



(Affiliated to Central Board of Secondary Education, New Delhi)

(Chettinad House, R.A.Puram, Chennai – 600 028)

# COMPUTER SCIENCE

Certified to be the Bonafide Record of work done by

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Std XII Sec \_\_\_\_

in the Computer Science Lab of the CHETTINAD VIDYASHRAM,

CHENNAI, during the year 2021 – 2022.

Date: Teacher-in-charge

## REGISTER NO. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#### Submitted for All India Senior Secondary Practical Examination in

#### Computer Science held on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_at

#### Chettinad Vidyashram, Chennai – 600 028.

#### Principal Internal Examiner External Examiner

**ACKNOWLEDGEMENT**

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**OVERVIEW OF PYTHON**

Python is a **computer programming language often used to build websites and software, automate tasks, and conduct data analysis**. Python is a general-purpose language, meaning it can be used to create a variety of different programs and isn't specialized for any specific problems.

It is a high-level, **interpreted, interactive and object-oriented scripting** language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages.

1. **Python is Interpreted** − Python is processed at runtime by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP.
2. **Python is Interactive** − You can actually sit at a Python prompt and interact with the interpreter directly to write your programs.
3. **Python is Object-Oriented** − Python supports Object-Oriented style or technique of programming that encapsulates code within objects.
4. **Python is a Beginner's Language** − Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

Python's features include −

* **Easy-to-learn** − Python has few keywords, simple structure, and a clearly defined syntax. This allows the student to pick up the language quickly.
* **Easy-to-read** − Python code is more clearly defined and visible to the eyes.
* **Easy-to-maintain** − Python's source code is fairly easy-to-maintain.
* **A broad standard library** − Python's bulk of the library is very portable and cross-platform compatible on UNIX, Windows, and Macintosh.
* **Interactive Mode** − Python has support for an interactive mode which allows interactive testing and debugging of snippets of code.
* **Portable** − Python can run on a wide variety of hardware platforms and has the same interface on all platforms.
* **Databases** − Python provides interfaces to all major commercial databases.
* **GUI Programming** − Python supports GUI applications that can be created and ported to many system calls, libraries and windows systems, such as Windows MFC, Macintosh, and the X Window system of Unix.
* **Scalable** − Python provides a better structure and support for large programs than shell scripting.

**PROJECT DESCRIPTION**

Our project titled “CVTERIA” provides a GUI based system to efficiently manage a cafeteria. We have used a combination of Python and MySQL for the back-end code and have designed a simple yet robust front-end GUI using Tkinter.

This application allows both the staff at a cafeteria and the cafeteria manager to manage records of the customers digitally. It includes features like adding customers, updating customer details, deleting customer details, and ability to view the list of customers including different sorting capabilities. For security purposes we have built a simple yet powerful password validation function. Our appropriate pop-up messages for various scenarios helps the user understand what he or she has done to the database.

The application has multiple validations at user enterable fields and data base level exceptions. We have mapped all the errors with user friendly messages.

The system runs without any glitches at an optimal speed. Being an open-source application, this is a cost-effective solution for small cafeterias.

**FUNCTIONS USED**

**TABLES USED**

CVTERIA

CAFETERIA MANAGEMENT SYSTEM

# XII-F2

TEAM:

SRIRAM CHOWDARY NEMANI

SHREYAS V RAMANAN

SREEHARI V S

PRAVEEN KUMAR S