users in navigating the program's features and functionalities effectively.