



Dr. D. Y. PATIL INSTITUTE OF ENGINEERING,
MANAGEMENT & RESEARCH
AKURDI, PUNE-411044

LABORATORY JOURNAL
SUBJECT: Computer Laboratory-II

INDEX

Exp No.	Date of performance-	Title of experiment	Page no.	remark
01		DNA Sequence Analysis. Task: Analyze a given DNA sequence and perform basic sequence manipulation, including finding motifs, calculating GC content, and identifying coding regions.		
02		Protein Structure Prediction. Task: Predict the 3D structure of a given protein sequence using homology modeling or threading techniques.		
03		Molecular Docking and Virtual Screening. Task: Perform molecular docking simulations to predict the binding affinity between a protein target and a small molecule ligand. Additionally, conduct virtual screening to identify potential drug candidates.		
04		Machine Learning for Genomic Data. Task: Apply machine learning algorithms, such as random forests or support vector machines, to classify genomic data based on specific features or markers.		
05		Write a program for pre-processing of a text document such as stop word removal, stemming.		
06		Implement a program for retrieval of documents using inverted files		
07		Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using the standard Heart Disease Data Set		
08		Implement Agglomerative hierarchical clustering algorithm using appropriate dataset.		
09		Implement Page Rank Algorithm. (Use python or beautiful soup for implementation).		

CERTIFICATE

This is to certify that Mr./Ms. _____
Roll No. _____ Seat No. _____ of class _____ Div. _____
has carried out above practical/term work during academic year 20____-20____
His / her performance is satisfactory.

Date

Subject in-charge

Head of Department

Principal