



DECODING BAS.AI

ATHARV REMESHAN

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Our Story_

One bright and hopeful morning, I (Atharv Remeshan), awoke with an extraordinary concept for our upcoming computer science project. It was a vision that promised to revolutionize the way we interact with digital documents.

The essence of this idea was to create a seamless avenue using python for generating **Word documents, PowerPoint presentations, and Excel spreadsheets**, all without the cumbersome need to launch their respective software applications. Initially, when I shared this notion with my small team of three (**me, Saket Rama and Bhavya Maheshwari**), I was met with only tepid enthusiasm. They couldn't quite fathom the magnitude of what I was proposing.

However, as we delved deeper into discussions and brainstorming sessions, the true brilliance of the concept began to take hold. We envisioned an **ingenious software solution** that catered to a distinct cohort of professionals, meticulously tailored to serve the unique requisites of data analysts, researchers, and knowledge workers.



This software was set to be a game-changer, offering a world where creating and managing documents was as simple as a few clicks. But we also recognized that for other vocations, a dedicated code would need to be meticulously composed to meet their specific needs. Hence we decided to focus on providing a complete cohort of essentials to meet a data analyst's needs. And so, our journey

began, fuelled by our collective passion for computer science, and the unwavering belief, that our extraordinary concept could shape the future of document creation and revolutionize the way we work and interact with information.

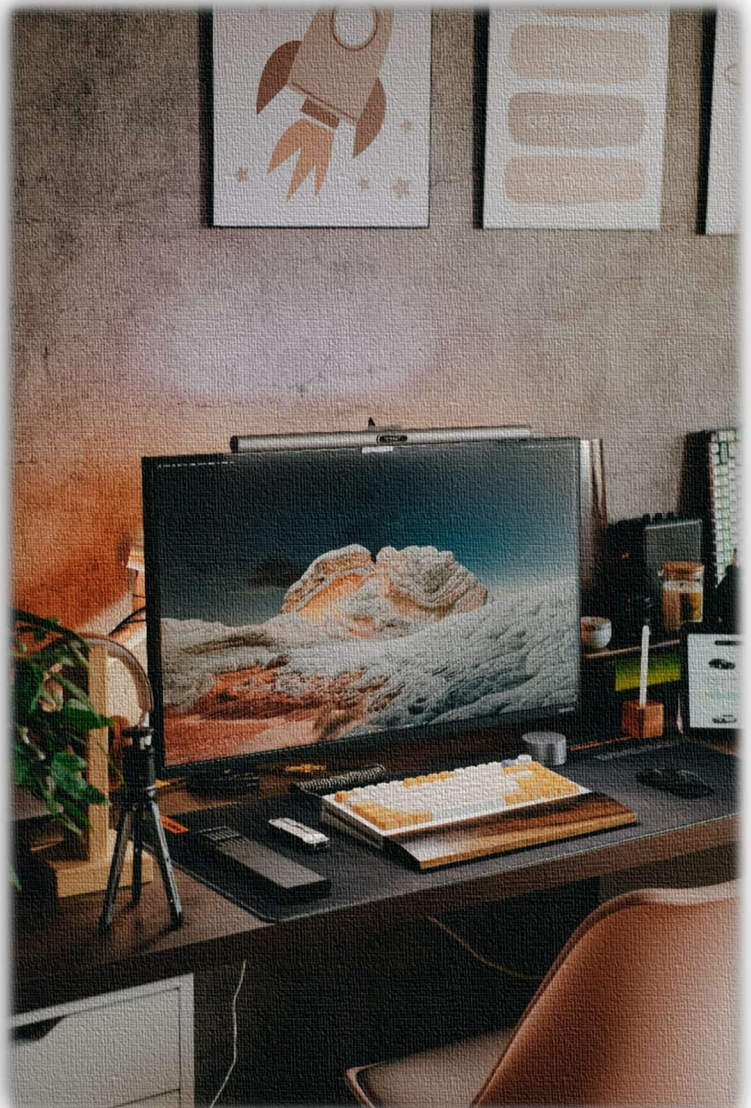
Software/Hardware requirements

Hardware requirement:-

1. **Laptop with windows 10/11**
2. **Good network connection**

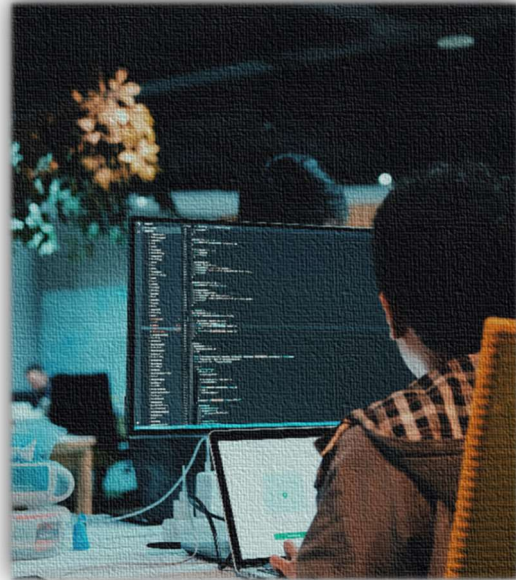
Software requirement:-

1. **Open AI API key**
2. **Gmail account**
3. **Good network connection**
4. **MS office licence**
5. **Pycharm python editor**



Python and Mysql

Python is a versatile and high-level programming language known for its simplicity and readability. Created in the late 1980s, Python emphasizes clean and concise code, making it an ideal choice for both beginners and experienced developers. It supports multiple programming paradigms, including procedural, object-oriented, and functional programming. Python's extensive standard library and vibrant community contribute to its popularity in various domains, such as web development, data analysis, machine learning, automation, and scientific computing. Its interpreted nature allows for rapid development, and its cross-platform compatibility ensures code portability across different operating systems. Python's ecosystem offers a wide range of libraries and frameworks, making it a powerful tool for solving diverse programming challenges.



MySQL is an open-source relational database management system (RDBMS) known for its reliability, scalability, and speed. Developed by MySQL AB and now owned by Oracle Corporation, MySQL is a widely-used database technology in web applications, business software, and data-driven applications. It uses a structured query language (SQL) for data manipulation and management, making it suitable for storing and retrieving structured data. MySQL is appreciated for its ease of use, strong data security features, and support for ACID (Atomicity, Consistency, Isolation, Durability) properties, ensuring data integrity. It supports various storage engines, allowing users to optimize their databases for specific use cases. MySQL's open-source nature has led to a large and active

community, resulting in continuous development
and a wealth of resources for users.

About the Project

Welcome to **BAS.AI**, a groundbreaking Python innovation designed to empower data analysts and revolutionize their corporate endeavors. Our mission is to seamlessly enhance your professional journey by providing unparalleled efficiency, simplicity, and delight. Let's delve into the components that form the backbone of this comprehensive platform:

- I. Powerful PowerPoint Creator:** Unleash your creativity effortlessly! Our PowerPoint module takes your data as input and transforms it into stunning presentations. You'll be amazed at how quickly it generates visually captivating slides, allowing you to focus on crafting the perfect narrative for your audience.
- II. Word Wizardry at Your Fingertips:** With the Word module, bid farewell to mundane formatting tasks. Enter your data, and watch in awe as our Word Wizard automatically applies styles and formatting, turning your documents into polished masterpieces.
- III. Excel Excellence Simplified:** Managing data in Excel has never been this smooth. Our Excel module takes your input data and creates well-organized spreadsheets with all the necessary styles and formatting applied. Say goodbye to manual data entry and hello to accurate, presentation-ready data sheets.
- IV. Effortless Email Sender:** Sending data to multiple recipients has never been easier. Our Email Sender module lets you share your files and data with just a few clicks. No need to open Gmail separately; everything is streamlined, saving you time and hassle.

Yet, there's more to our offering! What truly differentiates BAS.AI is its interactive user interface. We have meticulously crafted an intuitive and user-centric experience, ensuring that you harness the full potential of our tools without any learning curve.

“

“Get ready to supercharge your productivity and unleash your analytical potential with our extraordinary tool!”

Aim

Welcome to **BAS.AI**, a cutting-edge Python innovation tailored to empower data analysts and transform their corporate ventures. Our mission is to effortlessly elevate your professional journey by delivering unmatched efficiency, simplicity, and satisfaction. In this document, we will explore the fundamental components that underpin this all-encompassing platform.



Objectives

- 1. Enhance Presentation Creation Efficiency:** The primary objective is to empower data analysts to efficiently create visually appealing PowerPoint presentations. The platform should significantly reduce the time and effort required for presentation design, allowing users to focus on content and narrative development.
- 2. Streamline Document Formatting:** The project aims to simplify the process of formatting documents by leveraging the Word module. It seeks to automate styling and formatting tasks, enabling users to transform raw data into polished, professional documents effortlessly.
- 3. Optimize Data Management in Excel:** To simplify data management in Excel. The Excel module should automate data entry tasks, creating well-organized spreadsheets with appropriate styles and formatting. This ensures that users can easily work with accurate, presentation-ready data sheets.
- 4. Facilitate Efficient Data Sharing:** The project seeks to simplify data sharing through the Email Sender module. It aims to enable users to send data to multiple recipients with minimal effort, eliminating the need for separate email applications and streamlining the sharing process.
- 5. Increase User Productivity:** The project aims to boost user productivity by automating repetitive tasks. By simplifying presentation creation, document formatting, and data management, the platform should allow users to accomplish more in less time.
- 6. Drive User Satisfaction:** Ultimately, the project's overarching objective is to drive user satisfaction. By delivering a platform that simplifies and enhances the data analysis and presentation process, BAS.AI aims to delight users and become an indispensable tool in their professional journey.



Advantages

- 1. Time Efficiency:** The platform automates tasks like presentation creation, document formatting, and data management, saving users significant time and effort.
- 2. Professional Output:** Users can produce high-quality presentations and documents with consistent formatting, enhancing their professional image.
- 3. Data Accuracy:** Automation reduces the risk of errors in data handling, ensuring the accuracy of presentations and spreadsheets.
- 4. Streamlined Data Sharing:** The Email Sender module simplifies data sharing, improving collaboration and communication among team members.
- 5. Enhanced User Productivity:** By automating repetitive tasks, the platform allows users to focus on higher-value activities, increasing productivity.
- 6. User-Friendly Interface:** The intuitive user interface minimizes the learning curve, making it easy for users to harness the platform's full potential.
- 7. Cost Savings:** Time saved on manual tasks translates to cost savings in terms of labor and resources.
- 8. Increased User Satisfaction:** The platform's efficiency and professionalism contribute to higher user satisfaction and engagement.



Chat-GPT integration



The OpenAI API is an interface that allows developers to access advanced language models like GPT-3. It helps by enabling developers to integrate powerful natural language processing capabilities into their applications, automating tasks, and creating personalized and innovative experiences for users.

Here's a brief overview of how the OpenAI API functions in two of our components:

I. Word Wizardry at Your Fingertips

With the OpenAI API integrated into the Word module, users can leverage the power of language models to streamline document creation. For instance, the API has been used to generate short paragraphs of history of a company based on the input given. It has also been used to analyze graphs and tables included in the document. This AI-driven content generation ensures consistency and saves users from repetitive writing tasks.

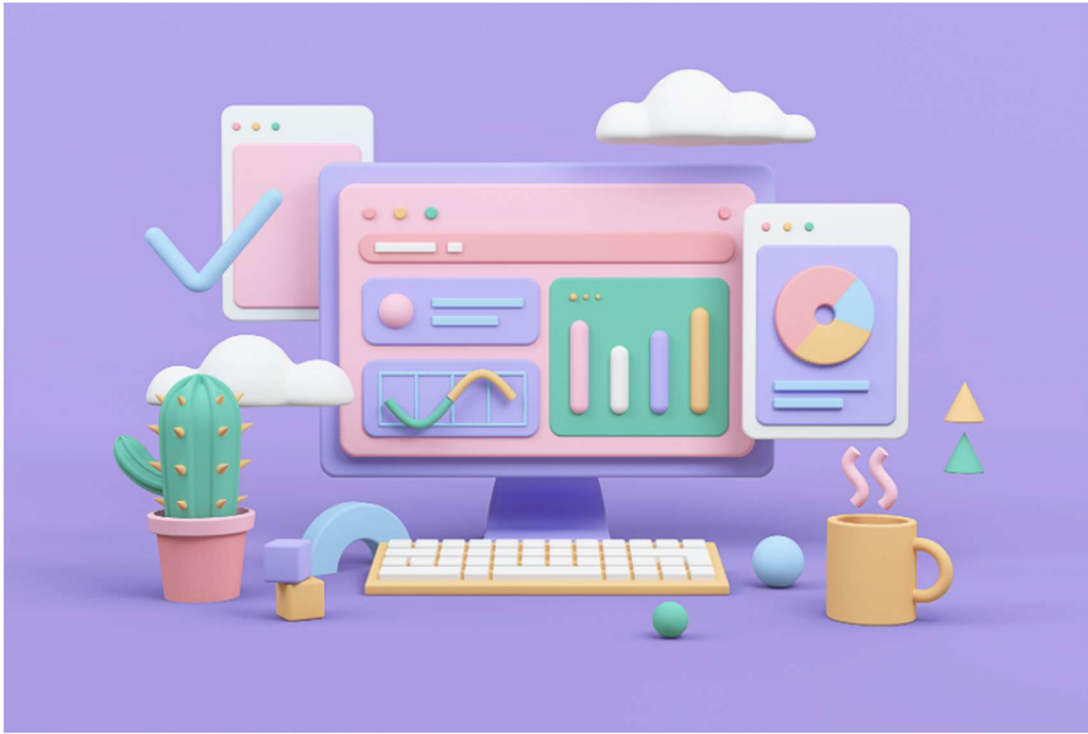
II. Effortless Email Sender

In the Email Sender module, the OpenAI API enhances the email composition process. Users can ask the API for help in writing personalized email messages to multiple recipients, making the communication more natural and engaging.



Here's a general code of how we have integrated OpenAI API throughout our project:-

```
import openai
def chat_with_chatgpt(prompt, model="gpt-3.5-turbo"):
    response = openai.Completion.create(
        engine=model,
        prompt=prompt,
        max_tokens=100,
        n=1,
        stop=None,
        temperature=0.5,
    )
    message = response.choices[0].text.strip()
    return message
```



CHAPTER 1

GRAPHIC USER INTERFACE



Graphical User Interface

Elevate your productivity to new heights with Bas.AI, where the dynamic quartet of PowerPoint, Word, Excel, and PPT converge within an intuitive, interactive GUI. Seamlessly navigate these essential components and harness their full potential effortlessly. Discover a world of efficiency and creativity at your fingertips, redefining the way you work and present. Welcome to the future of streamlined productivity – welcome to Bas.AI!

Essence of the code

Modules

i. Tkinter

Used for creating graphical user interfaces (GUIs).

How does it work?

- i. **on_enter(e)**
Changes button appearance on hover to have a black background and white foreground.
- ii. **on_leave(e)**
Reverts button appearance to its original style when the cursor leaves the button.
- iii. **hide_heading()**
Hides the initial heading after a delay of 3 seconds.
- iv. **makebody()**
Defines a set of functions and widgets for creating different types of files.
- v. A new **tkinter** window is created with a custom size, title, and black background.
- vi. Labels with custom fonts and colors are created to display the "WELCOME TO" and "BAS.AI" texts.
- vii. The **hide_heading()** function is scheduled to execute after 3 seconds using the **after()** method, which hides the initial heading.
- viii. The **makebody()** function is scheduled to execute after 4 seconds using the `after()` method. This function defines a set of functions and widgets for creating different types of files (Word, Excel, PowerPoint).
- ix. For each file type button (Word, Excel, PowerPoint):
 - Clicking the button hides the previous elements (question and buttons) and displays a heading with the respective file type name.
 - The window is minimized.
- x. Hover effects are applied to the buttons using the **on_enter()** and **on_leave()** functions.

Execution of code

WELCOME TO

BAS.AI

After 2s the screen disappears

and an interface appears

BAS.AI

What would you like to do?

Create a Word file

Create an Excel file

Create a PowerPoint file

Send Mail

Case 1

BAS.AI

What would you like to do?

Create a Word file

Create an Excel file

Create a PowerPoint file

Send Mail

Case 2

BAS.AI

What would you like to do?

Create a Word file

Create an Excel file

Create a PowerPoint file

Send Mail

On clicking the tabs, it takes you to the respective python consoles

Case 3

BAS.AI

What would you like to do?

Create a Word file

Create an Excel file

Create a PowerPoint file

Send Mail

Case 4

BAS.AI

What would you like to do?

Create a Word file

Create an Excel file

Create a PowerPoint file

Send Mail

These are the respective python consoles

Case 3

```
Hey want to create a Word document  
Dont worry we got you!!!  
Just type the required fields below  
Enter the name of the company -
```

Case 4

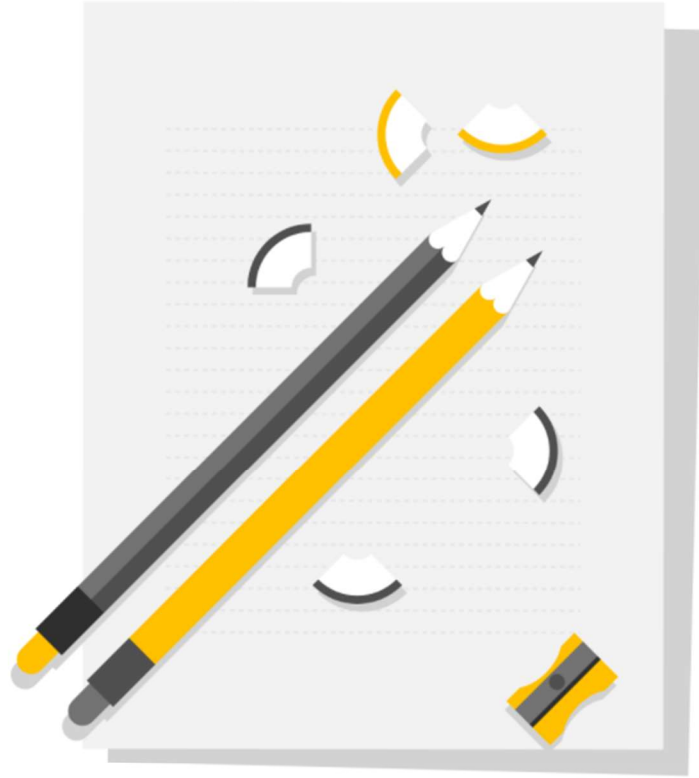
```
Hey want to create a PPT?  
Dont worry we got you!!!  
Just type the required fields below.  
Enter the number of slides:
```

Case 1

```
Hey want to create an Excel document  
Dont worry we got you!!!  
Just type the required fields below.  
Enter the name of the company -
```

Case 2

```
###  
Hey want to send an EMAIL?  
Dont worry we got you!!!  
Just type the required fields below.  
No of recipients you want to send -
```

CHAPTER 2

WORD



Introducing our cutting-edge Python code designed exclusively for data analysts! With this revolutionary solution, crafting comprehensive and visually appealing word documents becomes a breeze, eliminating the need for external software like Microsoft Word. Our code leverages the power of Python's libraries to automate the entire document creation process, allowing data analysts to focus on their insights rather than formatting and graph generation. Simply input your data, and watch as the code transforms it into a professional-looking word document, complete with the necessary formatting, tables, and insightful graphs. Say goodbye to time-consuming manual document creation and embrace the efficiency and convenience of our Python tool tailored to elevate the productivity of data analysts.

“

“Unleash your creativity and seamlessly generate compelling reports with ease using our Python-powered word document creator!”

Essence of the code

Modules

i. Docx

It is used to create and manipulate Microsoft Word documents (.docx files) programmatically. It provides various classes and methods to work with different elements of a word document, such as paragraphs, tables, styles, and more.

ii. docx.enum.style.WD_STYLE_TYPE

It is used to represent different style types in a word document, allowing you to manage paragraph styles, character styles, and table styles.

iii. docx.shared.Pt, docx.shared.RGBColor, docx.shared.Cm, docx.shared.Inches

These classes from the shared module are used to define size and color units for text and other document elements.

iv. docx.enum.text.WD_PARAGRAPH_ALIGNMENT

It provides options for paragraph alignment, allowing you to align text within a paragraph (left, center, right, or justified).

v. docx.xml.shared.OxmlElement, docx.xml.ns.qn

They are used for adding page backgrounds to the document.

- vi. **docx.enum.section.WD_SECTION_START**
It is used to manage section breaks in the document, enabling you to separate different parts of the document with different formatting.
- vii. **docx.enum.table.WD_TABLE_ALIGNMENT,**
docx.enum.table.WD_CELL_VERTICAL_ALIGNMENT
It used for table formatting, allowing you to align tables and control the vertical alignment of cells.
- viii. **matplotlib.pyplot**
It is widely used for creating data visualizations, such as graphs and charts.
- ix. **Numpy**
NumPy is a Python library for efficient numerical computing, offering multi-dimensional array support and a wide range of mathematical functions.
- x. **pandas**
It is used for data manipulation and analysis
- xi. **os**
It provides functions for interacting with the operating system, allowing tasks like file and directory operations, environment management, and system-related functionality.

How does it work?

- i. **Adding Background and Creating Sections**
The **add_background()** function adds a black background to the document. The **create_sections()** function adjusts the margins of the sections in the document.
- ii. **OpenAI API Setup**
The script sets up the OpenAI API key for later usage in generating textual content using the GPT-3 model.
- iii. **Document**
It consists of four parts:-
 - a. **Company History**
 - The **create_H1_Para1()** function is responsible for generating the first section of the document.
 - It asks the user to input the name of the company and validates the input.
 - It generates the company history using the OpenAI API, and then formats and adds this response to the document.
 - b. **Company Performance**
 - The **create_H2_Para2()** function generates the second section.
 - The user is prompted to input the details for creating a table (number of rows and columns, column titles, and cell values).
 - A table is created based on the provided data, formatted, and added to the document.
 - A graph is created based on user input and added to the document.

- The function then generates an analysis paragraph about the data using the OpenAI API, formats the paragraph, and adds it to the document.

c. Sales Team Performance

- The **create_H3_Para3()** function generates the third section.
- Similar to the previous section, it prompts the user for input to create a table, creates the table, adds it to the document, and generates a graph.
- An analysis of the above is generated using the OpenAI API and added to the document.

d. Improvements

- The **create_H4_Para4()** function generates the fourth section.
- Bullet points for improvements are generated using the OpenAI API and added to the document.

iv. Saving and Opening the Document:

- The **file_name** variable is constructed based on the company name (H1) and assigned a file path.
- The document is saved with the constructed file name.
- The **os.startfile(file_name)** function automatically opens the saved document for the users to view.

Disadvantages

- Fixed file paths may lead to portability and compatibility issues
- Hard-coded API keys and file paths can pose security risks if shared or exposed.



Execution of the code

Taking the input of company name from the user

```
Hey want to create a Word document of you annual sales report  
Dont worry we got you!!!  
Just type the required fields below.
```

```
Enter the name of the company - Intel Corporation
```

```
#Always write the input in the form(___,___etc) in the order unless mentioned
```

Taking the input of table rows and making the graph

Table - 1

```
How many rows and columns do you want - 5,4
```

```
Input the column Titles - Year,Revenue(in crores),Net Profit(in crores),Market Share(%)
```

```
Input your values for row 1 - 2018,2500,500,10
```

```
Input your values for row 2 - 2019,2000,300,14
```

```
Input your values for row 3 - 2020,3000,700,17
```

```
Input your values for row 4 - 2021,2700,100,20
```

```
Input your values for row 5 - 2022,3500,400,20
```

Graph - 1

```
define x and y axis only write the position of column  
variables when they were defined - 0,1
```

Table - 2

```
How many rows and columns do you want - 4,3
```

```
Input the column Titles - Emp name,Total sales(in Lakhs),Sales Region
```

```
Input your values for row 1 - John,50,North
```

```
Input your values for row 2 - Jane,45,South
```

```
Input your values for row 3 - Robert,60,East
```

```
Input your values for row 4 - Sarah,55,West
```

Graph - 2

```
define x and y axis only write the position of column  
variables when they were defined - 0,1
```

Output

Intel Corporation

Intel Corporation is an American multinational technology company headquartered in Santa Clara, California. It is one of the world's largest semiconductor chip makers and is the inventor of the x86 series of microprocessors, the processors found in most personal computers.

Intel was founded in 1968 by semiconductor pioneers Robert Noyce and Gordon Moore. The company's name was conceived as a portmanteau of the words "integrated electronics." The founders' goal was to build semiconductor memory products, which eventually led to the development of the first commercially available microprocessor, the Intel 4004, in 1971.

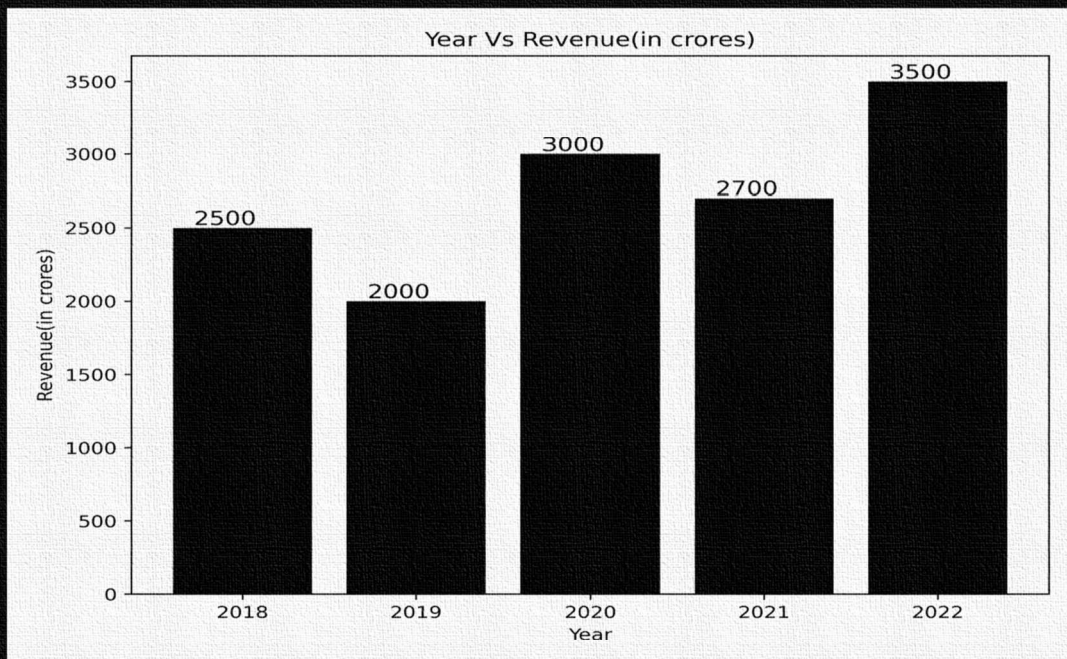
In the 1980s, Intel invested heavily in new microprocessor designs, and the success of the 386 and 486 chips helped to establish Intel as a leader in the PC processor market. In the 1990s, Intel introduced the Pentium line of processors, which further solidified its position as the dominant supplier of PC processors.

Today, Intel is the world's largest semiconductor chip maker and is a major player in the development of new technologies such as artificial intelligence, 5G networks, and autonomous driving. Intel also produces a wide range of other products, including flash memory, network interface controllers, and solid-state drives. Intel is also a major supplier of server processors for cloud computing and data centers.

This is the history of the company (generated by Chat GPT) , based on the company name taken as input from the user

Performance

Year	Revenue (in crores)	Net Profit (in crores)	Market Share (%)
2018	2500	500	10
2019	2000	300	14
2020	3000	700	17
2021	2700	100	20
2022	3500	400	20



This is the table and the graph generated based on the inputs from the user

The analysis of employee's performance using year revenue, net profits, and market share in rupees for Intel Corporation is as follows.

In 2018, Intel Corporation earned revenues of Rs.2500 crores and a net profit of Rs.500 crores with 10% market share. This shows that the employees' performance is satisfactory as the revenues increased year on year and the net profits and market share also maintained a fair level.

In 2019, the revenue decreased to Rs. 2000 crores resulting in decreased profits of Rs.300 crores. The market share also decreased to 14%. There might be some issue with employee's performance as due to some reasons the company failed to maintain its revenue level from the previous year.

In 2020, the revenue increased to Rs. 3000 crores with net profits of Rs. 700 crores. The market share also increased to 17%. This clearly shows that the employees' performance improved significantly as they earned increased profits and increased market share leading to increased revenues.

In 2021, the revenues decreased to Rs.2700 crores while the profits also decreased to Rs.100 crores. The market share also decreased to 20%. This reveals that the employees' performance is not satisfactory as the revenues decreased and profits and market share also decreased.

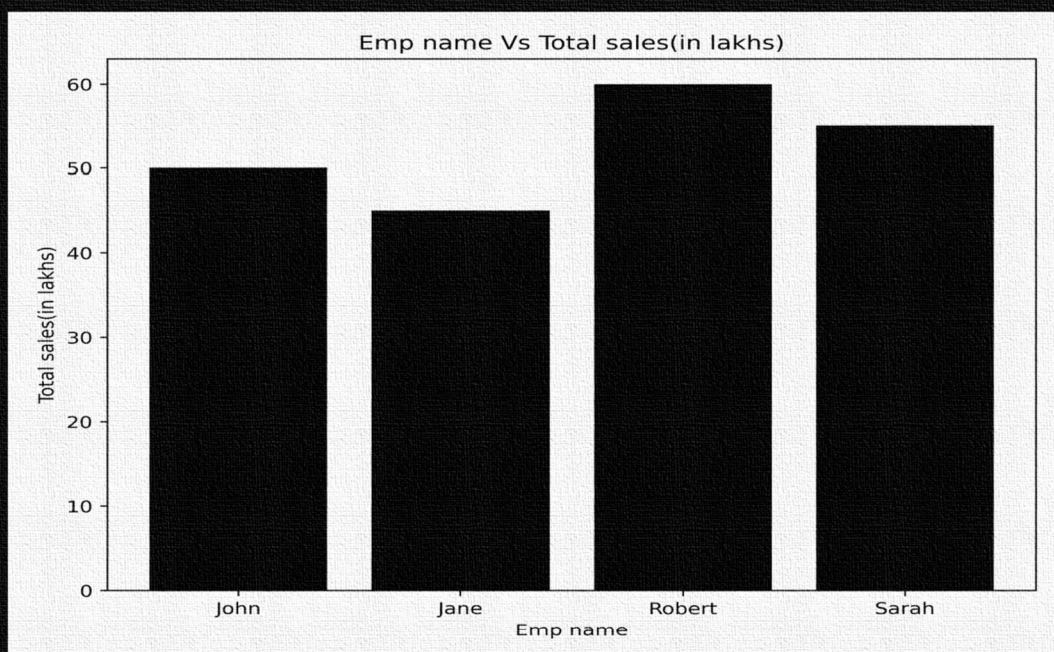
In 2022, the revenues and profits increased again to Rs.3500 crores and Rs.400 crores, respectively. The market share also leveled up to 20%. This indicates that the employees improved their performance in the current year again as the revenues increased and profits and market share also increased from the previous year.

Overall, the employees' performance for Intel Corporation was satisfactory as they maintained an increasing trend in their revenues, profits, and market share except for 2021 where there was a decrease in these factors.

This is the analysis/summary of the table/graph generated by ChatGPT

Sales team Performance

Emp name	Total sales(in lakhs)	Sales Region
John	50	North
Jane	45	South
Robert	60	East
Sarah	55	West



this is the table and graph according to the inputs given by the user

John from Intel Corporation's North region achieved the highest total sales of 50 lakhs, followed by Robert from the East region with 60 lakhs, Sarah from the West region with 55 lakhs and Jane from the South region with 45 lakhs.

This is the summary/analysis generated by ChatGPT based on the table/graph.

Improvements

1. Increase the sales target for each region.
2. Introduce incentives for employees to increase their sales.
3. Invest in marketing and advertising campaigns to increase brand awareness.
4. Develop new products and services to meet customer needs.
5. Expand into new markets and regions.
6. Utilize data analytics to identify potential customers and target them with tailored marketing campaigns.
7. Invest in customer service training to ensure customer satisfaction.
8. Develop partnerships with other companies to increase sales.
9. Utilize social media platforms to reach a wider audience.
10. Offer discounts and promotions to encourage customers to purchase.

Improvements/suggestions generated by ChatGPT based on the company's annual sales performance

Personal > Desktop > code

Name	Status	Date modified	Type	Size
Asian paints - Annual Performance		27-09-2023 14:51	Microsoft Word ...	173 KB
Crimson Industries - Annual Performan...		27-08-2023 13:22	Microsoft Word ...	113 KB
Crimson Industries - Annual Performan...		27-08-2023 15:07	Microsoft Excel ...	9 KB
Emp name Vs Total sales(in lakhs)		28-09-2023 07:33	PNG File	174 KB
emp Vs sales		27-09-2023 15:07	PNG File	164 KB
Intel Corporation - Annual Performance		28-09-2023 07:34	Microsoft Word ...	421 KB
sales_graph		27-09-2023 14:38	PNG File	20 KB
sales_report		27-08-2023 15:52	Microsoft Power...	32 KB
Year Vs Revenue(in crores)		28-09-2023 07:31	PNG File	218 KB
year Vs sales		27-09-2023 15:06	PNG File	181 KB

The document is saved in the code folder (highlighted in yellow)



CHAPTER 3

EXCEL



Excel

Welcome to Bas.AI's Excel Automation Module – your ultimate solution for hassle-free data management. Designed to empower professionals across various domains, this Python-based tool takes the complexity out of spreadsheet tasks. From data analysts to researchers and business experts, our module simplifies data manipulation and organization, making your work more efficient and productive. Say goodbye to manual data entry and hello to accurate, presentation-ready data sheets. With Bas.AI, you can focus on insights, not formatting.

Essence of the code

Modules

This Excel Automation Module relies on several key modules and libraries to simplify your data management tasks. Here's a breakdown of the essential components:

- i. openpyxl:**
This module is the backbone of the code, providing the functionality to create and manipulate Excel workbooks and worksheets programmatically.
- ii. webcolors:**
Used for converting color names to RGB values, enhancing the visual appeal of your Excel sheets.
- iii. colorama:**
Employed to add color and style to terminal/console text, improving the visual experience during data input and output.
- iv. os:**
Vital for interacting with the operating system, allowing the code to manage files and directories seamlessly.

How does it work?

i. Gathering and Entering Column Values

The code prompts the user to input the number of columns they want to create in the Excel sheet. For each column, it collects values row by row using the `get_column_values()` function until the user decides to finish input. And then using the `write_column_values()` function to input the values.

ii. Setting Column Widths

The code uses the `set_column_width()` function to dynamically adjust the column width based on the maximum length of data in each column, ensuring a visually appealing layout.

iii. Applying Colors

Users are prompted to choose colors for the first row and the remaining cells. The selected colors are converted to hexadecimal format using the `convert_rgb_to_hex()` function and applied to the Excel sheet for visual distinction.

iv. Adding Borders

Borders are applied using the `apply_borders()` function to create clear cell boundaries, improving the sheet's readability.

v. Saving and Opening

The final Excel sheet is saved using the `save_workbook()` function with a specified file name and opened through the `open_file()` function which uses the `OS` module for immediate use.



Disadvantages

- **Fixed File Location:** The code saves the generated Excel file to a fixed file location on the user's desktop. This may not be convenient for users who prefer to specify their own file path or name.
- **Single Sheet Creation:** The code currently supports the creation of a single sheet within the Excel workbook. Users looking to generate multiple sheets or more complex Excel structures may need to modify the code accordingly.

Execution of code

```
Hey want to create an Excel document of your annual sales report  
Dont worry we got you!!!  
Just type the required fields below.
```

```
Enter the name of the company - Crimson Indutries
```

Case 1

```
The Table
```

```
Do you want to enter data manually (M) or import from a CSV file (C)? C
```

Asking the user if he wants to input data manually or submit an excel sheet

```
Enter the path of the CSV file: C:\Users\remes\Downloads\Crimson industries.csv
```

```
Enter the color for the first row: Yellow
```

```
Enter the color for the remaining cells: White
```

```
Your excel sheet - Crimson Industries-Annual Performance  
has been made and saved in the \code folder
```

```
Finished
```

Style inputs taken from the user

```
The Table
```

```
Do you want to enter data manually (M) or import from a CSV file (C)? M
```

When the user wants to enter data manually

```
Enter the number of columns to be used: 4
```

```
Enter a value for column A (press Enter to finish): Quarter
```

```
Enter a value for column A (press Enter to finish): Q1
```

```
Enter a value for column A (press Enter to finish): Q2
```

```
Enter a value for column A (press Enter to finish): Q3
```

```
Enter a value for column A (press Enter to finish):
```

```
Enter a value for column B (press Enter to finish): Sales Revenue(INR)
```

```
Enter a value for column B (press Enter to finish): 6.5L
```

Inputs for table values taken from the user



```
Enter the color for the first row: Green  
Enter the color for the remaining cells: white  
  
Your excel sheet - Crimson Industries-Annual Performance  
has been made and saved in the \code folder  
  
Finished
```

Style inputs taken from the user

Output

Data entered manually

Case 2

	A	B	C	D
1	Quarter	Sales Revenue(INR)	Expenses(INR)	Profit
2	Q1	6.5L	3.5L	3L
3	Q2	7.2L	4L	3.2L
4	Q3	6.8L	3.92L	2.9L

Data taken from csv file

Case 1

	A	B	C	D	E
1	Quarter	Q1	Q2	Q3	Q4
2	Sales Revenue (â,¹)	1875000	2100000	1987500	2250000
3	Expenses	1122000	1200000	1162500	1275000
4	Profit	750000	900000	825000	975000

Personal > Desktop > code

Name	Status	Date modified	Type	Size
Asian paints - Annual Performance	✓	27-09-2023 14:51	Microsoft Word ...	173 KB
Crimson Industries - Annual Performan...	✓	27-08-2023 13:22	Microsoft Word ...	113 KB
Crimson Industríes - Annual Performan...	✓	27-08-2023 15:07	Microsoft Excel ...	9 KB
Emp name Vs Total sales(in lakhs)	✓	28-09-2023 07:33	PNG File	174 KB
emp Vs sales	✓	27-09-2023 15:07	PNG File	164 KB
Intel Corporation - Annual Performance	✓	28-09-2023 07:34	Microsoft Word ...	421 KB
sales_graph	✓	27-09-2023 14:38	PNG File	20 KB
sales_report	✓	27-08-2023 15:52	Microsoft Power...	32 KB
Year Vs Revenue(in crores)	✓	28-09-2023 07:31	PNG File	218 KB
year Vs sales	✓	27-09-2023 15:06	PNG File	181 KB

The document is saved in the 'code' folder (highlighted in yellow)



CHAPTER 4

POWERPOINT PRESENTATION



PowerPoint Presentation

Create engaging and informative presentations effortlessly with our Python PowerPoint slide generator! Say goodbye to manual slide creation and embrace the simplicity of our code.

Whether you need title slides, graphs, tables, or image slides, our code provides you with the tools to craft visually appealing presentations in no time. Just input your content, choose your slide layout, pick colors, and let the code handle the rest. Elevate your presentation game and captivate your audience with ease!

Essence of the Code

Modules

- i. **Pptx:** Utilized for creating and manipulating PowerPoint presentations programmatically. It offers a wide range of features for adding slides, shapes, and formatting.
- ii. **Webcolors:** Enables the code to work with color names and convert them to RGB values, ensuring flexible slide color customization.
- iii. **Openpyxl:** Allows reading data from Excel files, facilitating the creation of table slides from external data sources.
- iv. **Pandas:** Used for efficient data manipulation, especially when dealing with Excel data sources.
- v. **Colorama:**
Employed to add color and style to terminal/console text, improving the visual experience during data input and output.
- vi. **Os**
It provides functions for interacting with the operating system, allowing tasks like file and directory operations, environment management, and system-related functionality.

How Does It Work?

- i. **Slide Generation:** The code begins by using the `generate_presentation()` function and prompting the user to specify the number of slides and their layout preferences, including title slides, graphs, tables, or image slides.

ii. Content Input: Users provide content details, such as slide titles, graph data, table data, or image paths. Input validation ensures data accuracy.

iii. Color Customization: Users can choose colors for slide backgrounds, and the code automatically determines suitable text colors for readability using the **Webcolours** module.

iv. Slide Creation: Based on user preferences and input, the code dynamically generates slides using the different **add_slide** functions with the specified content, layout, and colors.

v. Thank You Slide: The code adds a "Thank You" slide at the end to conclude the presentation.



Disadvantages

- **Limited Customization:** The code may have limited flexibility for advanced formatting and slide customization beyond basic layouts and colors.
- **Input Validation:** While the code provides input validation, more extensive error handling for various scenarios could enhance user experience and prevent unexpected issues.

Execution of code

For every slide and graph their respective colours are given by the user

```
Hey want to create a PPT?  
Dont worry we got you!!!  
Just type the required fields below.  
  
Enter the number of slides: 5
```

Taking input of number of slides

```
Slide - 1  
Enter the layout of slide 1:  
1. Title slide  
2. Graph or Table slide  
3. Image slide  
  
option - 1  
Input title: Crimson Industries
```

```
Slide - 2  
Enter the layout of slide 2:  
1. Title slide  
2. Graph or Table slide  
3. Image slide  
  
option - 2  
Input title: Annual sale of items  
Do you want to insert a graph or a table? (graph/table): graph  
  
Graph  
Enter graph categories (comma-separated): paints,paint_brush,paint_thinner  
Enter series name for the graph: pie  
Enter series values (comma-separated): 130,200,100  
Enter color for Pie Chart:green  
Enter color for Pie Chart:red  
Enter color for Pie Chart:yellow
```

Slide - 3

Enter the layout of slide 3:

1. Title slide
2. Graph or Table slide
3. Image slide

option - 2

Input title: *Annual sale*

Do you want to insert a graph or a table? (graph/table): *table*

Table

Enter the source of the table data (input/excel): *input*

Enter the number of rows in the table: *3*

Enter the number of columns in the table: *3*

Enter value for cell (1, 1): *year*

Enter value for cell (1, 2): *2021*

Enter value for cell (1, 3): *2022*

Enter value for cell (2, 1): *sale*

Slide - 4

Enter the layout of slide 4:

1. Title slide
2. Graph or Table slide
3. Image slide

option - 2

Input title: *Annual Employee Performance*

Do you want to insert a graph or a table? (graph/table): *table*

Table

Enter the source of the table data (input/excel): *excel*

Enter the path of the Excel file: *C:\Users\remes\OneDrive\Desktop*

Enter the name of the Excel sheet: *Sheet*

Slide - 5

Enter the layout of slide 5:

1. Title slide
2. Graph or Table slide
3. Image slide

option - 3

Enter title: *Graph*

Do you want to insert an image? (y/n): *y*

Enter image path: *C:\Users\remes\OneDrive\Desktop\code\emp Vs sales.png*

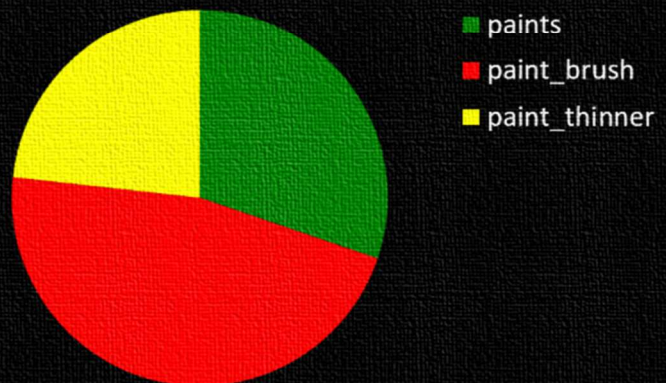
Do you want to insert an image? (y/n): *n*

Output

Crimson Industries

Slide 1

Annual sale of items



Slide 2

Annual sale

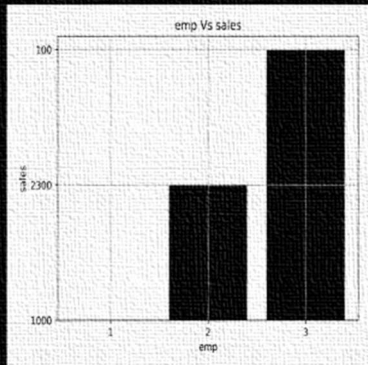
year	2021	2022
sale	10.5L	11.5L
profit	1.5L	2.5L

Slide 3

Annual Employee Performance

Slide 4

Quarter	Employee	Sales	Profit
Q1	A	3.5L	3L
Q2	B	4L	3.2L
Q3	C	3.92L	2.9L



Slide 5

GRAPH

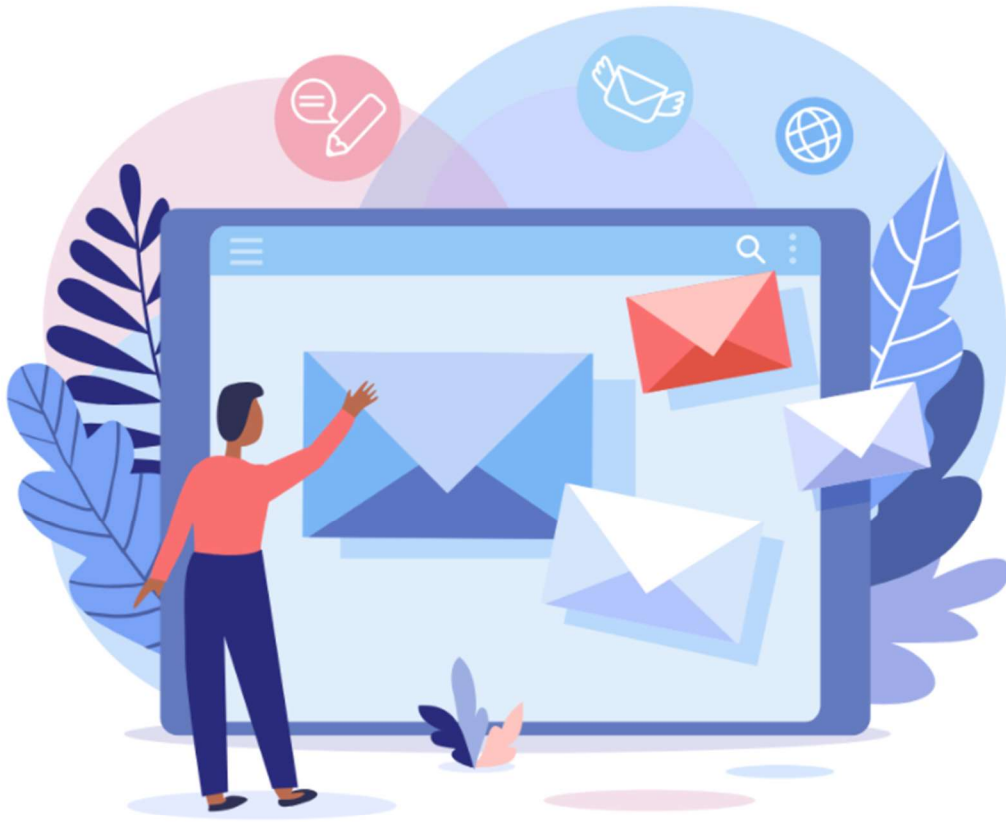
Slide 6

Thank You

Personal > Desktop > code

Name	Status	Date modified	Type	Size
Asian paints - Annual Performance	✓	27-09-2023 14:51	Microsoft Word ...	173 KB
Crimson Industries - Annual Performan...	✓	27-08-2023 13:22	Microsoft Word ...	113 KB
Crimson Industries - Annual Performan...	✓	27-08-2023 15:07	Microsoft Excel ...	9 KB
Emp name Vs Total sales(in lakhs)	✓	28-09-2023 07:33	PNG File	174 KB
emp Vs sales	✓	27-09-2023 15:07	PNG File	164 KB
Intel Corporation - Annual Performance	✓	28-09-2023 07:34	Microsoft Word ...	421 KB
sales_graph	✓	27-09-2023 14:38	PNG File	20 KB
sales_report	✓	27-08-2023 15:52	Microsoft Power...	32 KB
Year Vs Revenue(in crores)	✓	28-09-2023 07:31	PNG File	218 KB
year Vs sales	✓	27-09-2023 15:06	PNG File	181 KB

The document is saved in the 'code' folder (highlighted in yellow)



CHAPTER 5

EMAIL



Email

Introducing our efficient and user-friendly Python email automation code! With this innovative solution, you can effortlessly send multiple files to numerous recipients all at once, without the need to open any external email software like Gmail. Our code utilizes the power of Python's built-in libraries, enabling you to streamline your email sending process and save valuable time. Simply input the recipient/s email addresses, attach the files you wish to share, compose your message, and let the code handle the rest. Experience the convenience of batch emailing with ease, making communication a breeze for both personal and professional purposes.



*“Say goodbye to manual email attachments
and embrace the simplicity of our Python email automation code!”*

Essence of the code

Modules

i. **Smtplib**

It is used to send email messages via Simple Mail Transfer Protocol (SMTP). It enables you to connect to an SMTP server and send emails programmatically from your Python code.

ii. **email.mime.text.MIMEText**

It allows you to construct the body of your email using plain text and provides functionality to set the subject, sender, and recipient(s) of the email.

iii. **email.mime.multipart.MIMEMultipart**

Multipart messages allow you to include plain text, attachments and HTML files in a single mail.

iv. **email.mime.base.MIMEBase**

Creates basic functionality for creating email message parts that can be attached to an email. It serves as the base class for constructing various types of MIME message parts, such as images, audio files, or other binary attachments.

v. **email.encoders**

It is used to properly encode binary data (e.g., attachments) into a format that can be safely included in an email message.

vi. **colorama**

It provides an easy way to add colored output to the terminal or command prompt - change text color, background color, and text style (bold, underline, etc.) for better visual output.

vii. **time**

It provides functions to work with time-related tasks. It allows you to measure time intervals, pause execution, and work with time values.

viii. **Os**

It provides a way to interact with the operating system. It allows you to perform various operating system-related tasks, such as navigating the file system, working with files and directories, and executing system commands.

How does it work?

i. **Gathering Recipient/Sender's info**

The script prompts the user to input the number of recipients they want to send emails to. Based on this number, it then collects their email addresses. Sender's email address has already been added to the code.

ii. **Body**

The script prompts the user to input the subject of the email.

The **body()** function is responsible for collecting the email body. It presents the user with a choice to either provide their own text or use the OpenAI GPT-3.5 model to generate the email body based on a given prompt. If the user chooses to use GPT-3.5, the script communicates with the OpenAI API to generate the content.

iii. **Listing and Selecting Attachments**

The **show_files()** function displays a list of available files in a specified directory

The user is prompted to select the files they want to attach by entering the corresponding numbers as shown on the console.

iv. **send_emails() Function**

It runs a 'for' loop through the list of recipient email addresses.

It constructs the body of the email by combining the recipient's name, the provided/generated email body, and any selected attachments.

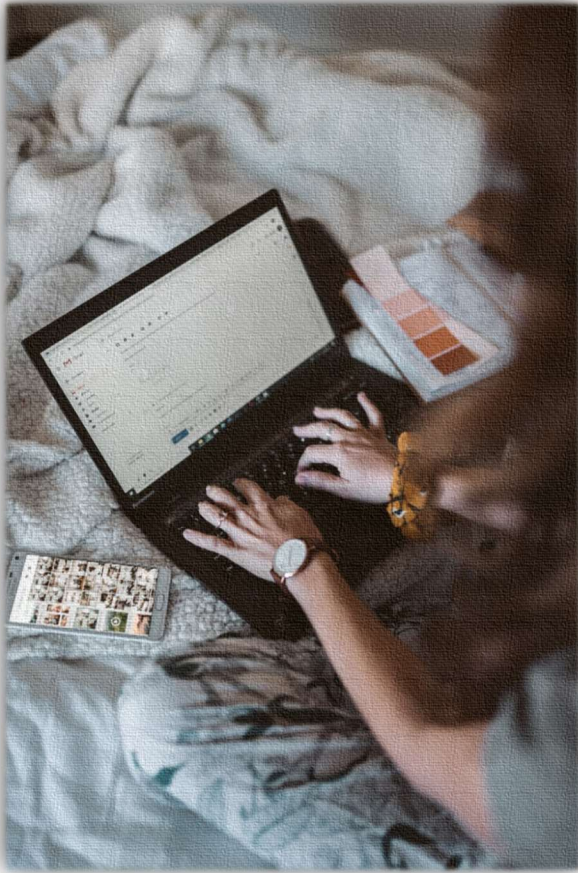
It uses the **MIMEMultipart** format to assemble the email, attaching the body and the selected files.

v. **SMTP Connection**

The script sets up the SMTP (Simple Mail Transfer Protocol) server details, including the port and server address (Gmail SMTP server) and prepares a secure connection to the email server. It logs in using the sender's Gmail address and password, and sends the email to each recipient.

vi. **Error management**

Try and **except** along with **while** has been used in each input statement to correct user-input errors.



Disadvantages

- lacks security measures (like handling passwords securely), and handling potential issues with the OpenAI API or the SMTP server.
- User has specific files in a specified directory on their desktop for attaching to the emails.
- Uses fixed values for the SMTP server and Gmail address, which might not be suitable for all scenarios.

Execution of the code

```
Hey want to send an EMAIL?  
Dont worry we got you!!!  
Just type the required fields below.  
  
No of recipients you want to send - 3  
Recipient 1 -  
Recipient 2 -  
Recipient 3 -  
  
Connecting to server...  
Successfully connected to server.... None  
  
write the subject of the email - meeting after long time
```

Case 1

Taking recipient email-ids and subject of the email from the user

```
Do you want to write email on your own or use chat gpt  
(say yes to not use gpt and say gpt to use chatgpt) - yes  
  
Write your body - We have not met in a long time. Will you be able to join me tomorrow?  
  
Do you want to send an attachment(Yes/No) - no
```

Taking the body of the email from the user as he wants to write the body manually

```
Sending email to:  
Email sent to:  
  
Sending email to:  
Email sent to:  
  
Sending email to:  
Email sent to:  
  
Finished
```

Confirmation message

Do you want to write email on your own or use chat gpt (say yes to not use gpt and say gpt to use chatgpt) - gpt

The user chooses to generate the body of the email from ChatGPT

Write your prompt - I am meeting my friends after a Long time. I have planned a meet tomorrow

Hey,

I hope this message finds you well. It has been far too long since we last caught up, and I miss our

I thought it would be a great opportunity for us to reconnect, reminisce about old memories, a

I genuinely hope you can make it, as your presence would make this gathering even more special

Looking forward to meeting you tomorrow at 5pm at SGC Seawoods.

Yours faithfully,
Atharv

Are you satisfied with the result(Yes/No) - no
Sorry for the inconvenience caused. please type your prompt again

Email body generated by ChatGPT

Write your prompt - I am meeting my friends after a Long time. I have planned a meet tomorrow at 5pm

Hey,

I hope this message finds you well. It has been far too long since we last caught up, and I miss our

I thought it would be a great opportunity for us to reconnect, reminisce about old memories, and cre

I genuinely look forward to seeing each and every one of you and sharing laughter and joy once again

Yours faithfully,
Atharv

Are you satisfied with the result(Yes/No) - yes

Email body generated by ChatGPT

Personal > Desktop > code

Name	Status	Date modified	Type	Size
Ath. file hand	✓ R	28-09-2023 10:00	PY File	1 KB
Atharv 12B RF - function	✓ R	28-09-2023 10:00	PY File	1 KB
English	✓ R	28-09-2023 09:58	Microsoft Word ...	13 KB
function 12b	✓ R	28-09-2023 10:01	PY File	1 KB
Hello	✓ R	27-09-2023 14:38	PNG File	20 KB
sales_report	✓ R	27-08-2023 15:52	Microsoft Power...	32 KB

Folder from which the files are shown



```
Do you want to send an attachment(Yes/No) - yes

These are the available files you can send:-
1. Ath. file hand.py
2. Atharv 12B RF - function.py
3. English.docx
4. function 12b.py
5. Hello.png
6. sales_report.pptx

which files do you want to send
(input in the form - fileno,fileno,...) - 5,3
```

It shows the files available from the 'code' folder and asks the user which files he wants to send.



```
Sending email to:
Email sent to:

Sending email to:
Email sent to:

Sending email to:
Email sent to:

Finished
```

Confirmation message

Output

Email generated along with attachments (generated by ChatGPT)

Case 1



I thought it would be a great opportunity for us to reconnect, reminisce about old memories, and create new ones. We can grab a coffee, enjoy a meal, or simply spend quality time catching up on each other's lives.

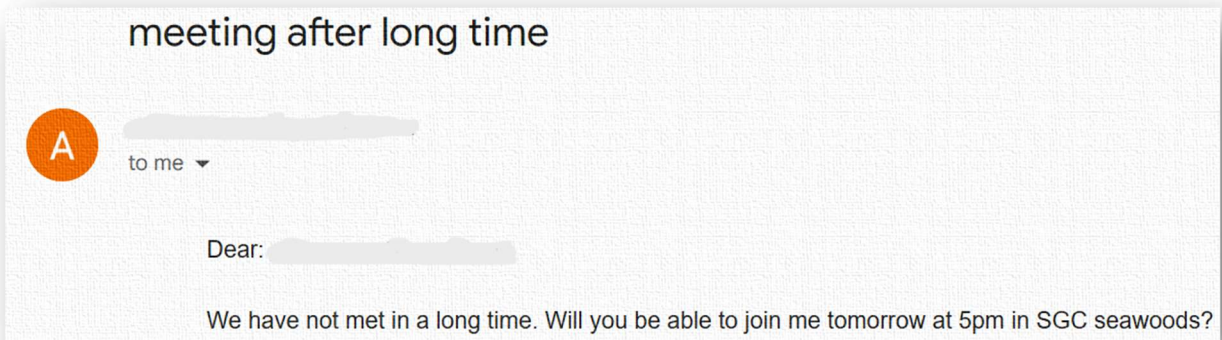
I genuinely look forward to seeing each and every one of you and sharing laughter and joy once again. Please let me know if you can make it, as your presence would make this gathering even more special.

Yours faithfully,
Atharv



Email generated (manual input)

Case 2





Check out our website!!

Meet Our Team



Bhavya



Saket



Atharv

**Get to know the faces behind our brand
@BAS.AI**