Chatbot To Shop For Essentials During Pandemic Using Watson

1.INTRODUCTION

1.1 Overview

My project is a chatbot to a shop for essentials during panedemic named PANDSTORE and using watson assistant.
The chatbot interactes with the user and answer him according to his demand .

1.2 Purpose

We all noteced how the coronavirus pandemeic changed our lives .Social distancing have led to a more virtual existance .That's why shopping you essentials online without being under the risk of getting infected is the best way to adopt to the situation .

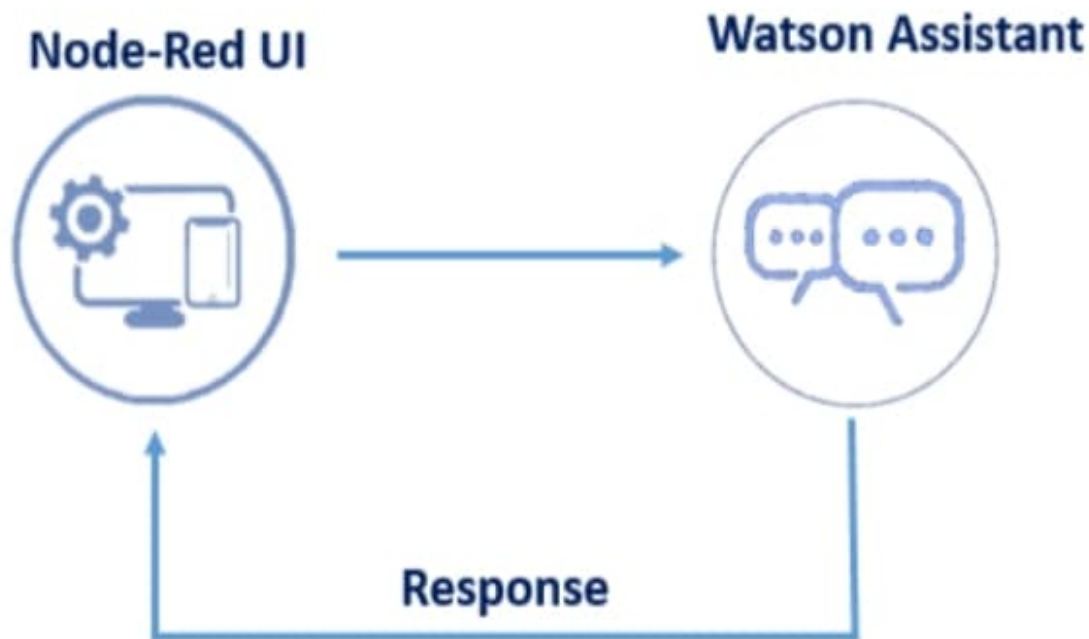## 2. LITERATURE SURVEY

2.1 Existing problem

To be honest online shopping has grown in Tunisia since the coronavirus pandemic but hurdles remain. Tunisia steps continue to be held back in this area due the abscence of a clear government strategy to accelerate the spread of its utility .

2.2 Proposed solution
Thanks to PANDSTORE ,these online procedure are a lot easier since it is
 24 hours available ,and it relues with instant consistent answers .

3. THEORITICAL ANALYSIS

3.1 Block diagram

3.2 Hardware / Software designing

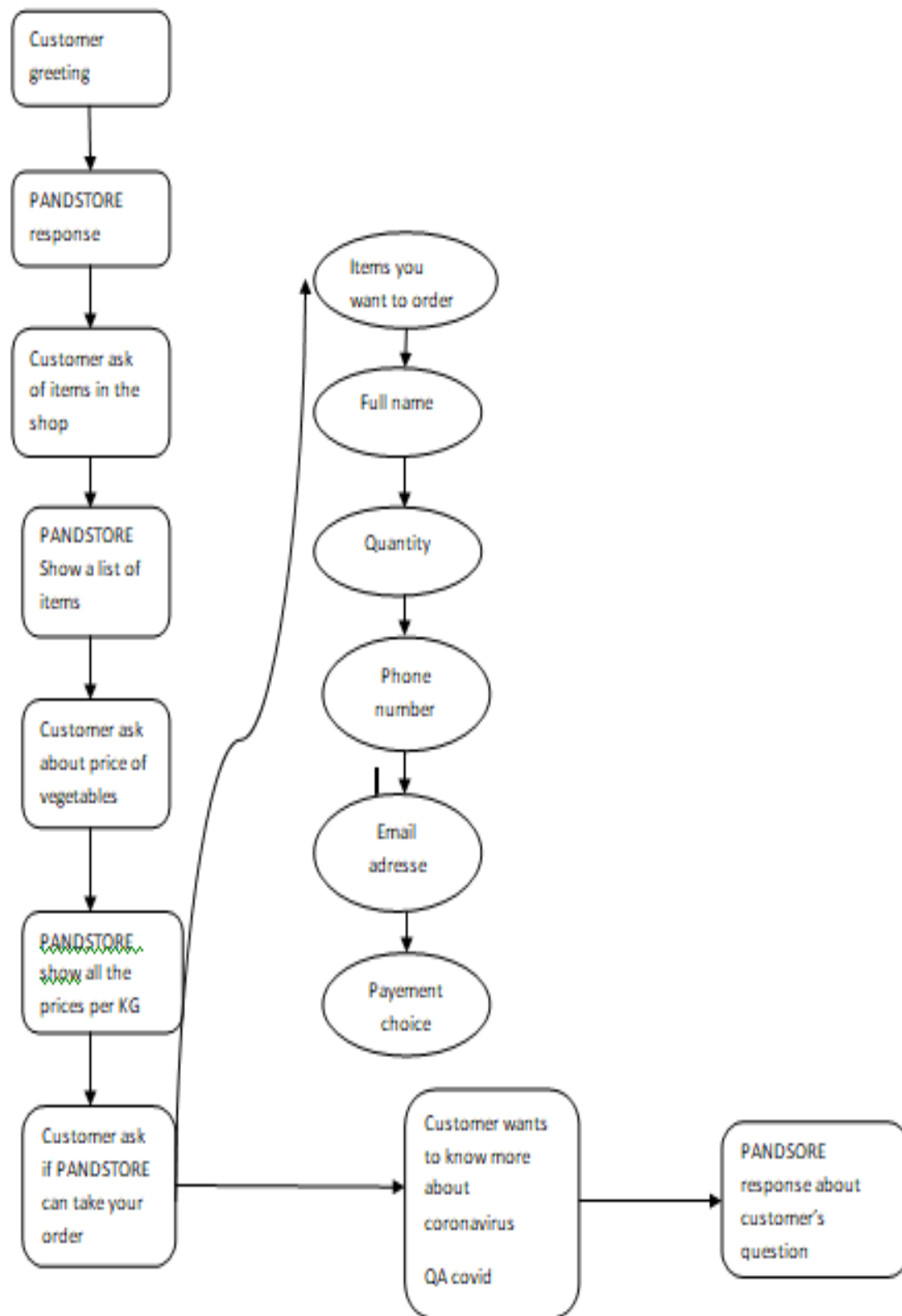Hardware requirements : Pc , internet connection
Software requirements : IBM cloud account , Watson assistant service , Node-Red

4. EXPERIMENTAL INVESTIGATIONS

While working on this solution , first i searched for an essentials database to implement it in PANDSTORE ,plus I searched for each items prices .

Then I made an investigation on the coronavirus to represent it to the user when he ask the PANDSTORE .

5 .FLOWCHART

```
Customer
greeting
   │
   ▼
PANDSTORE                    ┌──────────────┐
response                     │   Items you  │
   │                         │ want to order│
   ▼                         └──────────────┘
Customer ask                        │
of items in the                     ▼
shop                            ┌──────────┐
   │                            │ Full name│
   ▼                            └──────────┘
PANDSTORE                           │
Show a list of                      ▼
items                           ┌──────────┐
   │                            │ Quantity │
   ▼                            └──────────┘
Customer ask                        │
about price of                      ▼
vegetables                      ┌──────────┐
   │                            │  Phone   │
   ▼                            │  number  │
PANDSTORE                       └──────────┘
show all the                        │
prices per KG                       ▼
   │                            ┌──────────┐
   ▼                            │  Email   │
Customer ask                    │ adresse  │
if PANDSTORE                    └──────────┘
can take your                       │
order                               ▼
                                ┌──────────┐
                                │ Payement │
                                │  choice  │
                                └──────────┘
```

| Customer ask if PANDSTORE can take your order | → | Customer wants to know more about coronavirus QA covid | → | PANDSORE response about customer's question |

6. RESULT

Assistant preview

Hello I am PANDSTORE your shop for essentials during pandemic bot
Is there anything I can do for you ?

PANDSTORE

Hello

hello how can I help you

Good morning

GOOD MORNING How can I help you

Salam

Salem how can I help you

Type something...

| | | ◯ < |

Ok thank you

I hope that my assistance was beneficial for you . Stay Safe PANDSTORE

Type something...

| | | ◯ < |

List of items please

Grocery List

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Fruits
☐ Apples
☐ Pears
☐ Bananas
☐ Oranges
☐ Berries
☐ Grapes
☐ Melon
☐ Lemon/Lime

Vegetables
☐ Salad Greens
☐ Broccoli
☐ Carrots
☐ Cucumbers
☐ Garlic
☐ Lettuce
☐ Tomatoes
☐ Mushrooms
☐ Onions
☐ Peppers
☐ Potatoes
☐ Squash
☐ Zucchini

Deli
☐ Cold Cuts
☐ Cheese
☐ Deli Salad
☐ Hot Dogs

Meat/Fish
☐ Beef
☐ Poultry
☐ Pork
☐ Fish
☐ Bacon
☐ Sausage

Dairy
☐ Milk
☐ Butter
☐ Eggs
☐ Sour Cream
☐ Creamer
☐ Cream Cheese
☐ Yogurt

Frozen food
☐ Meals
☐ Pizza
☐ Potatoes
☐ Vegetables
☐ Waffles
☐ Ice Cream

Cereal
☐ Hot Cereal
☐ Cold Cereal

Baking
☐ Sugar
☐ Flour
☐ Vanilla
☐ Pancake Mix

Condiments
☐ Peanut Butter
☐ Jelly/Honey
☐ Ketchup
☐ Mustard
☐ Mayo
☐ Salsa

Spices
☐ Salt
☐ Pepper
☐ Taco Seasoning

Canned Goods
☐ Beans
☐ Soup
☐ Broth
☐ Tomato Sauce
☐ Tuna Fish
☐ Fruit
☐ Vegetables

Pasta/Rice
☐ Spaghetti
☐ Macaroni
☐ Rice

Beverages
☐ Water
☐ Juice
☐ Soda
☐ Coffee
☐ Tea
☐ Beer/Wine

Sauces/Oils
☐ BBQ Sauce
☐ Oil
☐ Vinegar
☐ Salad Dressing
☐ Soy Sauce
☐ Spaghetti Sauce
☐ Maple Syrup

Paper/Wrap
☐ Toilet Paper
☐ Paper Towels
☐ Tissues
☐ Napkins
☐ Aluminum Foil
☐ Plastic Wrap
☐ Plastic Baggies

Pet Items
☐ Dog Food
☐ Cat Food
☐ Cat Litter

Breads
☐ Sandwich
☐ Fresh Loaf
☐ Bagels
☐ Muffins
☐ Pitas
☐ Tortillas
☐ Buns
☐ Croutons

Snacks
☐ Hummus
☐ Cookies
☐ Chips
☐ Dip
☐ Crackers
☐ Candy
☐ Nuts
☐ Popcorn
☐ Raisins
☐ Snack Bars

Toiletries
☐ Soap
☐ Shampoo
☐ Conditioner
☐ Razors
☐ Shaving Cream
☐ Deodorant
☐ Lotion
☐ Toothpaste
☐ Floss
☐ Pain Reliever

Household
☐ Garbage Bags
☐ Laundry Soap
☐ Dryer Sheets
☐ Bleach
☐ Dish Soap
☐ Hand Soap
☐ Cleaner
☐ Glass Cleaner
☐ Sponges
☐ Batteries
☐ Light Bulbs
☐ Stamps

And also...

...and don't forget to buy yourself some flowers

LIST OF ITEMS

Type something...

Prices of vegetables

SEEDS VEGETABLES
-Broad Beans (2.5 dt per KG)
-Green Peas (3.1 dt per KG)
-Lentils Seeds (3.8 dt per KG)
-Beans (4 dt per KG)

PANDSTORE

Order

what is the item you want to order ?

Fruits

write your full name please

Rayhane Dhifallah

the quantity please

5 kg

please write your phone number (demanded form:--)

54-336-481

please type your email adresse

Rayhanedhifallah99@gmail.com

we offer cod upi and card what is the mode of payement you want

Card

your order of fruits of quantity 5(KG /pieces) is placed please do payement through card we will contact you through your phone number

What is covid

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.

Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

Should i do disinfecting process ?

Disinfecting

Before preparing or eating food it is important to always wash your hands with soap and water for at least 40-60 seconds. Regular food safety and handling guidance should be followed.

Can i go out for shopping ?

Shopping

If you have symptoms of COVID-19, you should not go out You can shop online with many shops and supermarkets and have it delivered to your door or collected at a collection point. If you are food shopping and you are fit and well, it is recommended that you go to a local shop, or collect your online shopping to ensure that home delivery slots are available to those who need them most.

Type something...

Hello I am PANDSTORE your shop for essentials during pandemic bot
Is there anything I can do for you ?

HI!

PANDSTORE

Type something...

PANDSTORE for online shopping

list of items

list of healthy food

Talk to PANDSTORE

Custumer **good morning**

write here *
good morning

SUBMIT   CANCEL

PANDSTORE

Bot   GOOD MORNING How can I
Response   **help you**

7.ADVANTAGES & DISADVANTAGES

Advantages:

As I said in the first page a chatbot is hours available ,it is extremly responsive and releavent since it replies with instant and constant answers .
Besides a chatbot has an endless patience , it can show to the customer the patience that no human can provide which enhance the customer's satisfaction especially during a stressfull situation such as the pandemic .

Disadvantages:

the user interface design in my chatbot isn't perfect
One of the main cons of PANDSTORE is that a chatbot can't understand nature for example it can't adapt their language to match that of humans such as slang,misspellings... which leads to a higher capacity for misunderstanding .

8. APPLICATIONS

PANDSTORE can be applied on :
-shop sites /application
-facebook pages

9 .CONCLUSION

To conclude,I think that chatbot for essentials can be easily integrated in iur lives since it can be applied on many of our dialog and mobile application such as FB,Messenger,online shopping websites ....
Last but not least,I want to thank you for this opprtunities "Build A Thon " It actually helped me learn new concepts and encourage me to take my first step to AI .

10 .FUTURE SCOPE

Eventhough PANDSTORE is a small example of AI integration in our life ,but I think that it concepts helps us a lot as human being to adopt to all kind of situation.
Since it ensures a very smoth purchase experience and ain to satisfy the customer who tend to blend shopping on web,mobile .
To conclued ,the spread of AI integration all accross the world proves that AI is the future .

11.APPENDIX

source code

Node-Red :

link
https://node-red-pukws-2021-02-15.eu-gb.mybluemix.net/ui/#!/2?socketid=xq_wtF_U83gC0wM9AABI
https://node-red-pukws-2021-02-15.eu-gb.mybluemix.net/red/#flow/5d2b270b.b9e168

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shop","disabled":false,"hidden":false}]

chatbot :

https://web-chat.global.assistant.watson.cloud.ibm.com/preview.html?region=eu-gb&integratio
nID=49425a88-dbd0-4d78-b24d-5be9883567d9&serviceInstanceID=9c2f3bad-bbeb-4c95-9d
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