**INDEX OF EXPEREMENTS**

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| --- | --- | --- | --- | --- | --- |
| **Week** | **Theory/ Practical (Group-I/ II)** | | **Topic Covered Date and Remarks** | | |
| **Practical Day** | **Topics/ Programs** | **Date** | **HOD** | **Director Principal** |
| 1st |  | Introduction to python programming |  |  |  |
| 2nd  To  7nd | 1  2 3 | Pandas   * Reading Data set through pandas. * Getting basic information. * Basic information of pandas library. |  |  |  |
| 8nd | 4  5  6 | EDA through PANDAS   * Finding missing values * Imputing values * Deleting / treatment of null values |  |  |  |
| 9th | 7. 8. | Data visualization With MatplotLIB  -Line Chart   * Bar Chart * Histogram * Box plot * Violin plot |  |  |  |
|  |  | * Scatter plot * Hue semantic * Bubble plot * Pie Chart   Advance Visualization with Seaborn |  |  |  |
| 12th | 9 | * Analyze Data Distributions: * Explore Relationships: * Manipulate Data: * Visualize Insights |  |  |  |
| 15th | 10 | **Hypothesis testing.**   * Aim: To understand null Hypothesis   and alternative hypotheses   * T-tests: * ANOVA: * Chi-square test:   Spearman correlation |  |  |  |
| 18th | 19 | Time Series Analysis |  |  |  |
| 20th | 20 | * Time series data and components * ARIMA models   Forecasting, |  |  |  |
| 22th | 21 | To develop understanding of Machine learning Algorithms:  Support Vector Machines (SVM):  Ensemble learning (Random Forest, Gradient Boosting):  Model evaluation, |  |  |  |
| 24th | 22  23 | Introduction to Tableau  ● Basic information of canvas and different panes  Project on analysis |  |  |  |

**Preface**

This manual will introduce you to the Python programming language. It’s

aimed at beginning programmers, but even if you’ve written programs

before and just want to add Python to your list of languages, It will get you

started. Python is a powerful high-level, object-oriented programming

language created by Guido van Rossum. It has simple easy-to-use syntax,

making it the perfect language for someone trying to learn computer

programming for the first time.This practical manual will be helpful for

students of all BCA streams for better understanding the course from the

point of view of applied aspects. Though all the efforts have been made to

make this manual error free, yet some errors might have crept in

inadvertently. Suggestions from the readers for the improvement of the

manual are most welcomed