

REPORT FOR RESTAURANT MANAGEMENT SYSTEM

As a project work for Course

PYTHON PROGRAMMING (INT 213)

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Jalandhar, Punjab, India.

RESTAURANT MANAGEMENT SYSTEM

30th NOVEMBER 2021

ABSTRACT:-

A restaurant management system is a collective term for software that helps streamline food business operations. Namely, restaurants, bars, bakeries, cafes, cloud (dark, virtual, ghost) kitchens, food trucks or delivery businesses.

It combines all things that are good about the traditional POS (Point of Sale) systems, with tools that manage your phone calls, take table reservations, streamline inventory management, handle billing, provide actionable analytics, and also help with marketing activities such as CRM, loyalty programs and building an online presence. It also works seamlessly with your existing restaurant technology systems (your accounting and employee management software) and uses open APIs that let you integrate with any third party tool.

ACKNOWLEDGEMENT:-

I would like to thank my mentor - **Ms. Upinder Kaur** for his advice and inputs on this project. Many thanks to my friends and seniors as well, who spent countless hours to listen and provide feedbacks

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INTRODUCTION:-

1. Context

This project has been done as part of my course for the CSE(H) at Lovely Professional University . Supervised by Upinder Kaur, I have two months to fulfill the requirements in order to succeed the module.

2. Motivations

Being extremely interested in everything having a relation with the Development, the group project was a great occasion to give us the time to learn and confirm our interest for this field. The fact that we can make estimations, predictions and give the ability for machines to learn by themselves is both powerful and limitless in term of application possibilities. That's why I decided to conduct my project around the Development.

3. Idea:-

As a first experience, we wanted to make my project as much didactic as possible by approaching every different steps of the machine learning process and trying to understand them deeply. Known as "toy problem" the problems that are not immediate scientific interest but useful to illustrate and practice, we chose to take house price Prediction as approach. The goal was to calculate the bill of a restaurant according to the market prices taking into account different "features" that will be developed in the following .

TEAM MEMBERS:-

Prashant Kumar:-

Contributions:-

1. Coding(joined)
2. Multivariable Regressing
3. GUI
4. Development(joined)

Ayush Solanki:-

Contributions:-

1. Coding(joined)
2. Datasets
3. Linear regression
4. Reports
5. Development(joined)

LIBRARIES:-

Tkinter:-

The tkinter package (“Tk interface”) is the standard Python interface to the Tcl/Tk GUI toolkit. Both Tk and tkinter are available on most Unix platforms, including macOS, as well as on Windows systems.

PIL:-

Pillow is the friendly PIL fork by Alex Clark and Contributors. PIL is the Python Imaging Library by Fredrik Lundh and Contributors.

Barcode:-

This library provides a simple way to create **barcodes** using only the Python standard lib. The barcodes are created as SVG objects.

Random:-

Python has a built-in module that you can use to make **random** numbers.

Time:-

The **time()** function returns the number of seconds passed since epoch.

Request:-

The **requests** module allows you to send HTTP requests using Python.

JSON:-

Python has a built-in package called **json**, which can be used to work with JSON data.

PROPOSED MODULES:-

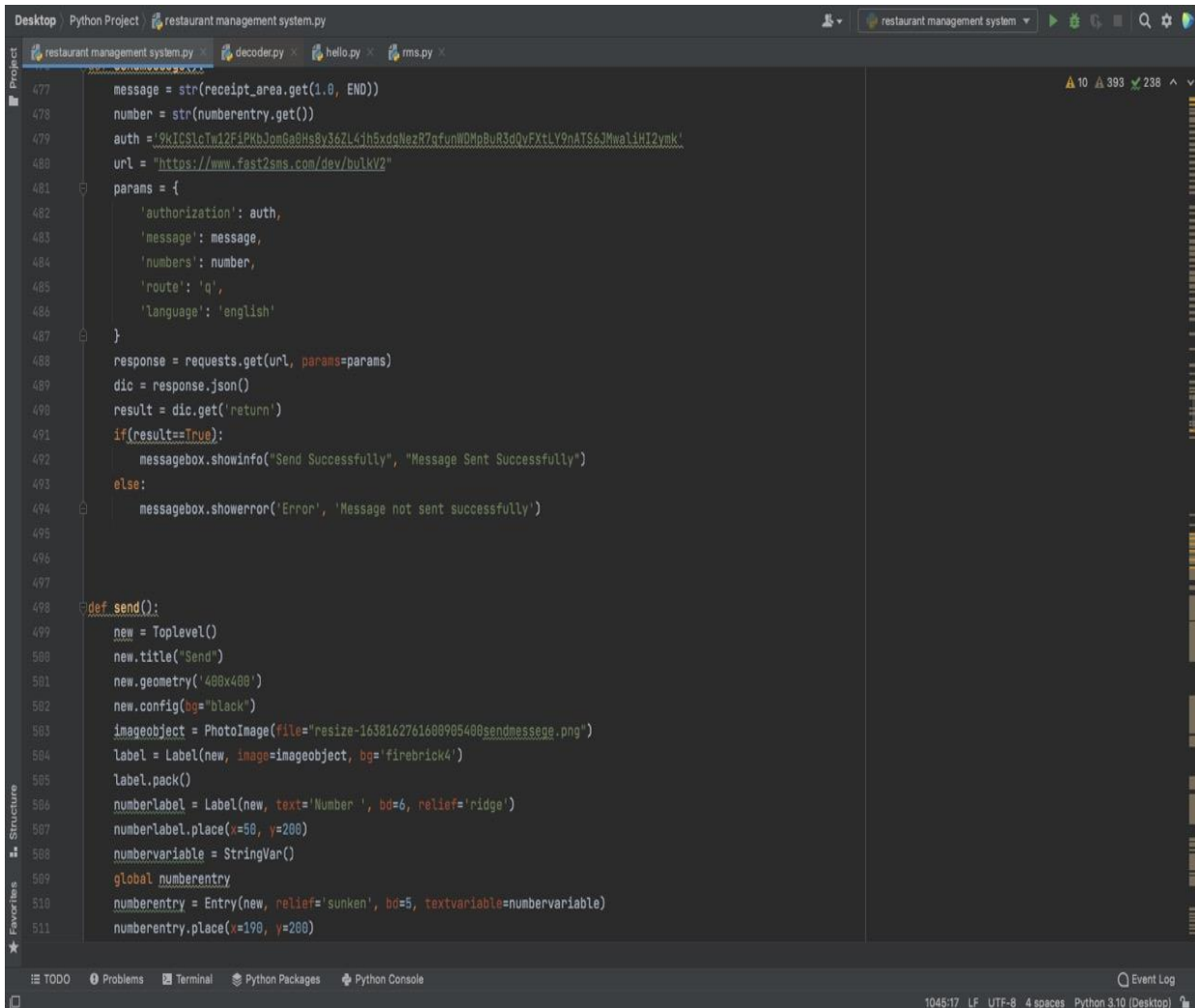
Dataset:-

- 1.Enter dataset manually
- 2.Default dataset
- 3.Different datasets

Data representation:-

- 1.Restaurant Menu
- 2.Bill generation
- 3.Bill messaging
- 4.Payment Option

SCREENSHOTS:-



The screenshot displays a Python IDE window titled "restaurant management system.py". The code is a REST client script that interacts with a Fast2SMS API. It defines a function `send()` that constructs a request with a message, phone number, and API credentials, then sends it via `requests.get()`. The script also includes UI elements like a `Label` and an `Entry` widget for user input. The bottom status bar shows the file encoding as UTF-8 and the Python version as 3.10.

```
477 message = str(receipt_area.get(1.0, END))
478 number = str(numberentry.get())
479 auth = '9KIC$1cTw12F1PKbJonGa0Hs8y36ZL4jh5xdgMezR7afunWDMpBuR3dQuFXtLY9nATS6JMwal1HI2ymk'
480 url = "https://www.fast2sms.com/dev/bulkV2"
481
482 params = {
483     'authorization': auth,
484     'message': message,
485     'numbers': number,
486     'route': 'q',
487     'language': 'english'
488 }
489
490 response = requests.get(url, params=params)
491 dic = response.json()
492 result = dic.get('return')
493 if(result==True):
494     messagebox.showinfo("Send Successfully", "Message Sent Successfully")
495 else:
496     messagebox.showerror('Error', 'Message not sent successfully')
497
498 def send():
499     new = Toplevel()
500     new.title("Send")
501     new.geometry('400x400')
502     new.config(bg="black")
503     imageobject = PhotoImage(file="resize-1638162761600905400sendmessage.png")
504     label = Label(new, image=imageobject, bg='firebrick4')
505     label.pack()
506     numberLabel = Label(new, text='Number ', bd=6, relief='ridge')
507     numberLabel.place(x=50, y=200)
508     numbervariable = StringVar()
509     global numberentry
510     numberentry = Entry(new, relief='sunken', bd=5, textvariable=numbervariable)
511     numberentry.place(x=190, y=200)
```


Desktop Python Project restaurant management system.py

restaurant management system.py x decoder.py x hello.py x rms.py x

```
86 def rajmatadka():
87     if cinrt.get() == 1:
88         text_rt.config(state=NORMAL)
89         text_rt.delete(0, END)
90         text_rt.focus()
91     else:
92         text_rt.config(state=DISABLED)
93         e_rt.set('0')
94 def mushroommatta():
95     if cinmm.get() == 1:
96         text_mm.config(state=NORMAL)
97         text_mm.delete(0, END)
98         text_mm.focus()
99     else:
100         text_mm.config(state=DISABLED)
101         e_mm.set('0')
102 def soyachap():
103     if cinsc.get() == 1:
104         text_sc.config(state=NORMAL)
105         text_sc.delete(0, END)
106         text_sc.focus()
107     else:
108         text_sc.config(state=DISABLED)
109         e_sc.set('0')
110 def baiganbharta():
111     if cinbb.get() == 1:
112         text_bb.config(state=NORMAL)
113         text_bb.delete(0, END)
114         text_bb.focus()
115     else:
116         text_bb.config(state=DISABLED)
117         e_bb.set('0')
118 def roti():
119     if cinr.get() == 1:
120         text_r.config(state=NORMAL)
121         text_r.delete(0, END)
```

10 393 238

Structure

Event Log

1045:17 LF UTF-8 4 spaces Python 3.10 (Desktop)

```
Desktop Python Project restaurant management system.py restaurant management system
restaurant management system.py x decoder.py x hello.py x rms.py x
54 def kadaipanner():
55     if cinkp.get() == 1:
56         text_kp.config(state=NORMAL)
57         text_kp.delete(0, END)
58         text_kp.focus()
59     else:
60         text_kp.config(state=DISABLED)
61         e_kp.set('0')
62 def pannertikka():
63     if cinpt.get() == 1:
64         text_pt.config(state=NORMAL)
65         text_pt.delete(0, END)
66         text_pt.focus()
67     else:
68         text_pt.config(state=DISABLED)
69         e_pt.set('0')
70 def aloojeria():
71     if cinaj.get() == 1:
72         text_aj.config(state=NORMAL)
73         text_aj.delete(0, END)
74         text_aj.focus()
75     else:
76         text_aj.config(state=DISABLED)
77         e_aj.set('0')
78 def bhindimasala():
79     if cinbm.get() == 1:
80         text_bm.config(state=NORMAL)
81         text_bm.delete(0, END)
82         text_bm.focus()
83     else:
84         text_bm.config(state=DISABLED)
85         e_bm.set('0')
86 def rajmatadka():
87     if cinrt.get() == 1:
88         text_rt.config(state=NORMAL)
89
1045:17 LF UTF-8 4 spaces Python 3.10 (Desktop)
```

Desktop / Python Project / restaurant management system.py

restaurant management system.py x decoder.py x hello.py x rms.py x

```
118 def roti():
119     if cinr.get() == 1:
120         text_r.config(state=NORMAL)
121         text_r.delete(0, END)
122         text_r.focus()
123     else:
124         text_r.config(state=DISABLED)
125         e_r.set('0')
126 def butterroti():
127     if cinbr.get() == 1:
128         text_br.config(state=NORMAL)
129         text_br.delete(0, END)
130         text_br.focus()
131     else:
132         text_br.config(state=DISABLED)
133         e_br.set('0')
134
135
136 def butternaan():
137     if cinbn.get() == 1:
138         text_bn.config(state=NORMAL)
139         text_bn.delete(0, END)
140         text_bn.focus()
141     else:
142         text_bn.config(state=DISABLED)
143         e_bn.set('0')
144
145
146 def alooparatha():
147     if cinap.get() == 1:
148         text_ap.config(state=NORMAL)
149         text_ap.delete(0, END)
150         text_ap.focus()
151     else:
152         text_ap.config(state=DISABLED)
153         e_ap.set('0')
154
155 def alooparatha():
```

10 393 238

Structure Favorites

TODO Problems Terminal Python Packages Python Console

Event Log

1045:17 LF UTF-8 4 spaces Python 3.10 (Desktop)

Desktop Python Project restaurant management system.py

restaurant management system.py decoder.py hello.py rms.py

```
153 def eggroll():
154     if ciner.get()==1:
155         text_er.config(state=NORMAL)
156         text_er.delete(0, END)
157         text_er.focus()
158     else:
159         text_er.config(state=DISABLED)
160         e_er.set('0')
161
162 def eggcurry():
163     if cinec.get()==1:
164         text_ec.config(state=NORMAL)
165         text_ec.delete(0, END)
166         text_ec.focus()
167     else:
168         text_ec.config(state=DISABLED)
169         e_ec.set('0')
170
171 def chickentikka():
172     if cinct.get()==1:
173         text_ct.config(state=NORMAL)
174         text_ct.delete(0, END)
175         text_ct.focus()
176     else:
177         text_ct.config(state=DISABLED)
178         e_ct.set('0')
179
180 def chickenbutter():
181     if cincb.get()==1:
182         text_cb.config(state=NORMAL)
183         text_cb.delete(0, END)
184         text_cb.focus()
185     else:
186         text_cb.config(state=DISABLED)
187         e_cb.set('0')
188
```

Structure Favorites

TODO Problems Terminal Python Packages Python Console

Event Log

1045:17 LF UTF-8 4 spaces Python 3.10 (Desktop)

```
Desktop Python Project restaurant management system.py
restaurant management system.py decoder.py hello.py rms.py
332 raw_text = 0
333 item1a, item1b, item1c = cinsp.get(), pinsp.get(), int(text_sp.get())
334 item2a, item2b, item2c = cinmv.get(), pinmv.get(), int(text_mv.get())
335 item3a, item3b, item3c = cindm.get(), pindm.get(), int(text_dm.get())
336 item4a, item4b, item4c = cinkp.get(), pinkp.get(), int(text_kp.get())
337 item5a, item5b, item5c = cinpt.get(), pinpt.get(), int(text_pt.get())
338 item6a, item6b, item6c = cinaj.get(), pinaj.get(), int(text_aj.get())
339 item7a, item7b, item7c = cinbm.get(), pinbm.get(), int(text_bm.get())
340 item8a, item8b, item8c = cinrt.get(), pinrt.get(), int(text_rt.get())
341 item9a, item9b, item9c = cinmm.get(), pinmm.get(), int(text_mm.get())
342 item10a, item10b, item10c = cinsc.get(), pinsc.get(), int(text_sc.get())
343 item11a, item11b, item11c = cinbb.get(), pinbb.get(), int(text_bb.get())
344 item12a, item12b, item12c = cinr.get(), pinr.get(), int(text_r.get())
345 item13a, item13b, item13c = cinbr.get(), pinbr.get(), int(text_br.get())
346 item14a, item14b, item14c = cinbn.get(), pinbn.get(), int(text_bn.get())
347 item15a, item15b, item15c = cinap.get(), pinap.get(), int(text_ap.get())
348 item16a, item16b, item16c = ciner.get(), piner.get(), int(text_er.get())
349 item17a, item17b, item17c = cinec.get(), pinec.get(), int(text_ec.get())
350 item18a, item18b, item18c = cinct.get(), pinct.get(), int(text_ct.get())
351 item19a, item19b, item19c = cincb.get(), pincb.get(), int(text_cb.get())
352 global price_of_indian
353 price_of_indian = (item1a*item1b*item1c) + (item2a*item2b*item2c)+(item3a*item3b*item3c)+(item4a*item4b*item4c)+(item5a*item5b*item5c)+(item6a*item6b*item6c)+(item7a*item7b*item7c)+(item8a*item8b*item8c)+(item9a*item9b*item9c)+(item10a*item10b*item10c)+(item11a*item11b*item11c)+(item12a*item12b*item12c)+(item13a*item13b*item13c)+(item14a*item14b*item14c)+(item15a*item15b*item15c)+(item16a*item16b*item16c)+(item17a*item17b*item17c)+(item18a*item18b*item18c)+(item19a*item19b*item19c)
354 print(price_of_indian)
355 indianprice.set(raw_text+str(price_of_indian))
356 item1x, item1y, item1z = cchcs.get(), pchcs.get(), int(txt_chcs.get())
357 item2x, item2y, item2z = cchvs.get(), pchvs.get(), int(txt_chvs.get())
358 item3x, item3y, item3z = cchfr.get(), pchfr.get(), int(txt_chfr.get())
359 item4x, item4y, item4z = cchm.get(), pchm.get(), int(txt_chm.get())
360 item5x, item5y, item5z = cchcp.get(), pchcp.get(), int(txt_chi_pot.get())
361 item6x, item6y, item6z = cchcn.get(), pchcn.get(), int(txt_chi_nood.get())
362 item7x, item7y, item7z = cchcc.get(), pchcc.get(), int(txt_chi_che.get())
363 item8x, item8y, item8z = cchkc.get(), pchkc.get(), int(txt_kad_pann.get())
364 price_of_chinese = ((item1x*item1y*item1z)+(item2x*item2y*item2z)+(item3x*item3y*item3z)+(item4x*item4y*item4z)+(item5x*item5y*item5z)+(item6x*item6y*item6z)+(item7x*item7y*item7z)+(item8x*item8y*item8z))
365 chinesprice.set(raw_text+str(price_of_chinese))
366
367 item1l, item1m, item1n = cdt.get(), pdt.get(), int(txt_d_t.get())
```

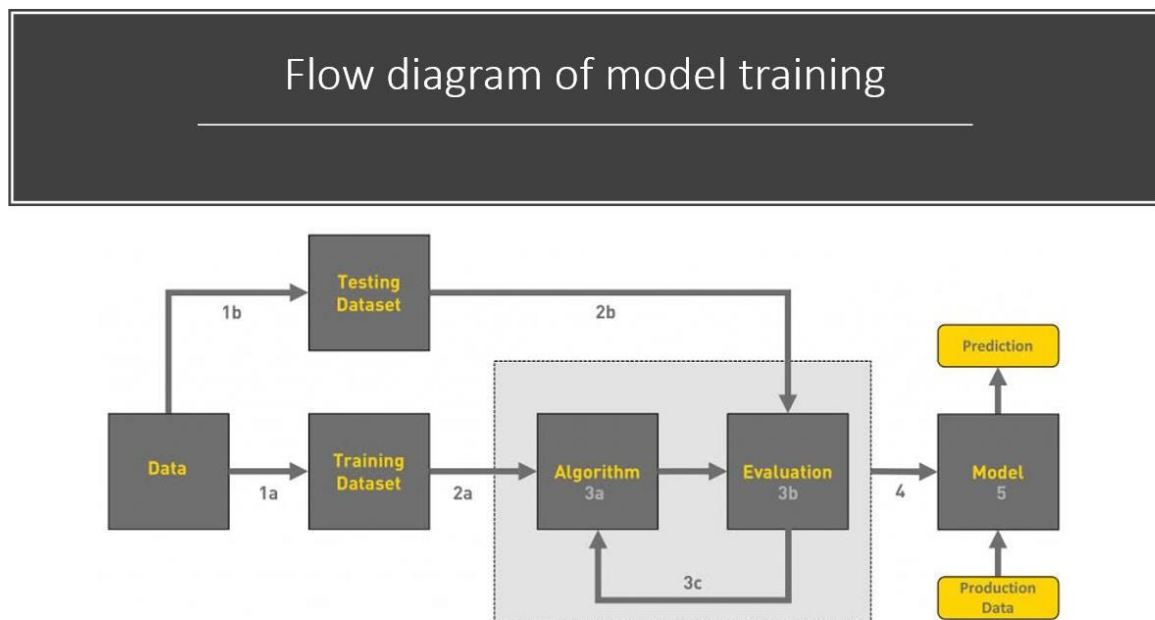
```
Desktop Python Project restaurant management system.py restaurant management system
restaurant management system.py decoder.py hello.py rms.py
477 message = str(receipt_area.get(1.0, END))
478 number = str(numberentry.get())
479 auth = '9K1CS1cTw12FiPKbJomGa0Hs8y36ZL41h5xdqNezR7qfunWDMoBuR3dQvFXtLV9nATS6JWmal1HI2ymk'
480 url = "https://www.fst2sms.com/dev/bulkV2"
481 params = {
482     'authorization': auth,
483     'message': message,
484     'numbers': number,
485     'route': 'q',
486     'language': 'english'
487 }
488 response = requests.get(url, params=params)
489 dic = response.json()
490 result = dic.get('return')
491 if(result==True):
492     messagebox.showinfo("Send Successfully", "Message Sent Successfully")
493 else:
494     messagebox.showerror('Error', 'Message not sent successfully')
495
496
497
498 def send():
499     new = Toplevel()
500     new.title("Send")
501     new.geometry('400x400')
502     new.config(bg="black")
503     imageobject = PhotoImage(file="resize-1638162761600905400sendmessage.png")
504     label = Label(new, image=imageobject, bg='firebrick4')
505     label.pack()
506     numberlabel = Label(new, text='Number ', bd=6, relief='ridge')
507     numberlabel.place(x=50, y=200)
508     numbervariable = StringVar()
509     global numberentry
510     numberentry = Entry(new, relief='sunken', bd=5, textvariable=numbervariable)
511     numberentry.place(x=190, y=200)
```

1045:17 LF UTF-8 4 spaces Python 3.10 (Desktop)

GUI Development:-

A graphical user interface builder (or GUI builder), also known as GUI designer, is a **software development tool** that simplifies the creation of GUIs by allowing the designer to arrange graphical control elements (often called widgets) using a drag-and-drop WYSIWYG editor.

Flow Diagram:-



Conclusions:-

It is our team's hope that this document will be of huge help with understanding of our little project as we have used a different approach which has proved beneficial for us and easy for us to understand the vast ocean that is GUI Development. We have reached the maximum accuracy after data cleaning but we will work forward to increase this accuracy little by little.

REFERENCES:-

To conduct this project the following tools have been used :

- PyCharm IDE
- Tkinter (Library)

1. Coursera:-

We have used this side for our basis knowledge gain of the methods that will be used in the project

<https://www.coursera.org/specializations/python>

2. Coding Ninja:-

Learnt Python basics from Coding Ninja.

<https://www.codingninjas.com/courses/python-data-structures-and-algorithms>

3. Stackoverflow:-

We have used this site for solving our different problems which has occurred during this project.