# VISVESVARAYA TECHNOLOGICAL UNIVERSITY



BELAGAVI - 590018, Karnataka

#### **INTERNSHIP REPORT**

ON

# "CGPA Calculator-VTU Site"

Submitted in partial fulfilment for the award of degree(21CSI85)

# BACHELOR OF ENGINEERING IN YOUR BRANCH

Submitted by:

RAKSHITHA C 1CD20AI041



Conducted at VARCONS TECHNOLOGIES



# CAMBRIDGE INSTITUTE OF TECHNOLOGY Department of Artificial Intelligence And Machine Learning

Accredited by NBA, New Delhi Main Campus KR Puram, Bengaluru - 560036

# CAMBRIDGE INSTITUTE OF TECHNOLOGY Department of Artificial Intelligence And Machine Learning

# Accredited by NBA, New Delhi Main Campus KR Puram, Bengaluru - 560036



#### **CERTIFICATE**

This is to certify that the Internship titled "CGPA Calculator-VTU Site" carried out by Ms .Rakshitha C, a bonafide student of Cambridge Institute of Technology, in partial fulfillment for the award of Bachelor of Engineering, in Artificial Intelligence and Machine Learning under Visvesvaraya Technological University, Belagavi, during the year 2023-2024. It is certified that all corrections/suggestions indicated have been incorporated in the report.

The project report has been approved as it satisfies the academic requirements in respect of Internship prescribed for the course Internship / Professional Practice (21\*\*\*\*)

Signature of Guide	Signature of HOD	Signature of Principal	
	External Viva:		
Name of the Examiner		Signature with Date	
1)			
2)			

Internship report 2023-24 2

# DECLARATION

I, **Rakshitha** C, final year student of AIML, Cambridge Institute of Technology -560049, declare that the Internship has been successfully completed, in **VARCONS TECHNOLOGIES**. This report is submitted in partial fulfillment of the requirements for award of Bachelor Degree in Artificial Intelligence and Machine Learning, during the academic year 2023-2024.

Date: 18-04-2024 ::

Place : Bengaluru

USN: 1CD20AI041

NAME: Rakshitha C

#### OFFER LETTER PROVIDED BY THE COMPANY





Date: 5th March, 2024

Name: Rakshitha C USN: 1CD20AI041

Placement ID: FSWDMARCHBATCHONE

#### Dear Student,

We would like to congratulate you on being selected for the Full Stack Web Devlopment Internship position with Varcons Technologies, effective Start Date 5<sup>th</sup> March, 2024, All of us are excited about this opportunity provided to you!

This internship is viewed as being an educational opportunity for you, rather than a part-time job. As such, your internship will include training/orientation and focus primarily on learning and developing new skills and gaining a deeper understanding of concepts of Full Stack Web Devlopment through hands-on application of the knowledge you learn while you train with the senior developers. You will be bound to follow the rules and regulations of the company during your internship duration.

Again, congratulations and we look forward to working with you!.

Sincerely,

Spoorthi H C

Director

VARCONS TECHNOLOGIES

213, 2<sup>st</sup> Floor, 18 M G Road, Ulsoor,
Bangalore-560001

## ACKNOWLEDGEMENT

This Internship is a result of accumulated guidance, direction and support of several important persons. We take this opportunity to express our gratitude to all who have helped us to complete the Internship.

We express our sincere thanks to our Principal, for providing usadequate facilities to undertake this Internship.

We would like to thank our Head of Dept – AIML, for providing us an opportunity to carry out Internship and for his valuable guidance and support.

We would like to thank our (Lab assistant name) Software Services for guiding us during the period of internship.

We express our deep and profound gratitude to our guide, Prof. Geetha R, Assistant Prof, for her keen interest and encouragement at every step in completing the Internship.

We would like to thank all the faculty members of our department for the support extended during the course of Internship.

We would like to thank the non-teaching members of our dept, for helping us during the Internship.

Last but not the least, we would like to thank our parents and friends without whose constant help, the completion of Internship would have not been possible.

Rakshitha C 1CD20AI041

# **ABSTRACT**

This internship report presents an analysis of the CGPA (Cumulative Grade Point Average) calculator tool integrated into the Visvesvaraya Technological University (VTU) website, with a focus on enhancing user experience. The report outlines the methodologies employed to evaluate the effectiveness, usability, and functionality of the CGPA calculator tool.

The study begins with a comprehensive review of existing CGPA calculators and user interface design principles. Subsequently, various metrics are identified to assess the usability and user satisfaction of the VTU CGPA calculator. These metrics include efficiency, effectiveness, learnability, error prevention, and user satisfaction.

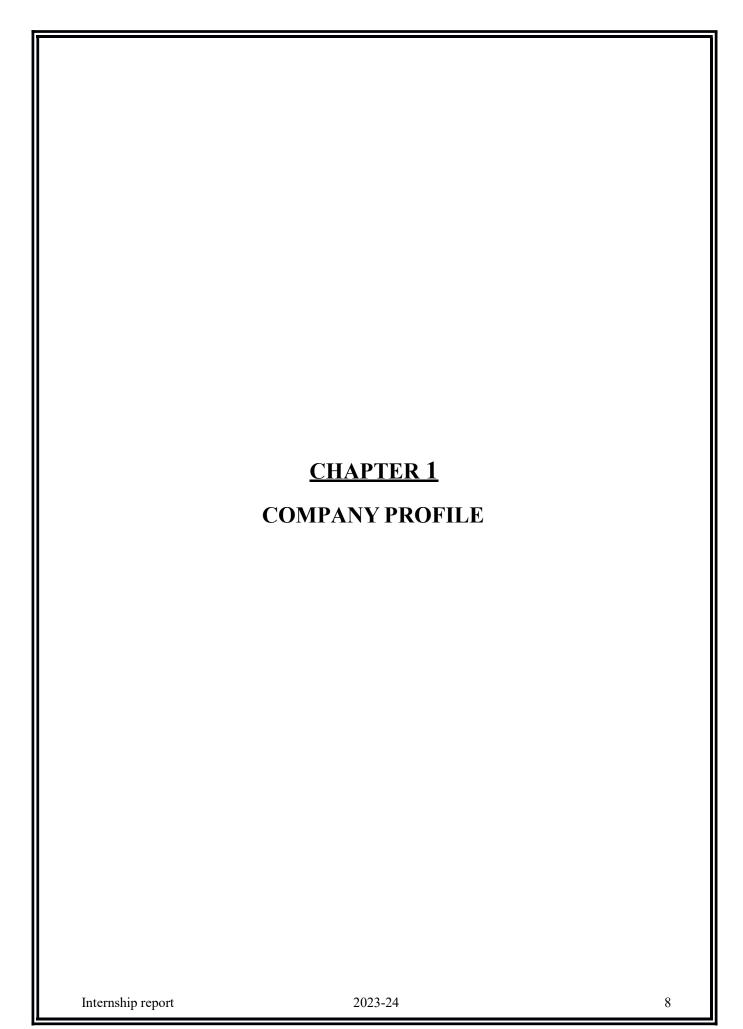
To gather empirical data, a combination of quantitative and qualitative research methods is employed. Quantitative data is collected through user surveys and analytics tools, while qualitative insights are derived from user interviews and usability testing sessions. The analysis of collected data provides valuable insights into user preferences, pain points, and suggestions for improvement.

The findings of this study highlight several key areas for enhancement in the VTU CGPA calculator, including interface design adjustments, feature additions, and performance optimization. Additionally, recommendations are provided for implementing these improvements to ensure a more intuitive and seamless user experience. Ultimately, this internship report aims to contribute to the ongoing efforts of VTU in enhancing its online services, particularly in the realm of academic tools, by providing actionable insights derived from user-centered research and analysis.

The successful implementation of the CGPA calculator will contribute to streamlining the academic processes at VTU, empowering students to track their progress and make informed decisions regarding their educational journey. Additionally, it will demonstrate the university's commitment to leveraging technology to enhance the student experience and foster academic excellence.

# **Table of Contents**

SI no	Description	Page no
1	Company Profile	8
2	About the Company	10
3	Introduction 13	
4	System Analysis 16	
5	Requirement Analysis	20
6	Design Analysis	22
7	Implementation	24
8	Snapshots 47	
9	Conclusion	54
10	References 56	



# 1. COMPANY PROFILE

#### A Brief History of Company

Varcons Technologies is a leading provider of cutting-edge technologies and services, offering scalable solutions for businesses of all sizes. Founded by a group of friends who started by scribbling their ideas on a piece of paper, today we offer smart, innovative services to dozens of clients. We develop SaaS products, provide Corporate Seminars, Industrial trainings and much more.

Smart solutions are at the core of all that we do at VCT. Our main goal is to find smart ways of using technology that will help build a better tomorrow for everyone, everywhere. SaaS offers a variety of advantages over traditional software licensing models and We here at VCT tend to include the key features of SaaS in everything we build.

We develop websites that behave and interact similar to Sophisticated software and also provied Information+Functionality=WaaS .Let us analyse the way your users/customers interact with you/your business by gathering, studying, and understanding the consumer voice and their perception of the product/service to generate a report to help you make better market decisions. With a comprehensive range of services, We can guarantee your technology needs are not just met, but exceeded. We shall work with your Customers/users closely to understand the way your users/customers use/make use of Products/Services. We create API's and tools that help you automate any process with a host of features pertaining to the Device.

VCA provides a host of services to its customers/users/clients, Enabling business success driven by technology Harnessing the power of technology, we create a measurable difference for our clients across various industries & multiple geographies. We develop websites that behave and interact similar to sophisticated software. We help you manage your SEO campaign more efficiently and effectively. We help you gain market share by leveraging our expertise. our holistic approach to identify anything that may be hurting your traffic or rankings and show you just how to outrank the competition.

CHAPTER 2	
ABOUT THE COMPANY	

2023-24

10

Internship report

# 2. ABOUT THE COMPANY

Built for Creatives, by Creatives at VCT, We make sure every product/service that we offer is built keeping in mind the practical usability of the product/Service, We're a startup focused on Creativity and Customizability, and We also provide subscription models for Software that we have already built, Since the application is already configured, the user has a ready-to-use application. This not only reduces installation and configuration time but also cuts down the time wasted on potential glitches linked to software deployment.

## Departments and services offered

VCA provides a host of services to its customers/users/clients, Enabling business success driven by technology Harnessing the power of technology, we create a measurable difference for our clients across various industries & multiple geographies. We develop websites that behave and interact similar to sophisticated software. We help you manage your SEO campaign more efficiently and effectively. We help you gain market share by leveraging our expertise. our holistic approach to identify anything that may be hurting your traffic or rankings and show you just how to outrank the competition.

With a comprehensive range of services, we guarantee your technology needs are not just met, but exceeded. We shall work with your customers/users closely to understand the way your users/customers use/make use of products/services We offer professional Graphic design, Brochure design & Logo design. We are experts in crafting visual content to convey the right message to the customers. We also design custom wraps for your products(also known as package designing) We analyse the way your users/customers interact with you/your business by gathering, studying and understanding the consumer voice and their perception of the product/service We work with Consumer Electronics, Lighting, Home Automation, Metering, Sensor-Technology, Home Appliance and Medical Device companies to help them create smart and connected products. Through its integrated Embedded and IoT services, VCA helps build intelligent & connected devices that can be remotely monitored and controlled while leveraging edge and cloud computing for a host of intelligent applications and analytics.

#### Services provided by Company.

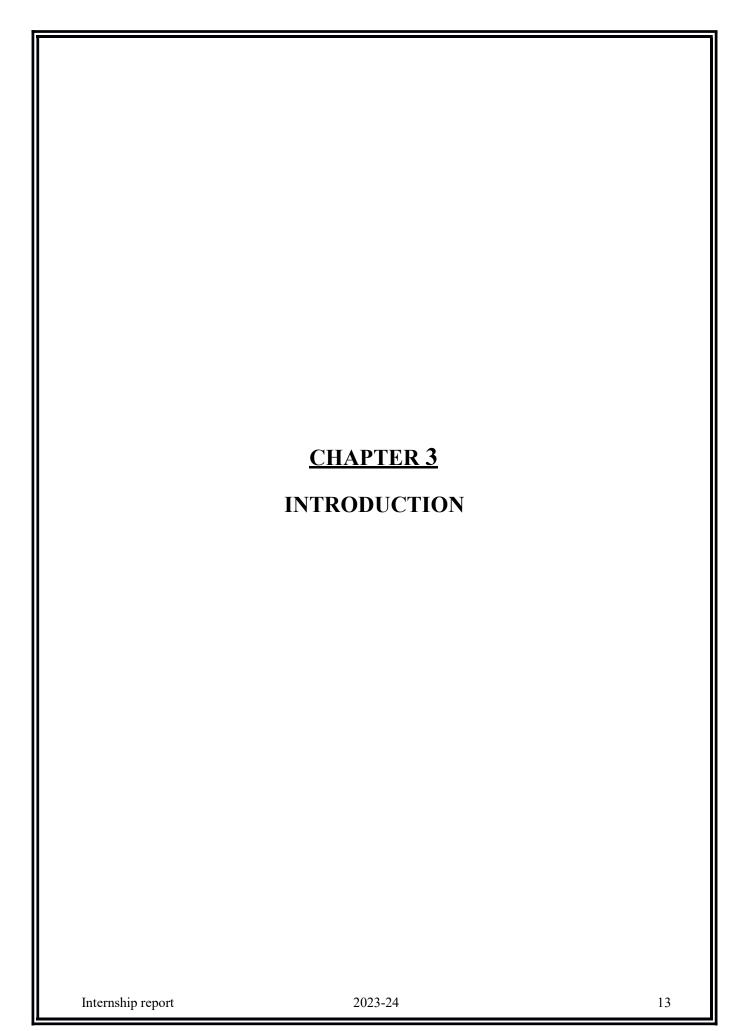
- Website as Software
- Search Engine Optimisation
- Comprehensive Customer Support
- Branding and Design
- Analytics and Research
- Embedded Systems and IOT

#### **OD services we provide:** Traditional Services+ SaaS features= Magic!

- Website as Software
- Analytics and Research
- Comprehensive Customer Support
- Smart Automation Tools

We develop websites that behave and interact similar to Sophisticated software. Information+Functionality=WaaS .Let us analyse the way your users/customers interact with you/your business by gathering, studying, and understanding the consumer voice and their perception of the product/service to generate a report to help you make better market decisions.

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# 3. INTRODUCTION

#### **Introduction to CGPA Calculator-VTU Site**

The modern educational landscape is increasingly reliant on digital tools and platforms to streamline administrative processes and enhance the learning experience. In this context, the development of a CGPA (Cumulative Grade Point Average) calculator for the Visvesvaraya Technological University (VTU) website emerges as a significant endeavor aimed at facilitating student academic management and improving user interaction with the university's online resources.

The proposed project seeks to address this challenge by designing and implementing a user-friendly CGPA calculator seamlessly integrated into the VTU website. By leveraging modern web development technologies and adhering to user-centric design principles, the calculator aims to provide students with a convenient and accessible tool for computing their CGPA accurately.

#### **Key features of the CGPA calculator include:**

- User-friendly interface: The calculator will feature an intuitive interface designed for ease of use, allowing students to input their grades and credits effortlessly.
- Accurate computation: The calculator will employ algorithms to accurately calculate the CGPA based on the grades obtained by the student in each course and the corresponding credit weightage.
- Flexibility: The calculator will accommodate various grading systems used by VTU
  across different programs and semesters, ensuring flexibility and accuracy in CGPA
  calculation.
- Interactive feedback: The calculator will provide instant feedback to users, allowing them to review and adjust their inputs to obtain the desired CGPA.
- Accessibility: The calculator will be accessible to all VTU students through the official website, ensuring equitable access to this essential academic tool.

#### **Problem Statement**

The absence of a dedicated Cumulative Grade Point Average (CGPA) calculator on the Visvesvaraya Technological University (VTU) website poses a significant challenge for students in efficiently computing and tracking their academic performance. This project aims to address this issue by developing and integrating a user-friendly CGPA calculator into the VTU website, providing students with a convenient and accessible tool to accurately calculate and monitor their CGPA, thereby enhancing the overall student experience and academic management within the university.

CHAPTER 4	
SYSTEM ANALYSIS	

2023-24

16

Internship report

# 4. SYSTEM ANALYSIS

#### 1. System Analysis

A CGPA (Cumulative Grade Point Average) calculator is a vital tool for students and academic institutions alike, facilitating the computation of a student's overall academic performance. Effective system analysis is crucial in designing a CGPA calculator that meets the needs of users while ensuring accuracy, efficiency, and usability. This analysis delves into the process of identifying requirements, designing system architecture, and outlining development and deployment strategies for a CGPA calculator.

## User Requirements Gathering:

Understanding user needs is paramount in developing a successful CGPA calculator. Through interviews and surveys with students, academic advisors, and administrators, key features and functionalities are identified. Users express a desire for a user-friendly interface allowing easy input of grades, calculation of CGPA, visualization of semester-wise performance, and generation of comprehensive reports.

# Functional Requirements Identification:

The core functions of the CGPA calculator are delineated, encompassing grade input, CGPA computation, secure data storage, and report generation. Additional features such as grade conversions and support for various grading systems are specified to enhance user experience and accommodate diverse academic contexts.

# Non-functional Requirements Determination:

Non-functional requirements are defined to ensure the system's performance, usability, security, and reliability. Performance considerations encompass fast response times and scalability to accommodate increasing user loads. Usability is prioritized through an intuitive interface suitable for users with varying technical proficiencies. Security measures include robust data encryption and user authentication mechanisms, while reliability entails error handling and fault tolerance.

# System Architecture Design:

The system architecture is designed to accommodate scalability, maintainability, and compatibility. Modular components are established for the user interface, data processing, and storage, allowing for flexibility and ease of future

enhancements or modifications. Technologies and frameworks are chosen based on their suitability for the project's requirements and constraints.

#### Data Modeling:

A structured database schema is designed to efficiently store student information, including personal details, course enrollment, grades, and CGPA calculations. Relationships between entities such as students, courses, and semesters are established to ensure data integrity and consistency.

## Interface Design

The user interface is meticulously crafted to optimize usability and accessibility. Wireframes and mockups are created, incorporating stakeholder feedback to design an intuitive input form for grades and interactive visualizations for CGPA trends and performance metrics.

#### Development and Testing:

System development follows best practices for coding, documentation, and version control. Rigorous testing, including unit tests, integration tests, and user acceptance tests, is conducted to identify and rectify bugs or inconsistencies before deployment.

## Deployment and Maintenance:

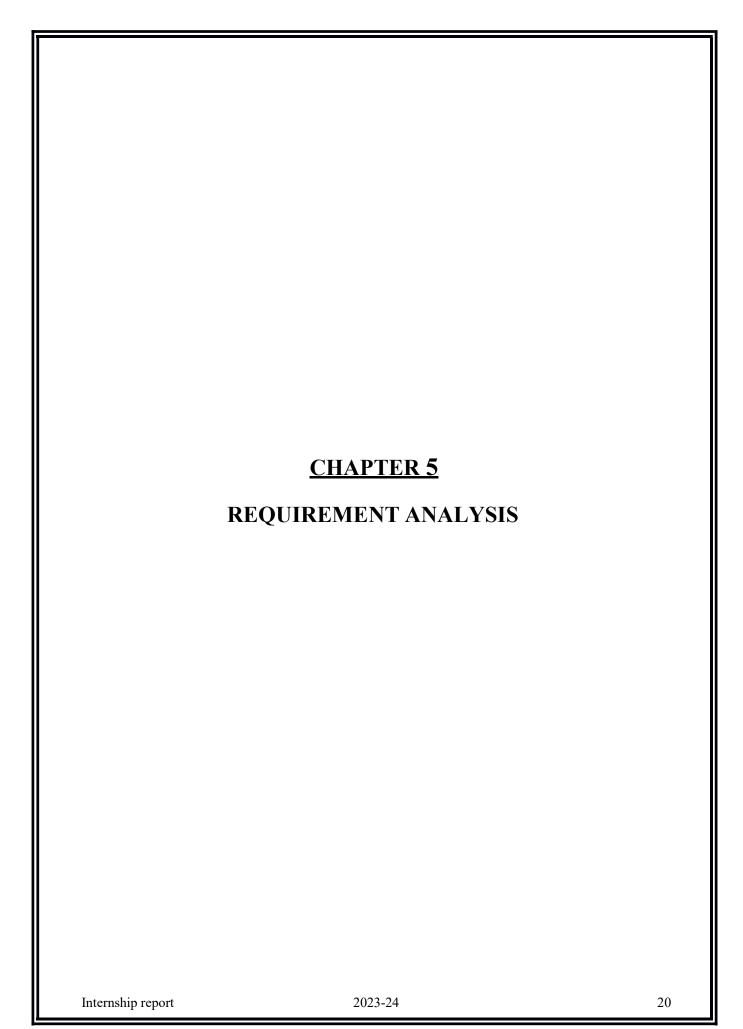
The CGPA calculator is deployed in a production environment, seamlessly integrating with existing IT infrastructure. Ongoing maintenance and support are provided to address issues, implement new features, and adapt to evolving user needs and technological advancements.

# 2. Objective of the System

The CGPA Calculator system aims to streamline the process of computing Cumulative Grade Point Averages (CGPA) by providing students, academic advisors, and administrators with a reliable and user-friendly platform. Its primary objective lies in ensuring accuracy in CGPA calculation, leveraging grades obtained in individual courses and accounting for their respective credit weightage. Efficiency is another core objective, with the system designed to swiftly process grade inputs and generate comprehensive reports, thereby minimizing the time and effort required for academic analysis. User-centric design principles are integral, with an intuitive interface facilitating easy grade input, CGPA visualization, and access to insightful performance analytics. Flexibility is emphasized to accommodate diverse grading systems and formats, ensuring the system's applicability across various educational contexts.

In addition to accuracy and efficiency, the CGPA Calculator system prioritizes data security, implementing robust encryption and authentication mechanisms to safeguard sensitive student

information. The system's architecture is designed for scalability, capable of accommodating increasing user loads and future enhancements while ensuring consistent reliability and minimal downtime. Insightful analytics provide stakeholders with valuable insights into academic performance, including semester-wise trends and areas for improvement, contributing to informed decision-making and academic planning. Ultimately, the system aims to enhance stakeholder satisfaction by meeting the diverse needs and expectations of students, faculty, and academic administrators, thereby fostering a conducive environment for academic success and progression.



# **5. REQUIREMENT ANALYSIS**

## **Hardware Requirement Specification**

• MySQL

• NODE JS

• Notepad++ Editor

• Processor: Intel core i5 processer

• Memory: 15.6 GB

• Hard Disk: 40 GB

## **Software Requirement Specification**

#### A] Functional Requirements

- Python
- CSS
- HTML.

#### **B**] Non-Functional Requirements

#### Availability

The online registration system shall permit backing up of the registration database whileother registration actives are going on.

#### Accessibility

The system shall be accessible by people with specific vision needs to the extent that a user shall be able to display whole user interface in a larger font without truncating displayed text or other values.

#### Security

The access permissions for system data may only be change by the systems data administrator passwords shall never be viewable at the point of entry or any other time.

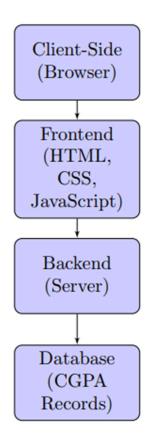
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2023-24

22

Internship report

# 6. DESIGN & ANALYSIS



**Fig System Design** 

CHAPTER 7 IMPLEMENTATION

2023-24

24

Internship report

# 7. IMPLEMENTATION

Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new successful system and in giving confidence on the new system for the users that it will work efficiently and effectively.

The system can be implemented only after thorough testing is done and if it is found to work according to the specification. It involves careful planning, investigation of the current system and it constraints on implementation, design of methods to achieve the change over and an evaluation of change over methods a part from planning.

Two major tasks of preparing the implementation are education and training of the users and testing of the system. The more complex the system being implemented, the more involved will be the system analysis and design effort required just for implementation.

The implementation phase comprises of several activities. The required hardware and software acquisition is carried out. The system may require some software to be developed. For this, programs are written and tested. The user then changes over to his new fully tested system and the old system is discontinued.

#### **TESTING**

The testing phase is an important part of software development. It is the Information zed system will help in automate process of finding errors and missing operations and also a complete verification to determine whether the objectives are met and the user requirements are satisfied. Software testing is carried out in three steps:

- 1. The first includes unit testing, where in each module is tested to provide its correctness, validity and also determine any missing operations and to verify whether the objectives have been met. Errors are noted down and corrected immediately.
- Unit testing is the important and major part of the project. So errors are rectified easily in particular module and program clarity is increased. In this project entire system is divided into several modules and is developed individually. So unit testing is conducted to individual modules.
- 3. The second step includes Integration testing. It need not be the case, the software whose modules when run individually and showing perfect results, will also show perfect results when run as a whole.

```
from PyQt5 import QtCore, QtGui, QtWidgets
import sys
import webbrowser
import os
grade points = []
credits = []
total marks = []
lcdNumber = True
lcdNumber 1 = True
credits earned = []
cixgi = []
ci earned =[]
class Ui MainWindow(object):
  def setupUi(self, MainWindow):
    MainWindow.setObjectName("MainWindow")
    MainWindow.resize(957, 889)
    MainWindow.setMinimumSize(QtCore.QSize(740, 650))
    icon = OtGui.OIcon()
    icon.addPixmap(QtGui.QPixmap("ico.ico"), QtGui.QIcon.Normal, QtGui.QIcon.Off)
    MainWindow.setWindowIcon(icon)
    MainWindow.setStyleSheet("background-color: rgb(40, 42, 54);\n"
    MainWindow.setTabShape(QtWidgets.QTabWidget.Rounded)
    MainWindow.setUnifiedTitleAndToolBarOnMac(True)
    self.centralwidget = QtWidgets.QWidget(MainWindow)
    self.centralwidget.setObjectName("centralwidget")
    self.tabWidget = QtWidgets.QTabWidget(self.centralwidget)
    self.tabWidget.setGeometry(QtCore.QRect(0, 0, 961, 891))
    self.tabWidget.setStyleSheet("background-color: rgb(170, 255, 0);")
    self.tabWidget.setTabPosition(QtWidgets.QTabWidget.North)
    self.tabWidget.setTabShape(QtWidgets.QTabWidget.Rounded)
    self.tabWidget.setIconSize(QtCore.QSize(20, 20))
    self.tabWidget.setElideMode(OtCore.Ot.ElideNone)
    self.tabWidget.setTabsClosable(False)
    self.tabWidget.setMovable(False)
    self.tabWidget.setTabBarAutoHide(False)
    self.tabWidget.setObjectName("tabWidget")
    self.sgpa with grades = QtWidgets.QWidget()
    self.sgpa with grades.setStyleSheet("background-color: rgb(153, 155, 255);")
    self.sgpa with grades.setObjectName("sgpa with grades")
    self.gridLayoutWidget = QtWidgets.QWidget(self.sgpa with grades)
    self.gridLayoutWidget.setGeometry(QtCore.QRect(10, 50, 921, 421))
    self.gridLayoutWidget.setObjectName("gridLayoutWidget")
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    self.gridLayout.setContentsMargins(0, 0, 0, 0)
    self.gridLayout.setObjectName("gridLayout")
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    self.comboBox 3.addItem("")
    self.comboBox 3.addItem("")
```

```
self.comboBox 3.addItem("")
self.comboBox 3.addItem("")
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self.gridLayout.addWidget(self.comboBox 3, 2, 1, 1, 1)
self.label 10 = QtWidgets.QLabel(self.gridLayoutWidget)
self.label 10.setObjectName("label 10")
self.gridLayout.addWidget(self.label 10, 5, 0, 1, 1)
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```

```
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self.gridLayout.addWidget(self.spinBox, 1, 2, 1, 1)
self.label 5 = QtWidgets.QLabel(self.gridLayoutWidget)
self.label 5.setObjectName("label 5")
self.gridLayout.addWidget(self.label 5, 0, 1, 1, 1)
self.comboBox 11 = QtWidgets.QComboBox(self.gridLayoutWidget)
self.comboBox 11.setObjectName("comboBox 11")
self.comboBox 11.addItem("")
self.comboBox 11.addItem("")
self.comboBox 11.addItem("")
self.comboBox 11.addItem("")
self.comboBox 11.addItem("")
self.gridLayout.addWidget(self.comboBox 11, 6, 1, 1, 1)
self.comboBox 7 = QtWidgets.QComboBox(self.gridLayoutWidget)
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self.label 17 = QtWidgets.QLabel(self.gridLayoutWidget)
self.label 17.setObjectName("label 17")
self.gridLayout.addWidget(self.label 17, 12, 0, 1, 1)
self.spinBox 8 = QtWidgets.QSpinBox(self.gridLayoutWidget)
self.spinBox 8.setObjectName("spinBox 8")
self.gridLayout.addWidget(self.spinBox 8, 8, 2, 1, 1)
self.label 8 = QtWidgets.QLabel(self.gridLayoutWidget)
self.label 8.setObjectName("label 8")
self.gridLayout.addWidget(self.label 8, 3, 0, 1, 1)
self.spinBox 11 = QtWidgets.QSpinBox(self.gridLayoutWidget)
self.spinBox 11.setObjectName("spinBox 11")
self.gridLayout.addWidget(self.spinBox 11, 11, 2, 1, 1)
self.comboBox 23 = QtWidgets.QComboBox(self.gridLayoutWidget)
self.comboBox 23.setObjectName("comboBox 23")
self.comboBox 23.addItem("")
self.comboBox 23.addItem("")
self.comboBox 23.addItem("")
self.comboBox 23.addItem("")
self.comboBox 23.addItem("")
self.gridLayout.addWidget(self.comboBox 23, 12, 1, 1, 1)
self.spinBox 10 = QtWidgets.QSpinBox(self.gridLayoutWidget)
```

```
self.spinBox 10.setObjectName("spinBox 10")
self.gridLayout.addWidget(self.spinBox 10, 10, 2, 1, 1)
self.spinBox 2 = QtWidgets.QSpinBox(self.gridLayoutWidget)
self.spinBox 2.setObjectName("spinBox 2")
self.gridLayout.addWidget(self.spinBox 2, 2, 2, 1, 1)
self.label 7 = QtWidgets.QLabel(self.gridLayoutWidget)
self.label 7.setObjectName("label 7")
self.gridLayout.addWidget(self.label 7, 0, 2, 1, 1)
self.comboBox 15 = QtWidgets.QComboBox(self.gridLayoutWidget)
self.comboBox 15.setObjectName("comboBox 15")
self.comboBox 15.addItem("")
self.comboBox 15.addItem("")
self.comboBox 15.addItem("")
self.comboBox 15.addItem("")
self.comboBox 15.addItem("")
self.gridLayout.addWidget(self.comboBox 15, 8, 1, 1, 1)
self.comboBox 19 = QtWidgets.QComboBox(self.gridLayoutWidget)
self.comboBox 19.setObjectName("comboBox 19")
self.comboBox 19.addItem("")
self.comboBox 19.addItem("")
self.comboBox 19.addItem("")
self.comboBox 19.addItem("")
self.comboBox 19.addItem("")
self.gridLayout.addWidget(self.comboBox 19, 10, 1, 1, 1)
self.label 14 = QtWidgets.QLabel(self.gridLayoutWidget)
self.label 14.setObjectName("label 14")
self.gridLayout.addWidget(self.label 14, 9, 0, 1, 1)
self.label 60 = QtWidgets.QLabel(self.gridLayoutWidget)
self.label 60.setObjectName("label 60")
self.gridLayout.addWidget(self.label 60, 15, 0, 1, 1)
self.comboBox 32 = QtWidgets.QComboBox(self.gridLayoutWidget)
self.comboBox 32.setObjectName("comboBox 32")
self.comboBox 32.addItem("")
self.comboBox 32.addItem("")
self.comboBox 32.addItem("")
self.comboBox 32.addItem("")
self.comboBox 32.addItem("")
self.gridLayout.addWidget(self.comboBox 32, 13, 1, 1, 1)
self.comboBox 34 = QtWidgets.QComboBox(self.gridLayoutWidget)
self.comboBox 34.setObjectName("comboBox 34")
self.comboBox 34.addItem("")
self.comboBox 34.addItem("")
self.comboBox 34.addItem("")
self.comboBox 34.addItem("")
self.comboBox 34.addItem("")
self.gridLayout.addWidget(self.comboBox 34, 14, 1, 1, 1)
self.comboBox 36 = OtWidgets.QComboBox(self.gridLayoutWidget)
self.comboBox 36.setObjectName("comboBox 36")
self.comboBox 36.addItem("")
self.comboBox 36.addItem("")
self.comboBox 36.addItem("")
```

```
self.comboBox 36.addItem("")
    self.comboBox 36.addItem("")
    self.gridLayout.addWidget(self.comboBox 36, 15, 1, 1, 1)
    self.spinBox 40 = QtWidgets.QSpinBox(self.gridLayoutWidget)
    self.spinBox 40.setObjectName("spinBox 40")
    self.gridLayout.addWidget(self.spinBox 40, 13, 2, 1, 1)
    self.spinBox 41 = QtWidgets.QSpinBox(self.gridLayoutWidget)
    self.spinBox 41.setObjectName("spinBox 41")
    self.gridLayout.addWidget(self.spinBox 41, 14, 2, 1, 1)
    self.spinBox 42 = QtWidgets.QSpinBox(self.gridLayoutWidget)
    self.spinBox 42.setObjectName("spinBox 42")
    self.gridLayout.addWidget(self.spinBox 42, 15, 2, 1, 1)
    self.label = QtWidgets.QLabel(self.sgpa with grades)
    self.label.setGeometry(QtCore.QRect(10, 0, 621, 41))
    font = QtGui.QFont()
    font.setPointSize(10)
    font.setBold(True)
    font.setWeight(75)
    self.label.setFont(font)
    self.label.setObjectName("label")
    self.label 18 = QtWidgets.QLabel(self.sgpa with grades)
    self.label 18.setGeometry(QtCore.QRect(50, 580, 361, 41))
    font = OtGui.OFont()
    font.setPointSize(10)
    font.setBold(True)
    font.setWeight(75)
    self.label 18.setFont(font)
    self.label 18.setObjectName("label 18")
    self.lcdNumber = QtWidgets.QLCDNumber(self.sgpa with grades)
    self.lcdNumber.setGeometry(QtCore.QRect(450, 580, 131, 41))
    self.lcdNumber.setStyleSheet("color: rgb(0, 255, 0);\n"
"background-color: rgb(0, 0, 0);")
    self.lcdNumber.setObjectName("lcdNumber")
    self.label 19 = OtWidgets.OLabel(self.sgpa with grades)
    self.label 19.setGeometry(QtCore.QRect(110, 720, 571, 61))
    font = QtGui.QFont()
    font.setPointSize(10)
    font.setBold(True)
    font.setWeight(75)
    self.label 19.setFont(font)
    self.label 19.setObjectName("label 19")
    self.label 20 = QtWidgets.QLabel(self.sgpa with grades)
    self.label 20.setGeometry(QtCore.QRect(20, 800, 281, 51))
    font = QtGui.QFont()
    font.setPointSize(10)
    font.setBold(True)
    font.setWeight(75)
    self.label 20.setFont(font)
    self.label 20.setObjectName("label 20")
    self.pushButton = OtWidgets.OPushButton(self.sgpa with grades)
    self.pushButton.setGeometry(QtCore.QRect(270, 500, 131, 31))
```

```
self.gridLayout 4.addWidget(self.label 77, 1, 2, 1, 1)
    self.label 72 = QtWidgets.QLabel(self.gridLayoutWidget 4)
    self.label 72.setObjectName("label 72")
    self.gridLayout 4.addWidget(self.label 72, 4, 0, 1, 1)
    self.label 74 = QtWidgets.QLabel(self.gridLayoutWidget 4)
    self.label 74.setObjectName("label 74")
    self.gridLayout 4.addWidget(self.label 74, 6, 0, 1, 1)
    self.label 83 = QtWidgets.QLabel(self.gridLayoutWidget 4)
    self.label 83.setObjectName("label 83")
    self.gridLayout 4.addWidget(self.label 83, 7, 2, 1, 1)
    self.spinBox 51 = QtWidgets.QSpinBox(self.gridLayoutWidget 4)
    self.spinBox 51.setMaximum(500)
    self.spinBox 51.setObjectName("spinBox 51")
    self.gridLayout 4.addWidget(self.spinBox 51, 5, 1, 1, 1)
    self.spinBox 53 = QtWidgets.QSpinBox(self.gridLayoutWidget 4)
    self.spinBox 53.setMaximum(500)
  def retranslateUi(self, MainWindow):
     translate = QtCore.QCoreApplication.translate
    MainWindow.setWindowTitle( translate("MainWindow", "SGPA & CGPA
CALCULATOR FOR VTU 2018 BATCH ONLY by ADARSH N"))
    self.comboBox 3.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 3.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 3.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 3.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 3.setItemText(4, translate("MainWindow", "4"))
    self.label 10.setText( translate("MainWindow", "05"))
    self.comboBox.setItemText(0, translate("MainWindow", "0"))
    self.comboBox.setItemText(1, translate("MainWindow", "1"))
    self.comboBox.setItemText(2, translate("MainWindow", "2"))
    self.comboBox.setItemText(3, translate("MainWindow", "3"))
    self.comboBox.setItemText(4, translate("MainWindow", "4"))
    self.label 59.setText( translate("MainWindow", "14"))
    self.comboBox_17.setItemText(0, _translate("MainWindow", "0"))
    self.comboBox 17.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 17.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 17.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 17.setItemText(4, translate("MainWindow", "4"))
    self.label 3.setText( translate("MainWindow", "02"))
    self.label 12.setText( translate("MainWindow", "07"))
    self.label 11.setText( translate("MainWindow", "06"))
    self.comboBox 5.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 5.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 5.setItemText(2, translate("MainWindow", "2"))
    self.comboBox_5.setItemText(3, _translate("MainWindow", "3"))
    self.comboBox 5.setItemText(4, translate("MainWindow", "4"))
    self.comboBox 5.setItemText(5, translate("MainWindow", "8"))
    self.label 9.setText( translate("MainWindow", "04"))
    self.comboBox 21.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 21.setItemText(1, translate("MainWindow", "1"))
```

```
self.comboBox 36.setItemText(4, translate("MainWindow", "4"))
    self.label.setText( translate("MainWindow", "CALCULATE SGPA WITH GRADES:-"))
    self.label 18.setText( translate("MainWindow", "SEMESTER GRADE POINT
AVERAGE:-"))
    self.label 19.setText( translate("MainWindow", "DESIGNED AND DEVELOPED BY
ADARSH N"))
    self.label 20.setText( translate("MainWindow", "FOR VTU STUDENTS ONLY "))
    self.pushButton.setText( translate("MainWindow", "CLEAR"))
    self.pushButton 2.setText( translate("MainWindow", "CALCULATE"))
    self.pushButton 5.setText( translate("MainWindow", "USER MANUL/SOUCE CODE"))
    self.pushButton 40.setText( translate("MainWindow", "5th sem"))
    self.pushButton 41.setText( translate("MainWindow", "8th sem"))
    self.pushButton 42.setText( translate("MainWindow", "3rd sem"))
    self.pushButton 43.setText( translate("MainWindow", "6th sem"))
    self.pushButton 44.setText( translate("MainWindow", "4th sem"))
    self.pushButton 45.setText( translate("MainWindow", "1st sem"))
    self.pushButton 46.setText( translate("MainWindow", "7th sem"))
    self.pushButton 47.setText( translate("MainWindow", "2nd sem"))
    self.tabWidget.setTabText(self.tabWidget.indexOf(self.sgpa with grades),
translate("MainWindow", "SGPA WITH GRADES"))
    self.label_21.setText(_translate("MainWindow", "CALCULATE SGPA WITH MARKS:-
"))
    self.label 25.setText( translate("MainWindow", "Total Marks of Subject:-"))
    self.comboBox 25.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 25.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 25.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 25.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 25.setItemText(4, translate("MainWindow", "4"))
    self.label 23.setText( translate("MainWindow", "Credits Assigned:-"))
    self.label 37.setText( translate("MainWindow", "12"))
    self.label 26.setText( translate("MainWindow", "01"))
    self.label 61.setText( translate("MainWindow", "13"))
    self.label 32.setText( translate("MainWindow", "07"))
    self.comboBox 29.setItemText(0, translate("MainWindow", "0"))
    self.comboBox_29.setItemText(1, _translate("MainWindow", "1"))
    self.comboBox 29.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 29.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 29.setItemText(4, translate("MainWindow", "4"))
    self.comboBox 29.setItemText(5, translate("MainWindow", "8"))
    self.comboBox 33.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 33.setItemText(1, translate("MainWindow", "1"))
    self.comboBox_33.setItemText(2, _translate("MainWindow", "2"))
    self.comboBox 33.setItemText(3, translate("MainWindow", "3"))
    self.comboBox_33.setItemText(4, _translate("MainWindow", "4"))
    self.comboBox 43.setItemText(0, translate("MainWindow", "0"))
    self.comboBox_43.setItemText(1, _translate("MainWindow", "1"))
    self.comboBox 43.setItemText(2, translate("MainWindow", "2"))
    self.comboBox_43.setItemText(3, _translate("MainWindow", "3"))
    self.comboBox 43.setItemText(4, translate("MainWindow", "4"))
    self.label 30.setText( translate("MainWindow", "05"))
    self.label 34.setText( translate("MainWindow", "09"))
```

```
self.comboBox 35.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 35.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 35.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 35.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 35.setItemText(4, translate("MainWindow", "4"))
    self.label 27.setText( translate("MainWindow", "02"))
    self.comboBox 27.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 27.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 27.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 27.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 27.setItemText(4, translate("MainWindow", "4"))
    self.label_22.setText(_translate("MainWindow", "Subject No:-"))
    self.comboBox 37.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 37.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 37.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 37.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 37.setItemText(4, translate("MainWindow", "4"))
    self.label 29.setText( translate("MainWindow", "04"))
    self.label 31.setText( translate("MainWindow", "06"))
    self.label 33.setText( translate("MainWindow", "08"))
    self.comboBox 47.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 47.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 47.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 47.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 47.setItemText(4, translate("MainWindow", "4"))
    self.label 35.setText( translate("MainWindow", "10"))
    self.comboBox 45.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 45.setItemText(1, translate("MainWindow", "1"))
    self.comboBox 45.setItemText(2, translate("MainWindow", "2"))
    self.comboBox 45.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 45.setItemText(4, translate("MainWindow", "4"))
    self.label 36.setText( translate("MainWindow", "11"))
    self.comboBox 31.setItemText(0, translate("MainWindow", "0"))
    self.comboBox 31.setItemText(1, translate("MainWindow", "1"))
    self.comboBox_31.setItemText(2, _translate("MainWindow", "2"))
    self.comboBox 31.setItemText(3, translate("MainWindow", "3"))
    self.comboBox 31.setItemText(4, translate("MainWindow", "4"))
    self.label 28.setText( translate("MainWindow", "03"))
CALCULATOR PART - 02"))
    self.pushButton 2.clicked.connect(self. calculate 1)
    self.pushButton 4.clicked.connect(self. calculate 2)
    self.pushButton_14.clicked.connect(self.calculate 3)
    self.pushButton 8.clicked.connect(self.calculate 4)
    self.pushButton 12.clicked.connect(self.calculate 5)
    self.pushButton 23.clicked.connect(self. cgpa two eight)
    self.pushButton 45.clicked.connect(self. sgpa one one and two)
  def openlink(self):
       webbrowser.open('https://github.com/Adarsh232001/VTU-SGPA-CALCULATOR')
  def one and two(self):
```

Internship report 2023-24 34

```
self.comboBox 2.setCurrentIndex(4)
    self.comboBox 4.setCurrentIndex(4)
    self.comboBox 6.setCurrentIndex(3)
    self.comboBox 8.setCurrentIndex(3)
    self.comboBox 10.setCurrentIndex(3)
    self.comboBox 12.setCurrentIndex(1)
    self.comboBox 14.setCurrentIndex(1)
    self.comboBox 16.setCurrentIndex(1)
    clear =
['comboBox 18','comboBox 20','comboBox 22','comboBox 24','comboBox 26','comboBox 28'
,'comboBox 30']
    clear comboBox(self, clear)
  def one and two (self):
    self.comboBox 46.setCurrentIndex(4)
    self.comboBox 44.setCurrentIndex(4)
    self.comboBox 49.setCurrentIndex(3)
    self.comboBox 54.setCurrentIndex(3)
    self.comboBox 51.setCurrentIndex(3)
    self.comboBox 53.setCurrentIndex(1)
    self.comboBox 52.setCurrentIndex(1)
    self.comboBox 56.setCurrentIndex(1)
    clear =
['comboBox 48','comboBox 57','comboBox 50','comboBox 55','comboBox 58','comboBox 59'
,'comboBox 60']
    clear comboBox(self, clear)
  def three and four(self):
    self.comboBox 2.setCurrentIndex(3)
    self.comboBox 4.setCurrentIndex(4)
    self.comboBox 6.setCurrentIndex(3)
    self.comboBox 8.setCurrentIndex(3)
    self.comboBox 10.setCurrentIndex(3)
    self.comboBox 12.setCurrentIndex(3)
    self.comboBox 14.setCurrentIndex(2)
    self.comboBox 16.setCurrentIndex(2)
    self.comboBox 18.setCurrentIndex(1)
    clear =self.comboBox 10.setCurrentIndex(3)
  def sgpa two seven(self):
    self.comboBox 25.setCurrentIndex(4)
    self.comboBox 27.setCurrentIndex(4)
    self.comboBox 29.setCurrentIndex(3)
    self.comboBox 31.setCurrentIndex(3)
    self.comboBox 33.setCurrentIndex(3)
    self.comboBox 35.setCurrentIndex(2)
    self.comboBox 37.setCurrentIndex(1)
    clear =
['comboBox_39','comboBox_41','comboBox_43','comboBox_45','comboBox_47','comboBox_38'
Internship report
                                         2023-24
                                                                                        35
```

```
,'comboBox 40','comboBox 42']
    clear comboBox(self, clear)
  def sgpa two eight(self):
    self.comboBox 25.setCurrentIndex(3)
    self.comboBox 27.setCurrentIndex(3)
    self.comboBox 29.setCurrentIndex(5)
    self.comboBox 31.setCurrentIndex(1)
    self.comboBox 33.setCurrentIndex(3)
    clear =
['comboBox 35','comboBox 37','comboBox 39','comboBox 41','comboBox 43','comboBox 45'
,'comboBox 47','comboBox 38','comboBox 40','comboBox 42']
    clear comboBox(self, clear)
  def clear 1(self):
    self.comboBox.setCurrentIndex(0)
    self.comboBox 3.setCurrentIndex(0)
    self.comboBox 5.setCurrentIndex(0)
    self.comboBox 7.setCurrentIndex(0)
    self.comboBox 9.setCurrentIndex(0)
    self.comboBox 11.setCurrentIndex(0)
    self.comboBox 13.setCurrentIndex(0)
    self.comboBox 15.setCurrentIndex(0)
    self.comboBox 17.setCurrentIndex(0)
    self.comboBox 19.setCurrentIndex(0)
    self.comboBox 21.setCurrentIndex(0)
    self.comboBox 23.setCurrentIndex(0)
    self.comboBox 32.setCurrentIndex(0)
    self.comboBox 34.setCurrentIndex(0)
    self.comboBox 36.setCurrentIndex(0)
    self.spinBox.setValue(0)
    self.spinBox 2.setValue(0)
    self.spinBox 3.setValue(0)
    self.spinBox 4.setValue(0)
    self.spinBox 5.setValue(0)
    self.spinBox 6.setValue(0)
    self.spinBox 7.setValue(0)
    self.spinBox 8.setValue(0)
    self.spinBox 9.setValue(0)
    self.spinBox 10.setValue(0)
    self.spinBox 11.setValue(0)
    self.spinBox 12.setValue(0)
    self.spinBox 40.setValue(0)
    self.spinBox 41.setValue(0)
    self.spinBox 42.setValue(0)
    grade points.clear()
    credits.clear()
    total marks.clear()
    self.lcdNumber.display(0)
```

#reset the tab

```
self.spinBox 13.setValue(0)
  self.spinBox 14.setValue(0)
  self.spinBox 15.setValue(0)
  self.spinBox 16.setValue(0)
  self.spinBox 17.setValue(0)
  self.spinBox 18.setValue(0)
  self.spinBox 19.setValue(0)
  self.spinBox 20.setValue(0)
  self.spinBox 21.setValue(0)
  self.spinBox 22.setValue(0)
  self.spinBox 23.setValue(0)
  self.spinBox 24.setValue(0)
  self.spinBox 43.setValue(0)
  self.spinBox 44.setValue(0)
  self.spinBox 45.setValue(0)
  self.comboBox 25.setCurrentIndex(0)
  self.comboBox 27.setCurrentIndex(0)
  self.comboBox 29.setCurrentIndex(0)
  self.comboBox 31.setCurrentIndex(0)
  self.comboBox 33.setCurrentIndex(0)
  self.comboBox 35.setCurrentIndex(0)
  self.comboBox 37.setCurrentIndex(0)
  self.comboBox 39.setCurrentIndex(0)
  self.comboBox 41.setCurrentIndex(0)
  self.comboBox 43.setCurrentIndex(0)
  self.comboBox 45.setCurrentIndex(0)
  self.comboBox 47.setCurrentIndex(0)
  self.comboBox 38.setCurrentIndex(0)
  self.comboBox 40.setCurrentIndex(0)
  self.comboBox 42.setCurrentIndex(0)
  grade points.clear()
  credits.clear()
  total marks.clear()
  self.lcdNumber 2.display(0)
def clear 3(self):
  self.comboBox 46.setCurrentIndex(0)
  self.comboBox 44.setCurrentIndex(0)
  self.comboBox 49.setCurrentIndex(0)
  self.comboBox 54.setCurrentIndex(0)
  self.comboBox 51.setCurrentIndex(0)
  self.comboBox 53.setCurrentIndex(0)
  self.comboBox 52.setCurrentIndex(0)
  self.comboBox 56.setCurrentIndex(0)
  self.comboBox 48.setCurrentIndex(0)
  self.comboBox 57.setCurrentIndex(0)
  self.comboBox 50.setCurrentIndex(0)
  self.comboBox 55.setCurrentIndex(0)
  self.comboBox 58.setCurrentIndex(0)
  self.comboBox 59.setCurrentIndex(0)
```

def clear 2(self):

```
self.comboBox 60.setCurrentIndex(0)
  self.spinBox 68.setValue(0)
  self.spinBox 73.setValue(0)
  self.spinBox 66.setValue(0)
  self.spinBox 63.setValue(0)
  self.spinBox 64.setValue(0)
  self.spinBox 69.setValue(0)
  self.spinBox 62.setValue(0)
  self.spinBox 70.setValue(0)
  self.spinBox 65.setValue(0)
  self.spinBox 72.setValue(0)
  self.spinBox 71.setValue(0)
  self.spinBox 67.setValue(0)
  self.spinBox 74.setValue(0)
  self.spinBox 75.setValue(0)
  self.spinBox 76.setValue(0)
  grade points.clear()
  credits.clear()
  credits earned.clear()
  total marks.clear()
  self.lcdNumber 6.display(0)
  self.lcdNumber 7.display(0)
def clear 4(self):
  self.spinBox 25.setValue(0)
  self.spinBox 26.setValue(0)
  self.spinBox 27.setValue(0)
  self.spinBox 28.setValue(0)
  self.spinBox_29.setValue(0)
  self.spinBox 30.setValue(0)
  self.spinBox 31.setValue(0)
  self.spinBox 32.setValue(0)
  self.spinBox 33.setValue(0)
  self.spinBox 34.setValue(0)
  self.spinBox 35.setValue(0)
  self.spinBox 36.setValue(0)
  self.spinBox 37.setValue(0)
  self.spinBox 38.setValue(0)
  self.spinBox 39.setValue(0)
  self.comboBox 2.setCurrentIndex(0)
  self.comboBox 4.setCurrentIndex(0)
  self.comboBox 6.setCurrentIndex(0)
  self.comboBox 8.setCurrentIndex(0)
  self.comboBox 10.setCurrentIndex(0)
  self.comboBox 12.setCurrentIndex(0)
  self.comboBox 14.setCurrentIndex(0)
  self.comboBox 16.setCurrentIndex(0)
  self.comboBox 18.setCurrentIndex(0)
  self.comboBox 20.setCurrentIndex(0)
  self.comboBox 22.setCurrentIndex(0)
  self.comboBox 24.setCurrentIndex(0)
```

```
self.comboBox 26.setCurrentIndex(0)
  self.comboBox 28.setCurrentIndex(0)
  self.comboBox 30.setCurrentIndex(0)
  grade points.clear()
  credits.clear()
  credits earned.clear()
  total marks.clear()
  self.lcdNumber 3.display(0)
  self.lcdNumber 4.display(0)
def clear 5(self):
  self.spinBox 46.setValue(0)
  self.spinBox 47.setValue(0)
  self.spinBox 48.setValue(0)
  self.spinBox 49.setValue(0)
  self.spinBox 50.setValue(0)
  self.spinBox 51.setValue(0)
  self.spinBox 52.setValue(0)
  self.spinBox 53.setValue(0)
  self.spinBox 54.setValue(0)
  self.spinBox 55.setValue(0)
  self.spinBox 56.setValue(0)
  self.spinBox 57.setValue(0)
  self.spinBox 58.setValue(0)
  self.spinBox 59.setValue(0)
  self.spinBox 60.setValue(0)
  self.spinBox 61.setValue(0)
  self.lcdNumber 5.display(0)
  cixgi.clear()
  ci earned.clear()
def calculate 1(self):
     credits 0 = int(self.comboBox.currentText())
    credits.append(credits 0)
    credits 1 = int(self.comboBox 3.currentText())
     credits.append(credits 1)
    credits 2 = int(self.comboBox 5.currentText())
    credits.append(credits 2)
    credits 3 = int(self.comboBox 7.currentText())
    credits.append(credits 3)
    credits 4 = int(self.comboBox 9.currentText())
    credits.append(credits 4)
    credits 5 = int(self.comboBox 11.currentText())
    credits.append(credits 5)
     credits 6 = int(self.comboBox 13.currentText())
     credits.append(credits 6)
     credits 7 = int(self.comboBox 15.currentText())
    credits.append(credits 7)
     credits 8 = int(self.comboBox 17.currentText())
     credits.append(credits 8)
    credits 9 = int(self.comboBox 19.currentText())
```

```
credits.append(credits 9)
credits 10 = int(self.comboBox 21.currentText())
credits.append(credits 10)
credits 11 = int(self.comboBox 23.currentText())
credits.append(credits 11)
credits 12 = int(self.comboBox 32.currentText())
credits.append(credits 12)
credits 13 = int(self.comboBox 34.currentText())
credits.append(credits 13)
credits 14 = int(self.comboBox 36.currentText())
credits.append(credits 14)
grade 0 = self.spinBox.value()
check grade(self, grade 0)
grade points.append(grade 0)
grade 1 = self.spinBox 2.value()
check grade(self, grade 1)
grade points.append(grade 1)
grade 2 = self.spinBox 3.value()
check grade(self, grade 2)
grade points.append(grade 2)
grade 3 = self.spinBox 4.value()
check grade(self, grade 3)
grade points.append(grade 3)
grade 4 = self.spinBox 5.value()
check grade(self, grade 4)
grade points.append(grade 4)
grade 5 = self.spinBox 6.value()
check grade(self, grade 5)
grade points.append(grade 5)
grade 6 = self.spinBox 7.value()
check grade(self, grade 6)
grade points.append(grade 6)
grade 7 = self.spinBox 8.value()
check grade(self, grade 7)
grade points.append(grade 7)
grade 8 = self.spinBox 9.value()
check grade(self, grade 8)
grade points.append(grade 8)
grade 9 = self.spinBox 10.value()
check grade(self, grade 9)
grade points.append(grade 9)
grade 10 = self.spinBox 11.value()
check grade(self, grade 10)
grade points.append(grade 10)
grade 11 = self.spinBox 12.value()
check grade(self, grade 11)
grade points.append(grade 11)
grade 12 = self.spinBox 40.value()
check grade(self, grade 12)
grade points.append(grade 12)
grade 13 = self.spinBox 41.value()
```

```
check grade(self, grade 13)
     grade points.append(grade 13)
     grade 14 = self.spinBox 42.value()
    check grade(self, grade 14)
     grade points.append(grade 14)
    calculate with grades(self, lcdNumber)
def calculate 3(self):
    credits 0 = int(self.comboBox 46.currentText())
    credits.append(credits 0)
    credits 1 = int(self.comboBox 44.currentText())
    credits.append(credits 1)
    credits 2 = int(self.comboBox 49.currentText())
     credits.append(credits 2)
    credits 3 = int(self.comboBox 54.currentText())
    credits.append(credits 3)
    credits 4 = int(self.comboBox 51.currentText())
    credits.append(credits 4)
    credits 5 = int(self.comboBox 53.currentText())
    credits.append(credits 5)
    credits 6 = int(self.comboBox 52.currentText())
    credits.append(credits 6)
     credits 7 = int(self.comboBox 56.currentText())
    credits.append(credits 7)
    credits 8 = int(self.comboBox 48.currentText())
    credits.append(credits 8)
     credits 9 = int(self.comboBox 57.currentText())
    credits.append(credits 9)
    credits 10 = int(self.comboBox 50.currentText())
    credits.append(credits 10)
    credits 11 = int(self.comboBox 55.currentText())
     credits.append(credits 11)
    credits 12 = int(self.comboBox 58.currentText())
    credits.append(credits 12)
    credits 13 = int(self.comboBox 59.currentText())
     credits.append(credits 13)
    credits 14 = int(self.comboBox 60.currentText())
    credits.append(credits 14)
    grade 0 = self.spinBox 68.value()
    check grade(self, grade 0)
     grade points.append(grade 0)
    grade 1 = self.spinBox 73.value()
     check grade(self, grade 1)
     grade points.append(grade 1)
    grade 2 = self.spinBox 66.value()
    check grade(self, grade 2)
     grade points.append(grade 2)
    grade 3 = self.spinBox 63.value()
     check grade(self, grade 3)
     grade points.append(grade 3)
    grade 4 = self.spinBox 64.value()
```

```
grade points.append(grade 4)
    grade 5 = self.spinBox 69.value()
    check grade(self, grade 5)
     grade points.append(grade 5)
    grade 6 = self.spinBox 62.value()
    check grade(self, grade 6)
    grade points.append(grade 6)
    grade 7 = self.spinBox 70.value()
    check grade(self, grade 7)
    grade points.append(grade 7)
    grade 8 = self.spinBox 65.value()
    check grade(self, grade 8)
    grade points.append(grade 8)
    grade 9 = self.spinBox 72.value()
    check grade(self, grade 9)
    grade points.append(grade 9)
    grade 10 = self.spinBox 71.value()
    check grade(self, grade 10)
    grade points.append(grade 10)
    grade 11 = self.spinBox 67.value()
    check grade(self, grade 11)
    grade points.append(grade 11)
    grade 12 = self.spinBox 74.value()
    check grade(self, grade 12)
    grade points.append(grade 12)
     grade 13 = self.spinBox 75.value()
    check grade(self, grade 13)
     grade points.append(grade 13)
    grade 14 = self.spinBox 76.value()
    check grade(self, grade 14)
    grade points.append(grade 14)
    for i in range(len(grade points)):
       if (credits[i] * grade points[i]) > 0:
         credits earned.append(credits[i])
     calculate cgpa with grades(self, lcdNumber 1)
def calculate 4(self):
    lcdNumber 1 = False
    credits 0 = int(self.comboBox 2.currentText())
    credits.append(credits 0)
    credits 1 = int(self.comboBox 4.currentText())
    credits.append(credits 1)
    credits 2 = int(self.comboBox 6.currentText())
    credits.append(credits 2)
    credits 3 = int(self.comboBox 8.currentText())
    credits.append(credits 3)
    credits 4 = int(self.comboBox 10.currentText())
    credits.append(credits 4)
    credits 5 = int(self.comboBox 12.currentText())
    credits.append(credits 5)
```

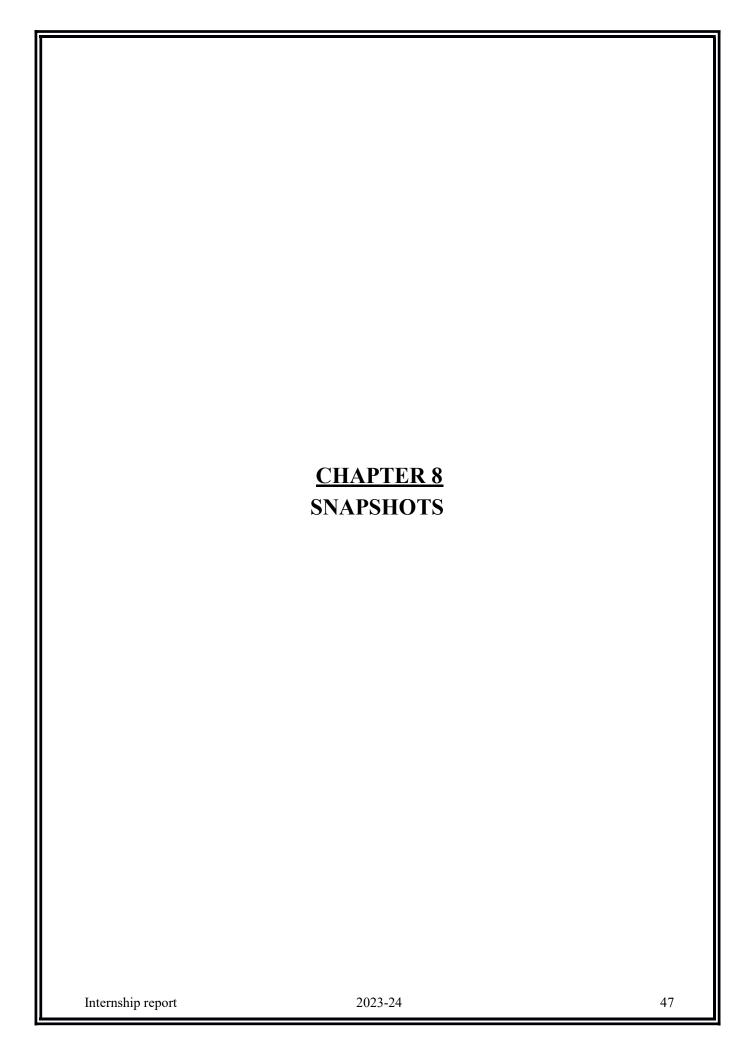
check grade(self, grade 4)

```
credits 6 = int(self.comboBox 14.currentText())
credits.append(credits 6)
credits 7 = int(self.comboBox 16.currentText())
credits.append(credits 7)
credits 8 = int(self.comboBox 18.currentText())
credits.append(credits 8)
credits 9 = int(self.comboBox 20.currentText())
credits.append(credits 9)
credits 10 = int(self.comboBox 22.currentText())
credits.append(credits 10)
credits 11 = int(self.comboBox 24.currentText())
credits.append(credits 11)
credits 12 = int(self.comboBox 26.currentText())
credits.append(credits 12)
credits 13 = int(self.comboBox 28.currentText())
credits.append(credits 13)
credits 14 = int(self.comboBox 30.currentText())
credits.append(credits 14)
marks 0 = \text{self.spinBox } 25.\text{value}()
total marks.append(marks 0)
marks 1 = self.spinBox 26.value()
total marks.append(marks 1)
marks 2 = self.spinBox 27.value()
total marks.append(marks 2)
marks 3 = self.spinBox 28.value()
total marks.append(marks 3)
marks 4 = self.spinBox 29.value()
total marks.append(marks 4)
marks 5 = self.spinBox 30.value()
total marks.append(marks 5)
marks 6 = self.spinBox 31.value()
total marks.append(marks 6)
marks 7 = self.spinBox 32.value()
total marks.append(marks 7)
marks 8 = self.spinBox 33.value()
total marks.append(marks 8)
marks 9 = self.spinBox 34.value()
total marks.append(marks 9)
marks 10 = self.spinBox 35.value()
total marks.append(marks 10)
marks 11 = self.spinBox 36.value()
total marks.append(marks 11)
marks 12 = self.spinBox 37.value()
total marks.append(marks 12)
marks 13 = self.spinBox 38.value()
total marks.append(marks 13)
marks 14 = self.spinBox 39.value()
total marks.append(marks 14)
marks to grades()
credits earned.clear()
for i in range(len(grade points)):
```

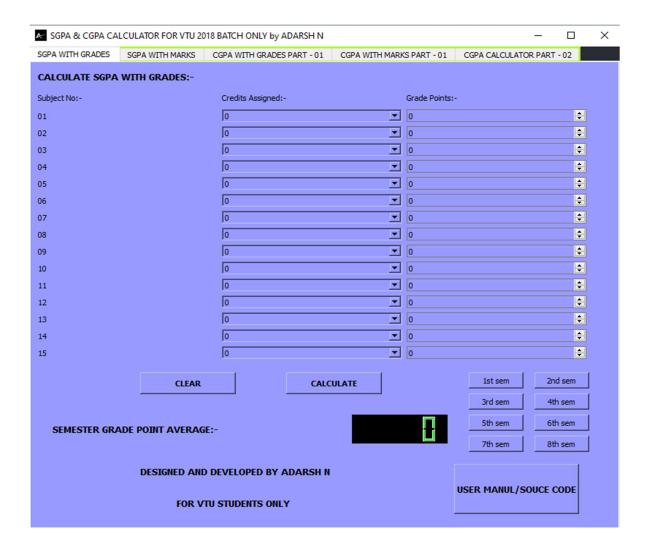
```
if (credits[i] * grade points[i]) > 0:
            credits earned.append(credits[i])
       calculate cgpa with grades(self, lcdNumber 1)
  def calculate 5(self):
    ci gi = self.spinBox 46.value()
    cixgi.append(ci gi)
    ci gi 1 = self.spinBox 47.value()
    cixgi.append(ci gi 1)
    ci gi 2 = self.spinBox 48.value()
    cixgi.append(ci gi 2)
    ci gi 3 = self.spinBox 49.value()
    cixgi.append(ci gi 3)
    ci gi 4 = self.spinBox 50.value()
    cixgi.append(ci gi 4)
    ci gi 5 = self.spinBox 51.value()
    cixgi.append(ci gi 5)
    ci gi 6 = self.spinBox 52.value()
    cixgi.append(ci gi 6)
    ci_gi_7 = self.spinBox 53.value()
    cixgi.append(ci gi 7)
    ci e = self.spinBox 54.value()
    ci earned.append(ci e)
    ci e 1 = self.spinBox 55.value()
    ci earned.append(ci e 1)
    ci e 2 = self.spinBox 56.value()
    ci earned.append(ci e 2)
    ci_e_3 = self.spinBox 57.value()
    ci earned.append(ci e 3)
    ci e 4 = self.spinBox 58.value()
    ci earned.append(ci e 4)
    ci e 5 = self.spinBox 59.value()
    ci earned.append(ci e 5)
    ci e 6 = self.spinBox 60.value()
    ci earned.append(ci e 6)
    ci e 7 = self.spinBox 61.value()
    ci earned.append(ci e 7)
    calculate cgpa(self)
def clear comboBox(self, clear):
  for i in clear:
    eval('self.'+i+'.setCurrentIndex(0)')
def calculate cgpa(self):
  try:
    final cgpa = sum(cixgi) / sum(ci earned)
    self.lcdNumber 5.display(final cgpa)
  except ZeroDivisionError:
    msg = QtWidgets.QMessageBox()
```

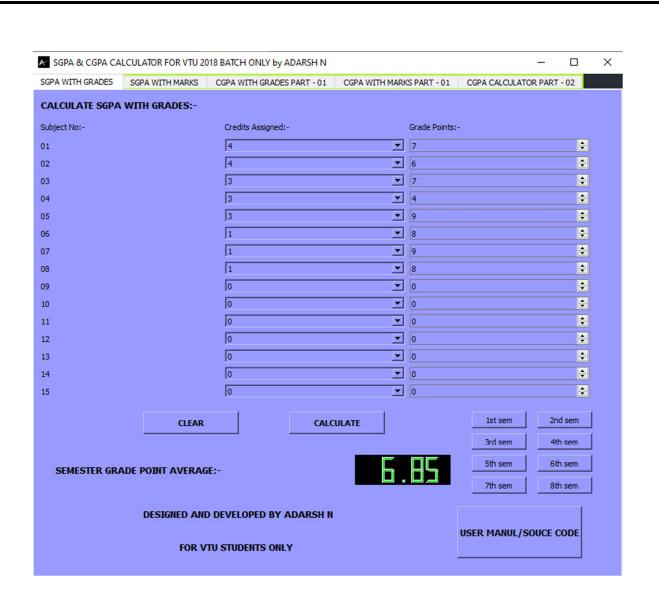
```
msg.setIcon(QtWidgets.QMessageBox.Critical)
    msg.setText("Enter the values")
    msg.setInformativeText('More information')
    msg.setWindowTitle("Error")
    msg.exec ()
def calculate cgpa with grades(self, lcdNumber 1):
  sum_of ci gi = 0
  sum of credits earned = sum(credits earned)
  try:
    for i in range(len(grade points)):
      sum of ci gi = sum of ci gi + (credits[i] * grade points[i])
    if lcdNumber 1 is True:
       self.lcdNumber 7.display(sum of ci gi)
       self.lcdNumber 6.display(sum of credits earned)
    elif lcdNumber 1 is False:
       self.lcdNumber 3.display(sum of ci gi)
      self.lcdNumber 4.display(sum of credits earned)
    credits.clear()
    grade points.clear()
  except ZeroDivisionError:
         msg = QtWidgets.QMessageBox()
         msg.setIcon(QtWidgets.QMessageBox.Critical)
         msg.setText("Enter the values")
         msg.setInformativeText('More information')
         msg.setWindowTitle("Error")
         msg.exec ()
def check grade(self, grade):
  if(grade!=0):
    if(grade<11):
         print(grade)
    else:
         msg = QtWidgets.QMessageBox()
         msg.setIcon(QtWidgets.QMessageBox.Critical)
         msg.setText("Enter a valid Grades ")
         msg.setInformativeText('More information')
         msg.setWindowTitle("Error")
         msg.exec ()
#convert marks to grades
def marks to grades():
    for marks in total marks:
         if(marks \ge 90):
              grade points.append(10)
         elif(marks<90 and marks>=80):
              grade points.append(9)
         elif(marks<80 and marks>=70):
              grade points.append(8)
```

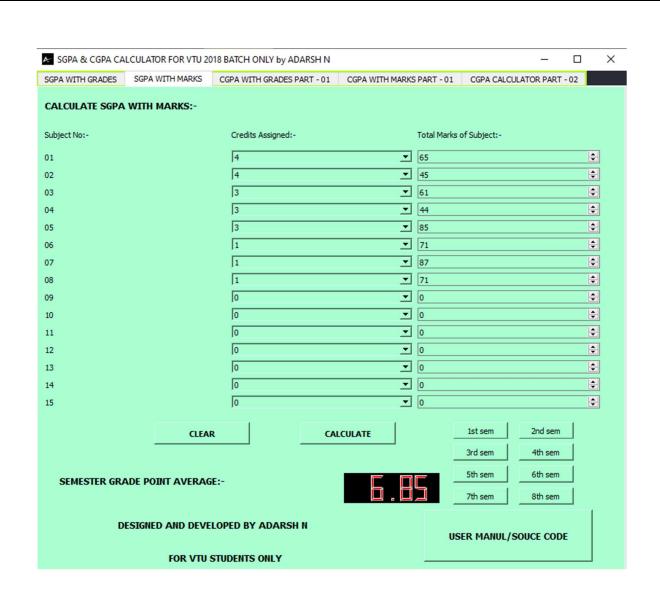
```
elif(marks<70 and marks>=60):
              grade points.append(7)
         elif(marks<60 and marks>=45):
              grade points.append(6)
         elif(marks<45 and marks>=40):
              grade points.append(4)
         elif(marks<40):
              grade points.append(0)
def calculate with grades(self, lcdNumber):
  sum sgpa = 0
  sum of credits = sum(credits)
  try:
    for i in range(len(grade points)):
         sum sgpa = sum sgpa + (credits[i] * grade points[i])
    final sgpa = sum sgpa/sum of credits
    if lcdNumber is True:
         self.lcdNumber.display(final sgpa)
    elif lcdNumber is False:
         self.lcdNumber 2.display(final sgpa)
    credits.clear()
    grade points.clear()
  except ZeroDivisionError:
         msg = QtWidgets.QMessageBox()
         msg.setIcon(QtWidgets.QMessageBox.Critical)
         msg.setText("Enter the values")
         msg.setInformativeText('More information')
         msg.setWindowTitle("Error")
         msg.exec ()
if name == " main ":
  import sys
  app = QtWidgets.QApplication(sys.argv)
  MainWindow = QtWidgets.QMainWindow()
  ui = Ui MainWindow()
  ui.setupUi(MainWindow)
  MainWindow.show()
  sys.exit(app.exec ())
```

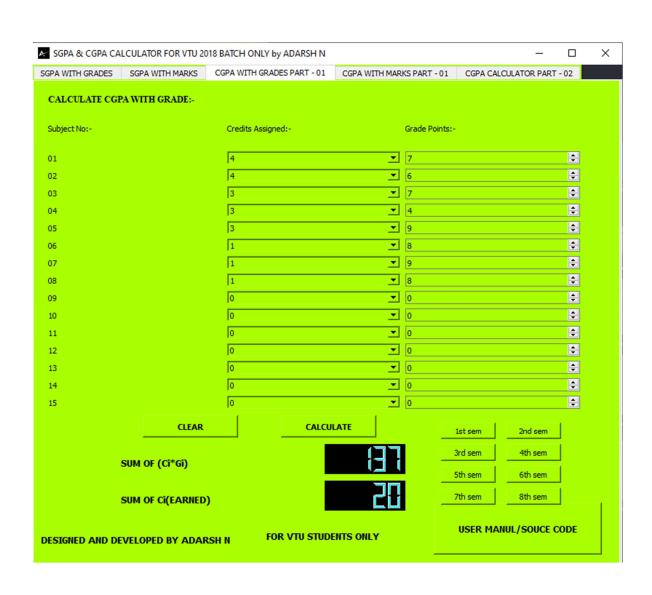


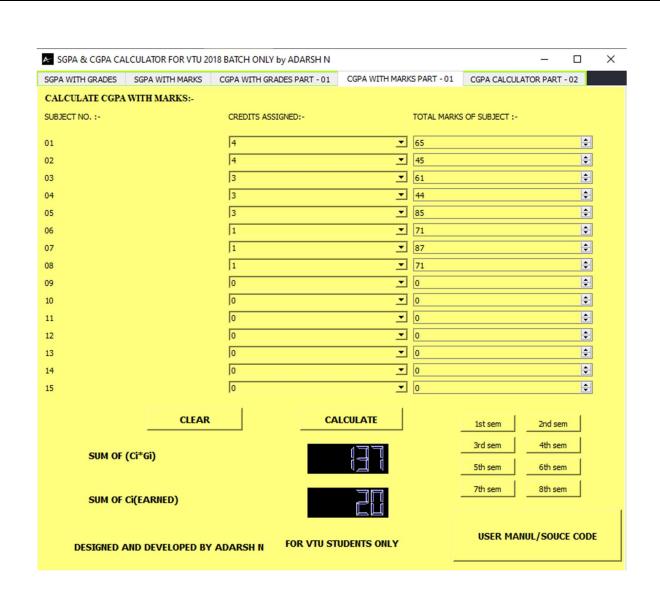
## 8. SNAPSHOT

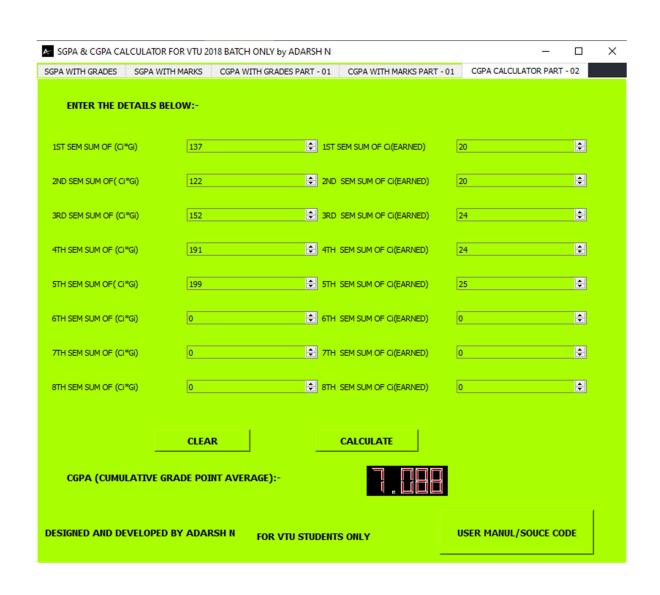












CHAPTER 9 CONCLUTION		
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2023-24

54

Internship report

## 9. CONCLUTION

The package was designed in such a way that future modifications can be done easily. The following conclusions can be deduced from the development of the project:

- ❖ Automation of the entire system improves the efficiency
- ❖ It provides a friendly graphical user interface which proves to be better when compared to the existing system.
- ❖ It gives appropriate access to the authorized users depending on their permissions.
- ❖ It effectively overcomes the delay in communications.
- Updating of information becomes so easier
- System security, data security and reliability are the striking features.
- ❖ The System has adequate scope for modification in future if it is necessary.

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Internship report 2023-24 56

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