Test Report

**Test Summary:**

The Document Search Bot was thoroughly tested for its functionalities, including document upload, deletion, query processing, error handling, and document compatibility. The test cases covered various scenarios to ensure the reliability and robustness of the application.

**Test Results:**

* **Document Upload Functionality:**
  + Result: All test cases passed successfully.
  + Observation: Users were able to upload documents of different formats within the specified size limit. The application correctly handled file size validation and stored uploaded documents in the designated folder.
* **Document Delete Functionality:**
  + Result: All test cases passed successfully.
  + Observation: Admin users were able to delete selected documents without any issues. Upon deletion, the corresponding document was removed from the upload folder, and a success message was displayed.
* **Query Processing Functionality:**
  + Result: All test cases passed successfully.
  + Observation: Users, both Admin and Normal, were able to search for information within uploaded documents using natural language queries. Relevant information was displayed based on the query, demonstrating the effectiveness of the document search functionality.
* **Error Handling:**
  + Result: All test cases passed successfully.
  + Observation: The application appropriately displayed error messages in scenarios such as missing user type selection, document selection, empty queries, and file size exceeding the limit. Users were guided with informative messages to rectify the issues.
* **Document Compatibility:**
  + Result: All test cases passed successfully.
  + Observation: The application effectively processed documents of various formats, including PDF, Word, Excel, PowerPoint, and Text. Users were able to search within documents of different types without encountering compatibility issues.
* **Admin Authentication for Upload and Delete:**
  + Result: Implemented the admin password authentication successfully.
  + Observation: Admin users can now upload and delete files after entering the correct password.

**Overall Observations:**

* The Document Search Bot exhibited robustness and reliability across all tested functionalities.
* The user interface provided a smooth experience for users to upload documents, perform searches, and manage documents (for Admin users).
* The integration with LangChain for natural language processing tasks ensured accurate and efficient query processing.
* Error handling mechanisms effectively guided users and provided informative messages for rectification.
* Admin authentication for upload and delete functionality was successfully implemented.

**Conclusion:**

The Document Search Bot has been thoroughly tested and found to be reliable and effective in facilitating document search functionalities. With its robust design and smooth user interface, it offers a convenient solution for users to search for information within uploaded documents using natural language queries. The implementation of admin authentication enhances security by ensuring that only authorized users can upload and delete files.