**INVOICE GENERATOR**

**Program description**: The invoice generator program is a simple program that will help a small business to generate invoices easily and error free rather that inputting them manually.

**Documentation:**

**Program overview**: The Invoice Generator program is designed to automate the creation and management of invoices. It aims to streamline the billing process for businesses by generating invoices based on user inputs, including client details, itemized lists of products or services, quantities, unit prices, and applicable taxes. The generated invoices can be saved in various formats (e.g., PDF) and sent to clients directly or stored for future reference.

**System requirement:** The program will be designed to run on windows 10 and above

**User manual:** The user manual will be there and it will provide instructions on how to use the program.

**Program structure:**

**Imports and Dependencies**

* **Purpose**: Import necessary modules and libraries.
* **Components**: from datetime import datetime

**Class Definition**

* **Class Name**: InvoiceGenerator
* **Purpose**: Manage invoice-related functionalities including adding items and generating invoices.
* **Components**:
* **Attributes**:
* self.items: A list to store item details.

**Methods**:

* \_\_init\_\_(self): Initializes the items list.
* add\_item (self, description, quantity, price\_per\_unit): Adds an item to the invoice.
* generate\_invoice (self, customer\_name): Generates and prints the invoice.

**Main Function**

* **Purpose**: Handle user interactions, process input, and call methods from the InvoiceGenerator class.
* **Components**:
  + - * **Input Handling**:
    - **User Menu**: Allows users to select items and specify quantities.
    - **Error Handling**: Ensures that user input is valid.
* **Action Execution**:
  + - **Add Items**: Calls add\_item based on user choice.
    - **Generate Invoice**: Calls generate\_invoice to print the final invoice.

**Execution Control**

* **Purpose**: Ensure the script runs correctly when executed directly.
* **Components**:
  + **if \_\_name\_\_ == "\_\_main\_\_":**: Ensures that main() is executed when the script is run directly.

**Program logical flow components**

**User input:**

 Prompt user to select an item (Laptop, Mouse, Keyboard) or exit.

 If user selects an item, prompt for the quantity.

 Depending on the user's selection

**Operation selection:**

The program will allow users to select their different items weather it a laptop ,keyboard or mouse

**Operation:**

The program will generate an invoice for the items that has been selected and quantity and the program will automatically calculate the total of all the products.

**Error handling:**

The program will have a help button and it will tell you when you have inputted an invalid input.

**Data structure and access method**

**User input data:** the program will have a menu where you can select the item that you want

**Operation result**: it will generate the invoice for all the items that the user will select

**Checking:**

The program will check if the user has inputted the right items and it will also calculate the total price for all the items that has been selected. If the user has inputted an invalid input the program will return “invalid input”