**Assignment 02**

**Software Project Management**

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# 1. Planning and Development (1 month)

## Technical Requirements:

Database Management System: MySQL or PostgreSQL (open-source to reduce costs)

Server specifications:

* Mid-tier server with minimum 16GB RAM
* 1TB storage (allowing for future growth)
* RAID configuration for data redundancy

Backup solution: Daily automated backups

Web-based interface for data entry and retrieval

## Justification:

Open-source DBMS saves on licensing costs

Web interface eliminates need for client-side software installation

One month allows for:

* System design and database schema creation (1 week)
* Development and testing of web interface (2 weeks)
* Initial deployment and testing system (1 week)

# 2. Staff Training (2 weeks)

## Requirements:

2 staff members from each location (10 total)

Training materials and documentation

Video conferencing setup for remote training

## Justification:

Training two staff per location creates redundancy

Two weeks allows:

* Week 1: Basic system operation and data entry procedures
* Week 2: Advanced features, troubleshooting, and hands-on practice

Video conferencing reduces travel costs

# 3. Data Entry and Migration (3 months)

## Approach:

* 10,000 records ÷ 10 staff = 1,000 records per person
* Daily target: ~15-20 records per person
* Quality control process: Daily verification of entered data
* Regular backups and progress tracking

## Justification:

Conservative estimate of 20 records per day allows for:

* Careful data entry
* Quality checks
* Handling complex or damaged records

Three months provides a buffer for unexpected issues

# 4. Budget Breakdown ($5,000):

## Hardware and Infrastructure ($2,000):

1. Server and storage: $1,500
2. Backup solution: $500

## Justification:

Critical for system reliability and data security

## Software Development ($1,200):

1. Database setup: $300
2. Web interface development: $900

## Justification:

Using open-source solutions reduces costs

## Training ($800):

1. Training materials: $300
2. Video conferencing setup: $500

## Justification:

Remote training reduces travel costs while ensuring quality training

## Quality Control and Contingency ($1,000):

1. Quality assurance tools: $400
2. Contingency fund: $600

## Justification:

* QA tools ensure data accuracy
* Contingency fund (12% of budget) for unexpected issues

## Risk Mitigation Strategies:

### 1. Technical:

* Regular system backups
* Failover systems for critical components
* Detailed documentation

### 2. Operational:

* Progress tracking tools
* Regular status meetings
* Clear escalation procedures

### 3. Quality:

* Automated validation rules
* Daily quality checks
* Error reporting system

This plan optimizes the available time and budget while ensuring data integrity and system reliability. The focus on open-source solutions and remote training helps maintain cost efficiency, while the phased approach allows for proper testing and quality control throughout the implementation.