Practical No.03

AIM: Scheduling Project.

Problem Statement: Prediction of personality trait based on Handwriting Analysis.

Theory:

**Project Scheduling for "Prediction of Personality Traits Based on Handwriting Analysis"**

Project scheduling involves **identifying tasks, assigning resources, and setting a timeline** for project completion. The Gantt chart helps visualize the schedule and track progress.

**1. Identifying Tasks**

The project can be broken down into the following key phases:

**Phase 1: Project Planning (Week 1-2)**

1. Define project scope and objectives
2. Gather requirements (functional & non-functional)
3. Conduct research on handwriting analysis and ML models
4. Identify datasets for training the model
5. Finalize technology stack (Python, TensorFlow, OpenCV, etc.)

**Phase 2: Data Collection & Preprocessing (Week 3-5)**

1. Collect handwriting samples (public datasets or manual collection)
2. Preprocess images (grayscale conversion, binarization, noise removal)
3. Extract handwriting features (slant, pressure, letter spacing, etc.)

**Phase 3: Model Development (Week 6-9)**

1. Select machine learning models (CNN, SVM, etc.)
2. Train and fine-tune the models
3. Evaluate model performance using accuracy metrics
4. Optimize model for better predictions

**Phase 4: Front-End & Backend Development (Week 10-12)**

1. Develop the user interface for input and result display
2. Build the backend for data processing and storage
3. Integrate the ML model with the application
4. Implement a user authentication system (optional)

**Phase 5: Testing & Deployment (Week 13-15)**

1. Perform unit testing (model and system components)
2. Conduct user testing for UI/UX improvements
3. Deploy the system on a cloud or local server
4. Gather feedback and perform refinements

**Phase 6: Documentation & Presentation (Week 16-17)**

1. Prepare project report and documentation
2. Create a final presentation for stakeholders/mentors
3. Submit and present the final project

**2. Identifying Resources**

**Human Resources**

* **Data Science Expert** – Model selection and training
* **Software Developer** – Frontend & backend development
* **UI/UX Designer** – User interface design
* **Tester** – System testing and bug fixes

**Hardware & Software Resources**

* **Hardware:** High-performance GPU (for ML model training), Laptops/PCs
* **Software:** Python, TensorFlow, OpenCV, Flask/Django, MySQL/PostgreSQL
* **Cloud Services:** Google Colab/AWS/GCP (for model training), Firebase (if needed)

**3. Project Schedule – Gantt Chart**

Below is a simplified Gantt chart representation of the project timeline:

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| | **Task** | **Week 1-2** | **Week 3-5** | **Week 6-9** | **Week 10-12** | **Week 13-15** | **Week 16-17** | | --- | --- | --- | --- | --- | --- | --- | | **Project Planning** | 🔵 |  |  |  |  |  | | **Data Collection & Preprocessing** |  | 🔵 |  |  |  |  | | **Model Development** |  |  | 🔵 |  |  |  | | **Front-End & Backend Development** |  |  |  | 🔵 |  |  | | **Testing & Deployment** |  |  |  |  | 🔵 |  | | **Documentation & Presentation** |  |  |  |  |  | 🔵 | |

**Legend:**  
🔵 = Work in Progress

This Gantt chart provides a structured timeline for smooth project execution.