Preparation for Practical Number 3: Scheduling Project

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**1. Identifying Tasks (Work Breakdown Structure - WBS)**

**Phase 1: Project Planning & Requirement Analysis**

* T1.1 Define project scope & objectives
* T1.2 Gather functional & non-functional requirements
* T1.3 Identify dataset sources for handwriting samples
* T1.4 Conduct literature review on handwriting analysis & ML models

**Phase 2: Data Collection & Preprocessing**

* T2.1 Collect and annotate handwriting dataset
* T2.2 Preprocess images (grayscale conversion, noise removal)
* T2.3 Extract handwriting features (slant, pressure, loops, etc.)
* T2.4 Split dataset into training & testing sets

**Phase 3: Model Development & Training**

* T3.1 Select suitable ML algorithms (SVM, CNN, etc.)
* T3.2 Train models on handwriting data
* T3.3 Tune hyperparameters for better accuracy
* T3.4 Evaluate models using accuracy, precision, recall

**Phase 4: System Development (Frontend & Backend)**

* T4.1 Design user interface (UI) for uploading handwriting samples
* T4.2 Implement backend for processing handwriting images
* T4.3 Integrate ML model with backend
* T4.4 Develop a report generation module

**Phase 5: Testing & Validation**

* T5.1 Perform unit testing for individual modules
* T5.2 Conduct system testing for overall workflow
* T5.3 Validate predictions against real psychological data
* T5.4 Fix bugs and optimize performance

**Phase 6: Deployment & Documentation**

* T6.1 Deploy the system on cloud/local server
* T6.2 Prepare user documentation & reports
* T6.3 Conduct final review & presentation
* **2. Identifying Resources**
* Resources include human resources, hardware, and software required to complete the project.
* **Human Resources**

| **Role** | **Responsibilities** |
| --- | --- |
| Project Manager | Oversees project scheduling & deliverables |
| Data Scientist | Works on feature extraction & ML model training |
| Backend Developer | Develops APIs for model integration |
| Frontend Developer | Creates UI for user interaction |
| QA Tester | Performs system testing |
| Documentation Expert | Prepares reports & documentation |

* **Hardware & Software Resources**

| **Resource** | **Description** |
| --- | --- |
| Laptops/Workstations | Minimum 8GB RAM for ML model training |
| Server/Cloud Storage | To store handwriting data & models |
| Python Libraries | TensorFlow, OpenCV, Scikit-learn for ML |
| Database | PostgreSQL/MySQL for storing reports |
| Web Framework | Flask/Django for backend |
| Frontend Tools | HTML, CSS, JavaScript for UI |

