SCHOOL OF INFORMATION SCIENCE COLLEGE OF COMPUTING,
INFORMATICS AND MATHEMATICS
UNIVERSITI TEKNOLOGI MARA (UiTM) CAWANGAN KEDAH
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DIPLOMA IN LIBRARY INFORMATICS
(CDIM144)

PROGRAMMING FOR LIBRARY
(IML208)

INDIVIDUAL ASSIGNMENT:
BATH AND BODY WORKS SHOPPING SYSTEM

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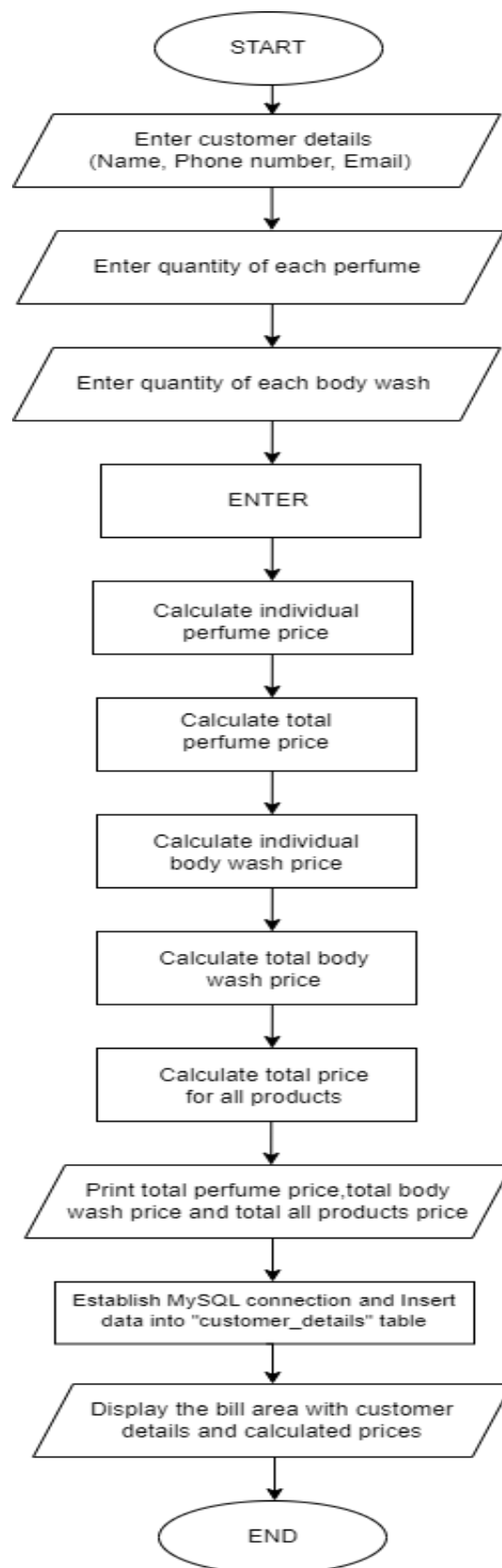**KAMPUS SUNGAI PETANI**

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**1.0    INTRODUCTION**

The python code that I created is a graphical user interface (GUI) application that uses the Tkinter library. The title for this python code system is Bath & Body Works Shopping. This system allows users to enter their personal as well as choose from a various perfume and body wash products. Other than that, this system also will execute an invoice with the user's total purchase price.

      The GUI layout has been decorated with various colours and different fonts to make it aesthetically pleasing and user-friendly. Next, the customer details section includes entry fields that must be filled by customers. The information that users need to fill are name, phone number and email address. This is to ease the process of confirming order, delivery and to generate accurate bills. One of the product selections that customer can choose is perfume. There are total of 5 different perfumes which are 'champagne toast', 'sunset glow', 'in the stars', 'you're the one', and 'into the night'. There are also an entry fields for quantity selection next to each perfume labels. The next product selection is body wash, and this section offers a variety of products at a price of RM10 per piece. Options like "A Thousand Wishes," "Gingham," "Warm Vanilla Sugar," "Strawberry Snowflakes," and "Pure Wonder" are available for users to choose from. The python code also includes a calculation where it calculates the cost of selected products and the bill area displays a thankyou message, customer details, and a detailed invoice summary. This is to ensure users understand the purchase costs. Additionally, this code connects to a MySQL database to store customer data, total perfume and body wash prices, and total purchase amounts. This feature enables easy retrieval of customer information for future reference.

## 2.0    FLOWCHART

```
                    ┌─────────────┐
                    │    START    │
                    └─────────────┘
                           │
                           ▼
            ╱──────────────────────────────╲
           ╱  Enter customer details         ╲
          ╱   (Name, Phone number, Email)     ╲
          ╲──────────────────────────────────╱
                           │
                           ▼
            ╱──────────────────────────────╲
           ╱   Enter quantity of each perfume ╲
          ╲──────────────────────────────────╱
                           │
                           ▼
            ╱──────────────────────────────╲
           ╱  Enter quantity of each body wash╲
          ╲──────────────────────────────────╱
                           │
                           ▼
                ┌──────────────────┐
                │      ENTER        │
                └──────────────────┘
                           │
                           ▼
                ┌──────────────────┐
                │ Calculate individual │
                │  perfume price    │
                └──────────────────┘
                           │
                           ▼
                ┌──────────────────┐
                │ Calculate total   │
                │  perfume price    │
                └──────────────────┘
                           │
                           ▼
                ┌──────────────────┐
                │ Calculate individual │
                │  body wash price  │
                └──────────────────┘
                           │
                           ▼
                ┌──────────────────┐
                │ Calculate total body │
                │  wash price       │
                └──────────────────┘
                           │
                           ▼
                ┌──────────────────┐
                │ Calculate total price │
                │  for all products │
                └──────────────────┘
                           │
                           ▼
         ╱──────────────────────────────────╲
        ╱ Print total perfume price,total body ╲
       ╱  wash price and total all products price╲
       ╲──────────────────────────────────────╱
                           │
                           ▼
            ┌──────────────────────────────┐
            │ Establish MySQL connection and Insert │
            │  data into "customer_details" table  │
            └──────────────────────────────┘
                           │
                           ▼
         ╱──────────────────────────────────╲
        ╱  Display the bill area with customer ╲
       ╱   details and calculated prices        ╲
       ╲──────────────────────────────────────╱
                           │
                           ▼
                    ┌─────────────┐
                    │     END     │
                    └─────────────┘
```

# 3.0 PYTHON CODE

```python
import tkinter as tk
import mysql.connector

#perfume calculation
def total():
    # Perfume calculation
        champagnetoast_price = int(champagnetoastEntry.get())*20
        sunsetglow_price = int(sunsetglowEntry.get())*20
        inthestars_price = int(inthestarsEntry.get())*20
        youretheone_price = int(youretheoneEntry.get())*20
        intothenight_price = int(intothenightEntry.get())*20

        total_perfumeprice = champagnetoast_price + sunsetglow_price + inthestars_price + youretheone_price + intothenight_price
        print("Total Perfume Price:", total_perfumeprice)

    # Body wash calculation
        athousandwishes_price = int(athousandwishesEntry.get()) * 10
        gingham_price = int(ginghamEntry.get()) * 10
        warmnvanillasugar_price = int(warmvanillasugarEntry.get()) * 10
        strawberrysnowflakes_price = int(strawberrysnowflakesEntry.get()) * 10
        purewonder_price_bodywash = int(purewonderEntry.get()) * 10

        total_bodywashprice = athousandwishes_price + gingham_price + warmnvanillasugar_price + strawberrysnowflakes_price + purewonder_price_bodywash
        print("Total Body Wash Price:", total_bodywashprice)

    # Add the calculation for the total of both perfumes and body wash
        total_all_products = total_perfumeprice + total_bodywashprice
        print("Total All Products Price:", total_all_products)

    # bill area
        customer_details= f"THANKYOU,DATA INSERTED SUCCESSFULLY!\n\nName:{nameEntry.get()}\nPhone number:{phoneEntry.get()}\nEmail:{emailEntry.get()}"
        bill_text = f"Perfume Total:RM {total_perfumeprice}\nBody Wash Total:RM {total_bodywashprice}\nTotal All Products:RM {total_all_products}"
        textarea.insert(tk.END, customer_details + "\n\n")
        textarea.insert(tk.END, bill_text + "\n\n")

    # Establish a connection to the MySQL server
        mydb = mysql.connector.connect(
            host="localhost",
            user="root",
```

```python
    # bill area
        customer_details= f"\t\tTHANKYOU!\nYour data has successfully enetered\n\nName:{nameEntry.get()}\nPhone number:{phoneEntry.get()}\nEmail:{emailEntry.get()}"
        bill_text = f"Perfume Total:RM {total_perfumeprice}\nBody Wash Total:RM {total_bodywashprice}\nTotal All Products:RM {total_all_products}"
        textarea.insert(tk.END, customer_details + "\n\n")
        textarea.insert(tk.END, bill_text + "\n\n")

    # Establish a connection to the MySQL server
        mydb = mysql.connector.connect(
            host="localhost",
            user="root",
            password="",
            database="bbw_shopping"
            )

    # Create a cursor object to interact with the database
        cursor = mydb.cursor()

    # Inserting data into a table
        sql = "INSERT INTO `customer_details` (Name, Phone_number, Email,Total_perfumeprice,Total_bodywashprice, Total_allproductprice) VALUES(%s,%s,%s,%s,%s,%s)"
        val = (nameEntry.get(),phoneEntry.get(),emailEntry.get(),total_perfumeprice,total_bodywashprice,total_all_products)

        try:
            cursor.execute(sql, val)
            mydb.commit()
            print("Data inserted successfully!")
        except mysql.connector.Error as err:
            print(f"Error: {err}")
            mydb.rollback()

        cursor.close()
        mydb.close()

#GUI
root= tk.Tk()
root.title ("BBW shopping")
root.geometry ('810x300')

#label
label= tk.Label(root,text='Bath & Body Works Shopping',font=('Georgia Font', 20, 'italic')
```

```python
56                print(f'Error: {err}')
57                mydb.rollback()
58
59            cursor.close()
60            mydb.close()
61
62    #GUI
63    root= tk.Tk()
64    root.title ("BBW shopping")
65    root.geometry ('810x300')
66
67    #label
68    label= tk.Label(root,text='Bath & Body Works Shopping',font=('Georgia Font', 20, 'italic')
69                        ,bg='palevioletred',fg='mistyrose',bd=10, relief='groove')
70    label.pack(ipadx=800)
71
72    #customer details frame
73    customer_details_frame=tk.LabelFrame(root,text='Customer Details',font=('Times New Roman',10,'bold')
74                                ,bg='mistyrose',fg= 'tomato',bd=5,relief= 'groove')
75    customer_details_frame.pack(ipadx=800)
76    #name
77    nameLabel=tk.Label(customer_details_frame,text='Name',font=('Times New Roman',10,'bold'),bg='mistyrose'
78                    ,fg= 'palevioletred')
79    nameLabel.grid (row=0,column=0,ipadx=5,ipady=5)
80    nameEntry=tk.Entry(customer_details_frame,font=('Times New Roman', 10),bd=3)
81    nameEntry.grid (row=0,column=1,ipadx=20)
82    #phone number
83    phoneLabel=tk.Label(customer_details_frame,text='Phone',font=('Times New Roman',10,'bold'),bg='mistyrose'
84                    ,fg= 'palevioletred')
85    phoneLabel.grid(row=0,column=2,ipadx=5,ipady=5)
86    phoneEntry=tk.Entry(customer_details_frame,font=('Times New Roman', 10),bd=3)
87    phoneEntry.grid (row=0,column=3,ipadx=10)
88    #email
89    emailLabel=tk.Label(customer_details_frame,text='Email',font=('Times New Roman',10,'bold'),bg='mistyrose'
90                    ,fg= 'palevioletred')
91    emailLabel.grid(row=0,column=4,ipadx=10,ipady=5)
92    emailEntry=tk.Entry(customer_details_frame,font=('Times New Roman', 10),bd=3)
93    emailEntry.grid (row=0,column=5,ipadx=30)
94
95    #products frame
```

```python
82    #phone number
83    phoneLabel=tk.Label(customer_details_frame,text='Phone',font=('Times New Roman',10,'bold'),bg='mistyrose'
84                    ,fg= 'palevioletred')
85    phoneLabel.grid(row=0,column=2,ipadx=5,ipady=5)
86    phoneEntry=tk.Entry(customer_details_frame,font=('Times New Roman', 10),bd=3)
87    phoneEntry.grid (row=0,column=3,ipadx=10)
88    #email
89    emailLabel=tk.Label(customer_details_frame,text='Email',font=('Times New Roman',10,'bold'),bg='mistyrose'
90                    ,fg= 'palevioletred')
91    emailLabel.grid(row=0,column=4,ipadx=10,ipady=5)
92    emailEntry=tk.Entry(customer_details_frame,font=('Times New Roman', 10),bd=3)
93    emailEntry.grid (row=0,column=5,ipadx=30)
94
95    #products frame
96    productsFrame=tk.Frame(root)
97    productsFrame.pack(pady=3)
98
99    #perfumes frame
100   perfumesframe=tk.LabelFrame(productsFrame,text='Perfumes (RM20/each)',font=('Times New Roman',10,'bold')
101                               ,bg='mistyrose',fg= 'tomato',bd=5,relief= 'groove')
102   perfumesframe.grid(row=0,column=0)
103   #champange toast
104   champagnetoastLabel=tk.Label(perfumesframe,text='champagne toast',font=('Times New Roman',10,'bold'),bg='mistyrose',
105                           fg='palevioletred')
106   champagnetoastLabel.grid(row=0,column=0)
107   champagnetoastEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
108   champagnetoastEntry.grid(row=0,column=1,padx=5,pady=5)
109   champagnetoastEntry.insert(0,0)
110   #pure wonder
111   sunsetglowLabel=tk.Label(perfumesframe,text='sunset glow',font=('Times New Roman',10,'bold'),bg='mistyrose',
112                           fg='palevioletred')
113   sunsetglowLabel.grid(row=1,column=0)
114   sunsetglowEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
115   sunsetglowEntry.grid(row=1,column=1,padx=5,pady=5)
116   sunsetglowEntry.insert(0,0)
117   #in the stars
118   inthestarsLabel=tk.Label(perfumesframe,text='in the stars',font=('Times New Roman',10,'bold'),bg='mistyrose',
119                           fg='palevioletred')
120   inthestarsLabel.grid(row=2,column=0)
121   inthestarsEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
```

4

```python
104  champagnetoastLabel=tk.Label(perfumesframe,text='champange toast',font=('Times New Roman',10,'bold'),bg='mistyrose',
105                               fg='palevioletred')
106  champangetoastLabel.grid(row=0,column=0)
107  champangetoastEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
108  champangetoastEntry.grid(row=0,column=1,padx=5,pady=5)
109  champangetoastEntry.insert(0,0)
110  #pure wonder
111  sunsetglowLabel=tk.Label(perfumesframe,text='sunset glow',font=('Times New Roman',10,'bold'),bg='mistyrose',
112                           fg='palevioletred')
113  sunsetglowLabel.grid(row=1,column=0)
114  sunsetglowEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
115  sunsetglowEntry.grid(row=1,column=1,padx=5,pady=5)
116  sunsetglowEntry.insert(0,0)
117  #in the stars
118  inthestarsLabel=tk.Label(perfumesframe,text='in the stars',font=('Times New Roman',10,'bold'),bg='mistyrose',
119                           fg='palevioletred')
120  inthestarsLabel.grid(row=2,column=0)
121  inthestarsEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
122  inthestarsEntry.grid(row=2,column=1,padx=5,pady=5)
123  inthestarsEntry.insert(0,0)
124  #you're the one
125  youretheoneLabel=tk.Label(perfumesframe,text='you are the one',font=('Times New Roman',10,'bold'),bg='mistyrose',
126                            fg='palevioletred')
127  youretheoneLabel.grid(row=3,column=0)
128  youretheoneEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
129  youretheoneEntry.grid(row=3,column=1,padx=5,pady=5)
130  youretheoneEntry.insert(0,0)
131  #into the night
132  intothenightLabel=tk.Label(perfumesframe,text='into the night',font=('Times New Roman',10,'bold'),bg='mistyrose',
133                             fg='palevioletred')
134  intothenightLabel.grid(row=4,column=0)
135  intothenightEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
136  intothenightEntry.grid(row=4,column=1,padx=5,pady=5)
137  intothenightEntry.insert(0,0)
138
139
140  #bodywash frame
141  bodywashframe=tk.LabelFrame(productsFrame,text='Body Wash (RM10/each)',font=('Times New Roman',10,'bold')
142                             ,bg='mistyrose',fg= 'tomato',bd=5,relief= 'groove')
143  bodywashframe.grid(row=0,column=1)
```

```python
131  #into the night
132  intothenightLabel=tk.Label(perfumesframe,text='into the night',font=('Times New Roman',10,'bold'),bg='mistyrose',
133                             fg='palevioletred')
134  intothenightLabel.grid(row=4,column=0)
135  intothenightEntry=tk.Entry(perfumesframe,font=('Times New Roman',10,),width=10,bd=3)
136  intothenightEntry.grid(row=4,column=1,padx=5,pady=5)
137  intothenightEntry.insert(0,0)
138
139
140  #bodywash frame
141  bodywashframe=tk.LabelFrame(productsFrame,text='Body Wash (RM10/each)',font=('Times New Roman',10,'bold')
142                             ,bg='mistyrose',fg= 'tomato',bd=5,relief= 'groove')
143  bodywashframe.grid(row=0,column=1)
144  #a thousand wishes
145  athousandwishesLabel=tk.Label(bodywashframe,text='a thousand wishes',font=('Times New Roman',10,'bold'),bg='mistyrose',
146                                fg='palevioletred')
147  athousandwishesLabel.grid(row=0,column=0)
148  athousandwishesEntry=tk.Entry(bodywashframe,font=('Times New Roman',10,),width=10,bd=3)
149  athousandwishesEntry.grid(row=0,column=1,padx=5,pady=5)
150  athousandwishesEntry.insert(0,0)
151  #gingham
152  ginghamLabel=tk.Label(bodywashframe,text='gingham',font=('Times New Roman',10,'bold'),bg='mistyrose',
153                        fg='palevioletred')
154  ginghamLabel.grid(row=1,column=0)
155  ginghamEntry=tk.Entry(bodywashframe,font=('Times New Roman',10,),width=10,bd=3)
156  ginghamEntry.grid(row=1,column=1,padx=5,pady=5)
157  ginghamEntry.insert(0,0)
158  #warmn vanilla sugar
159  warmvanillasugarLabel=tk.Label(bodywashframe,text='warm vanilla sugar',font=('Times New Roman',10,'bold'),bg='mistyrose',
160                                 fg='palevioletred')
161  warmvanillasugarLabel.grid(row=2,column=0)
162  warmvanillasugarEntry=tk.Entry(bodywashframe,font=('Times New Roman',10,),width=10,bd=3)
163  warmvanillasugarEntry.grid(row=2,column=1,padx=5,pady=5)
164  warmvanillasugarEntry.insert(0,0)
165  #strawberry snowflakes
166  strawberrysnowflakesLabel=tk.Label(bodywashframe,text='strawberry snowflakes',font=('Times New Roman',10,'bold'),bg='mistyrose',
167                                     fg='palevioletred')
168  strawberrysnowflakesLabel.grid(row=3,column=0)
169  strawberrysnowflakesEntry=tk.Entry(bodywashframe,font=('Times New Roman',10,),width=10,bd=3)
170  strawberrysnowflakesEntry.grid(row=3,column=1,padx=5,pady=5)
```

indvBBW.py ×

indvBBW.py > ...

```python
156    ginghamEntry.grid(row=1,column=1,padx=5,pady=5)
157    ginghamEntry.insert(0,0)
158    #warmn vanilla sugar
159    warmvanillasugarLabel=tk.Label(bodywashframe,text='warm vanilla sugar',font=('Times New Roman',10,'bold'),bg='mistyrose',
160                            fg='palevioletred')
161    warmvanillasugarLabel.grid(row=2,column=0)
162    warmvanillasugarEntry=tk.Entry(bodywashframe,font=('Times New Roman',10,),width=10,bd=3)
163    warmvanillasugarEntry.grid(row=2,column=1,padx=5,pady=5)
164    warmvanillasugarEntry.insert(0,0)
165    #strawberry snowflakes
166    strawberrysnowflakesLabel=tk.Label(bodywashframe,text='strawberry snowflakes',font=('Times New Roman',10,'bold'),bg='mistyrose',
167                            fg='palevioletred')
168    strawberrysnowflakesLabel.grid(row=3,column=0)
169    strawberrysnowflakesEntry=tk.Entry(bodywashframe,font=('Times New Roman',10,),width=10,bd=3)
170    strawberrysnowflakesEntry.grid(row=3,column=1,padx=5,pady=5)
171    strawberrysnowflakesEntry.insert(0,0)
172    #pure wonder
173    purewonderLabel=tk.Label(bodywashframe,text='pure wonder',font=('Times New Roman',10,'bold'),bg='mistyrose',
174                            fg='palevioletred')
175    purewonderLabel.grid(row=4,column=0)
176    purewonderEntry=tk.Entry(bodywashframe,font=('Times New Roman',10,),width=10,bd=3)
177    purewonderEntry.grid(row=4,column=1,padx=5,pady=5)
178    purewonderEntry.insert(0,0)
179
180    #enter frame
181    buttonFrame=tk.Frame(productsFrame,bd=8,relief='groove')
182    buttonFrame.grid(row=0,column=2,padx=5)
183    enterButton=tk.Button(productsFrame,text='ENTER',font=('Times New Roman',10,'bold'),bd=5,bg='mistyrose'
184                    ,fg= 'tomato',padx=10,pady=75,command=total)
185    enterButton.grid(row=0,column=2)
186
187    #billframe
188    billframe=tk.Frame(productsFrame,bd=8,relief='groove')
189    billframe.grid(row=0,column=3,ipadx=5,padx=5)
190
191    billareaLabel=tk.Label(billframe,text='BILL AREA',font=('Times New Roman',10,'bold'),fg= 'tomato')
192    billareaLabel.pack()
193
194    scrollbar=tk.Scrollbar(billframe,orient='vertical')
195    scrollbar.pack(side='right', fill='y')
```

```python
180    #enter frame
181    buttonFrame=tk.Frame(productsFrame,bd=8,relief='groove')
182    buttonFrame.grid(row=0,column=2,padx=5)
183    enterButton=tk.Button(productsFrame,text='ENTER',font=('Times New Roman',10,'bold'),bd=5,bg='mistyrose'
184                    ,fg= 'tomato',padx=10,pady=75,command=total)
185    enterButton.grid(row=0,column=2)
186
187    #billframe
188    billframe=tk.Frame(productsFrame,bd=8,relief='groove')
189    billframe.grid(row=0,column=3,ipadx=5,padx=5)
190
191    billareaLabel=tk.Label(billframe,text='BILL AREA',font=('Times New Roman',10,'bold'),fg= 'tomato')
192    billareaLabel.pack()
193
194    scrollbar=tk.Scrollbar(billframe,orient='vertical')
195    scrollbar.pack(side='right', fill='y')
196    textarea=tk.Text(billframe,width=36,height=9)
197    textarea.pack()
198    scrollbar.config(command=textarea.yview)
199
200    root.mainloop()
201
202
```

## 3.0    GRAPHICAL USER INTERFACE (GUI)

## 5.0 DATABASE