

# **ACKNOWLEDGMENT**

**I would like to express my special thanks to my teacher Mrs. Sharon Hiskiel for mentoring me throughout this project work. I also thank our respected principal Mrs. Shabnam Haque for her motivation and guidance throughout the year.**

**My project is titled as “School Management System” and it has enabled me to do a lot of research and I came to Know about so many new things in software design and development.**

**Also, I would also like to thank my parents who motivated and supported me during my work.**

**Mohd. Shayyan**

**XII SCIENCE**

## **INDEX**

- 1. Python Introduction**
- 2. Pandas Introduction**
- 3. Matplotlib Introduction**
- 4. MySQL Introduction**
- 5. Hardware Requirements**
- 6. Project Introduction (Python)**
- 7. Database schema Screenshots (SQL)**
- 8. User Output**
- 9. SQL Queries**
- 10. User Interface Code**
- 11. Testing**
- 12. Bibliography**

## **PYTHON INTRODUCTION**

**Python is a general purpose, dynamic, high-level, and interpreted programming language. Python is a high level language. It is a free and open source language. It is an interpreted language, as python programs are executed by an interpreter. Pandas is a software library written for the Python programming language for data manipulation and analysis. In particular, it offers data structures and operations for manipulating numerical tables and time series.**

**It is used For:**

- Web Development(Server-side)**
- Software Development**
- Mathematics**
- System Scripting**

## **PANDAS INTRODUCTION**

- **Pandas is a Python library used for working with data sets.**
- **It has functions for analyzing, cleaning, exploring, and manipulating data.**
- **The name "Pandas" has a reference to both "Panel Data", and "Python Data Analysis" and was created by Wes McKinney in 2008.**
- **Pandas can clean messy data sets, and make them readable and relevant.**
- **Relevant data is very important in data science.**
- **Pandas are also able to delete rows that are not relevant, or contains wrong values, like empty or NULL values. This is called cleaning the data.**

## **MATPLOTLIB INTRODUCTION**

**Matplotlib is an amazing visualization library in Python for 2D plots of arrays. Matplotlib is a multi-platform data visualization library built on NumPy arrays and designed to work with the broader SciPy stack. It was introduced by John Hunter in the year 2002. One of the greatest benefits of visualization is that it allows us visual access to huge amounts of data in easily digestible visuals. Matplotlib consists of several plots like line, bar, scatter, histogram, etc.**

**Matplotlib comes with a wide variety of plots. Plots help to understand trends, and patterns, and to make correlations. They're typically instruments for reasoning about quantitative information.**

## **MySQL INTRODUCTION**

**MySQL is a relational database management system(RDBMS) developed by Oracle that is based on structured query language(SQL).**

**A database is a structured collection of data.It may be anything from a simple shopping list to a picture gallery or a place to hold the vast amounts of information in a corporate network.In particular,a relational database is a digital store collecting data and organizing it according to the relational modal. In this modal,tables consist of rows and columns and relationship between data elements all follow a strict logical structure. An RDBMS is simply te set of software tools used to actually implement,manage and query such a database**