Feasability Report

1. Problem Statement:

- Current process: Students email documents to vendors, who then download and print them from only two computers, creating bottlenecks.
- Proposed solution: A desktop application for students to send documents directly to the shop's printers, pay for prints, and later collect them. The vendor interface will connect multiple printers to one computer, automating the printing process.

2. Objectives:

- Reduce waiting time for students.
- Streamline the printing process.
- Automate vendor-side operations.

3. Technical Feasibility:

- **Frontend (React):** User-friendly interface for students and vendors.
- **Backend (Python):** Robust backend to manage document uploads, payments, and communication between student and vendor systems.
- **Database (MongoDB):** Efficient storage of documents, payment records, and transaction logs.
- **Vendor-Side (C++ with Printer Spooler API):** Efficient management of print jobs across multiple printers, enabling automatic printing.

4. Operational Feasibility:

- The application will require deployment on student laptops and vendor computers.
- Vendors will need training on the new system, but the automated approach will reduce manual effort.
- Students can submit print jobs from their rooms, making the process more efficient.

5. Economic Feasibility:

- Cost for development: Free for students and minimal for vendors (software installation, minimal training).
- Potential savings: Reduced waiting times, better service, and potentially more business for vendors.

6. Schedule Feasibility:

- The project can be developed in stages over a few months, with each module being tested and integrated progressively.

7. Risks and Mitigation:

- **Technical risks:** Integration of C++ with the Printer Spooler API may be challenging, but with thorough testing, these risks can be managed.
- **Operational risks:** Vendors might resist change, so a simple and intuitive interface is essential.
- **Security risks:** Ensuring the secure transfer and storage of documents will be critical.