ONLINE ORDERING SYSTEM

REVIEW REPORT

Submitted by

MOHD UMAR 18BCE0196

RAHUL BAGGU 18BCE0029

Prepared For

DATABASE SYSTEMS (CSE2004) – PROJECT COMPONENT

Submitted To

Dr. GOVINDA K

Associate Professor

School of Computer Science and Engineering

Abstract

The following project is based on the online food delivery concept with a twist to modify it to the hotel management level. here we will tweak the algorithm to enhance stability of the online delivery system yet letting it perpetuate and resonate with the better functions of the system.

Here we will introduce various modules and QUICK SORT algorithm. We will also use some GUI for the project on a basic level to make the system more easy to understand and adding a more user friendly touch to it.

Here we will be using the java language due to it's versatility and impressive all round performance. being a all in one package is more easy to easy to use and access. using java gives another huge java advantage of automated GUI due to its libraries making the process faster and simpler.

In the end the main motto behind our theme is to improvise, structure, and enhance the online ordering systems and introducing them in a smaller scale such as hotels, bars and motels. since the impervious ability of the user to customize and order the food of his choice with even visiting the reception could revolutionize the hotel's or the organizations process control, income and none the less it's revenue.

Our proposed system is an online food ordering system that enables ease for the customers. It overcomes the disadvantages of the traditional queueing system. Our proposed system is a medium to order online food hassle free from restaurants as well as mess service. This system improves the method of taking the order from customer. The online food ordering system sets up a food menu online and customers can easily place the order as per their wish. Also with a food menu, customers can easily track the orders.

This system also provides a feedback system in which user can rate the food items. Also, the proposed system can recommend hotels, food, based on the ratings given by the user, the hotel staff will be informed for the improvements along with the quality. The payment can be made online or pay-on-delivery system. For more secured ordering separate accounts are maintained for each user by providing them an ID and a password.

1. INTRODUCTION

Due to the advent of many online food ordering service system most people have stopped using the hotel's restaurant and bars reducing the economic factor and inflow of money in the hotel as it is considered as one of the major financial inflows in the industry. Since the arrival of food apps such as Zomato and Swiggy the hotel industry have rendered in the influx of money hence making it very difficult to maintain and subside the business.
Hence this project will help owners to improve their income and build better relationships with the customers.

An online ordering system for Restaurants helps enhance the customer-restaurant relationship by providing end to end Customer Relationship Management (CRM) system. It provides a complete sales dashboard with information about new/active/canceled orders, lifetime sales details, etc.
It also comes with an order management system that streamlines the entire ordering process starting from order placement to final delivery.

Whenever customers place an order, an efficient online ordering system sends notifications via email or SMS to help the restaurant staff make the order execution faster. On the other hand, such software are also equipped with GPS systems that help you capture the entire address that in turn ensure timely and fast deliveries.

The online food ordering system sets up a food menu online and customers can easily place the order as per they like. Also with a food menu, online customers can easily track the orders. The management maintains customers database, and improve food delivery service. The Restaurant management systems motivates us to develop the system. There are various facilities provided so that the users of the system will get service effectively. Also, the system considers Restaurants as well as Mess facility to the customers. Again, the idea comes that mostly mess users are person who are shifted for various reason in new cities. So, they are interrelated. Increasing use of smart phones is also considered as a motivation, so that any users of this system get all service on single click. Another motivation can be considered as the system will be designed to avoid users doing fatal errors, users can change their own profile, users can track their food items through GPS, users can provide feedback and recommendations and can give

ratings, it will give appropriate feedbacks to Restaurants / Mess service providers. Due to lack of a full fledge application that can fulfill the customer requirements by providing him food from restaurants as well as from mess service, there is a need for the system. This proposed system will be used by the people who keep shifting from cities to cites. As well as, it will be useful for the students studying in different cities. The proposed system will provide the flexibility to the Customers/Users to order from either Restaurants or Mess. It will also provide Recommendations to the customers from the restaurants/mess owners uploaded on a daily basis. In the proposed system, there will be no limitation on the amount of order the customer wants. Also, same application can be used as a Startup Business for the developers. It will provide real time customers

feedback and ratings along with the comments to the restaurants/mess owner. It gives appropriate feedbacks to users, so if there is any error happened, then there will be a feedback dialog toward users. The proposed system is designed to avoid users doing fatal errors and inappropriate action. Scope of proposed system is justifiable because in large amount peoples are shifting to diff erent cities so wide range of people can make a use of proposed system. The system/interface will take input from the user. The major attributes that will give input to the dataset are: name, address, email-Id, mobile no, other personal related values, etc. The output will include user/customer's Order, Bill, Feedback and Payment options. Initially there will be 10 to 12 restaurants and mess services considered inside 2 to 3 areas. The reason why to choose this project is the idea behind project that is to solve problem of people which they are facing when they shift to different city. The system is not only for user but also for provider who provides food service. This system is for making efficient communication between consumer and producer of the food system which will then leads to the ideal and effective system

2. PROJECT SCOPE

The above system helps in the following ways:

a. Reduce time between order instructions and improve management.
b. Helps in economic and financial factors of the hotel.
c. Helps in building better relationships with customers.
d. Means to compete with only delivery sites on equal grounds.
e. Modernization and uplifting means for a organization.

3. KEY CONTACTS AND STAKEHOLDERS

NAME	REG NO.	NUMBER
UMAR	18BCE0196	9264951747
RAHUL	18BCE0029	6301724463

4. LITERATURE REVIEW

In [1] an automated food ordering system is proposed which will keep track of user orders smartly. Basically,
they implemented a food ordering system for diff erent type of restaurants in which user will make order or make custom food by one click only. By means of android application for Tablet PCs this system was implemented. The front end was developed using JAVA, Android and at the backend MySQL database was used.

In [2] Customer using a Smartphone is considered as a basic assumption for the system. When the customer approach to the restaurant, the saved order can be confirmed by touching the Smartphone. The list of selected preordered items shall be shown on the kitchen screen, and when confirmed, order slip shall be printed for further order processing. The solution provides easy and convenient way to select pre-order transaction form customers.

In [3] there was an attempt to design and implementation of digital dining in restaurants using android technology. This system was a basic dynamic database utility system which fetches all information from a centralized database. Efficiency and accuracy of restaurants as well as human errors were improved by this user-friendly application. Earlier drawbacks of automated food ordering systems were overcome by this system and it requires a onetime investment for gadgets.

In [4] an application of integration of hotel management systems by web services technology is presented. Ordering System Kitchen Order Ticket (KOT), Billing System, Customer Relationship Management system (CRM) are held together by the Digital Hotel Management. Add or expand of hotel software system in any size of hotel chains environment was possible with this solution.

In [5] research work aims to design and develop a wireless food ordering system in the restaurant. Technical operations of Wireless Ordering System (WOS) including systems architecture, function, limitations and recommendations were presented in this system. It was believed that with the increasing use of handheld device such as PDAs in restaurants, pervasive application will become an important tool for restaurants to improve the management aspect by minimizing human errors and by providing higher quality customer service.

In [6] along with customer feedback for a restaurant a design and execution of wireless food ordering system was carried out. It enables restaurant owners to setup the system in wireless environment and update menu presentations easily. Smart phone has been integrated in the customizable wireless food ordering system with real-time customer feedback implementation to facilitate real-time communication between restaurant owners and customers.

In Paper [7], the purpose of this study was to investigate the factors that influence the attitude of internet users towards online food ordering in Turkey among university students. A Technology Acceptance Model (TAM) developed by Davis in 1986 was used to study adoption of Web environment for food ordering. Trust, Innovativeness and External Influences are added to the model as main factors along with TAM.

In Paper [8], the research work aims to automate the food ordering process in restaurant and also improve the dining experience of customers. Design implementation of food ordering system for restaurants were discuss in this paper. This system, implements wireless data access to servers. The android application on user's mobile will have all the menu details. Kitchen and cashier receives the order details from the customer mobile wirelessly. These order details are updated in the central database. The restaurant owner can manage the menu modifications easily.

In Paper [9], this research works on eff orts taken by restaurants owners also to adopt information and communication technologies such as PDA, wireless LAN, costly multi-touch screens etc. to enhance dining experience. This paper highlights some of the limitations of the conventional paper based and PDA-based food ordering system and proposed the low-cost touch screen based Restaurant Management System using an android Smartphone or tablet as a solution

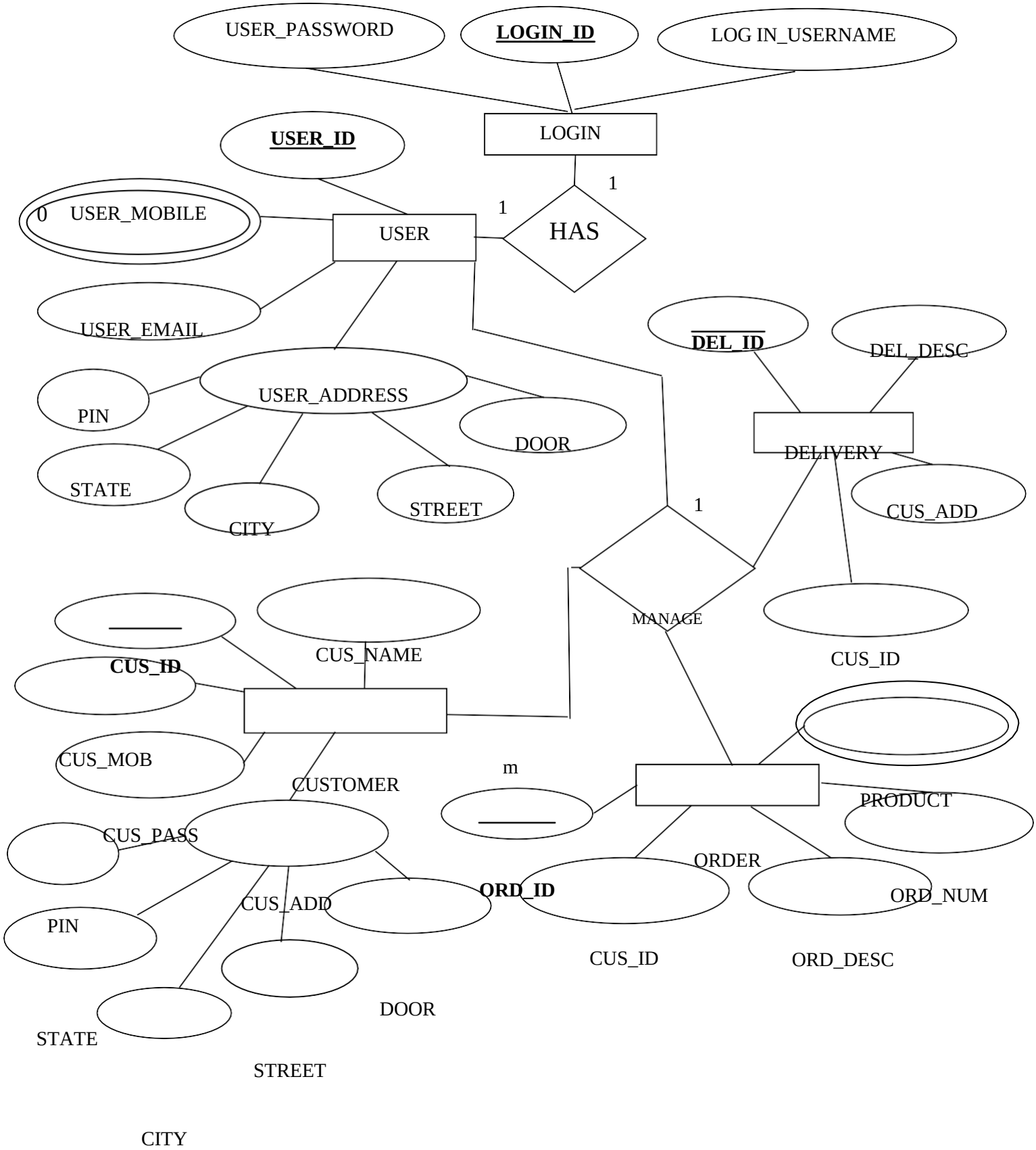
4.1 Software Resource Requirements

FRONT END

HTML
CSS

BACKEND
XAMAPP
PHP
MY SQL

5. ER DIAGRAM


USER_PASSWORD
LOGIN_ID
LOG IN_USERNAME
LOGIN
USER_ID
1
1
0
USER_MOBILE
USER
HAS
USER_EMAIL
DEL_ID
DEL_DESC
USER_ADDRESS
PIN
DOOR
DELIVERY
STATE
STREET
CUS_ADD
CITY
1
MANAGE
CUS_NAME
CUS_ID
CUS_ID
CUS_MOB
CUSTOMER
m
PRODUCT
CUS_PASS
ORDER
ORD_ID
ORD_NUM
CUS_ADD
PIN
CUS_ID
ORD_DESC
DOOR
STATE
STREET
CITY

6. TABLES AND CONSTRAINTS

Table Name: Login

Attribute	Data Type	Constrain
Log in_id	Varchar(25)	Primary key
Log in_username	Varchar(25)	Not null
User_password	Varchar(25)	Not null

Table Name: User

Attribute	Data Type	Constrain
User_id	Varchar(25)	Primary key
User_email	Varchar(25)	Not null
Pin	Number(6)	
State	Char(25)	
City	Char(25)	
Street	Char(25)	
Door	Char(25)	

Table Name: User_Mobile

Attribute	Datatype	Constrain
User_id	Varchar(25)	
User_mobile	Number(10)	Not starting with 0

Table Name : Customer

Attribute	Datatype	Constrain
Cus_name	Varchar(25)	Not null
Cus_id	Varchar(25)	Primary key
Cus_mob	number(10)	Not starting with 0
Cus_pass	Varchar(25)	Not null
Pin	Number(6)	
State	Char(25)	
City	Char(25)	
Street	Char(25)	
Door	Char(25)	

Table Name : Delivery

Attribute	Datatype	Constrain
Del_id	Varchar(25)	Primary key
Del_desc	Varchar(100)	
Cus_add	Varchar(100)	Foreign key on cus_add of customer table
Cus_id	Varchar(25)	Foreign key on cus_id of customer table

Table Name: Order

Attribute	Datatype	Constrain
Ord_id	Varchar(25)	Primary key
Cus_id	Varchar(25)	Foreign key on cus_id of customer table
Ord_desc	Varchar(100)	
Ord_num	Number(4)	Not null

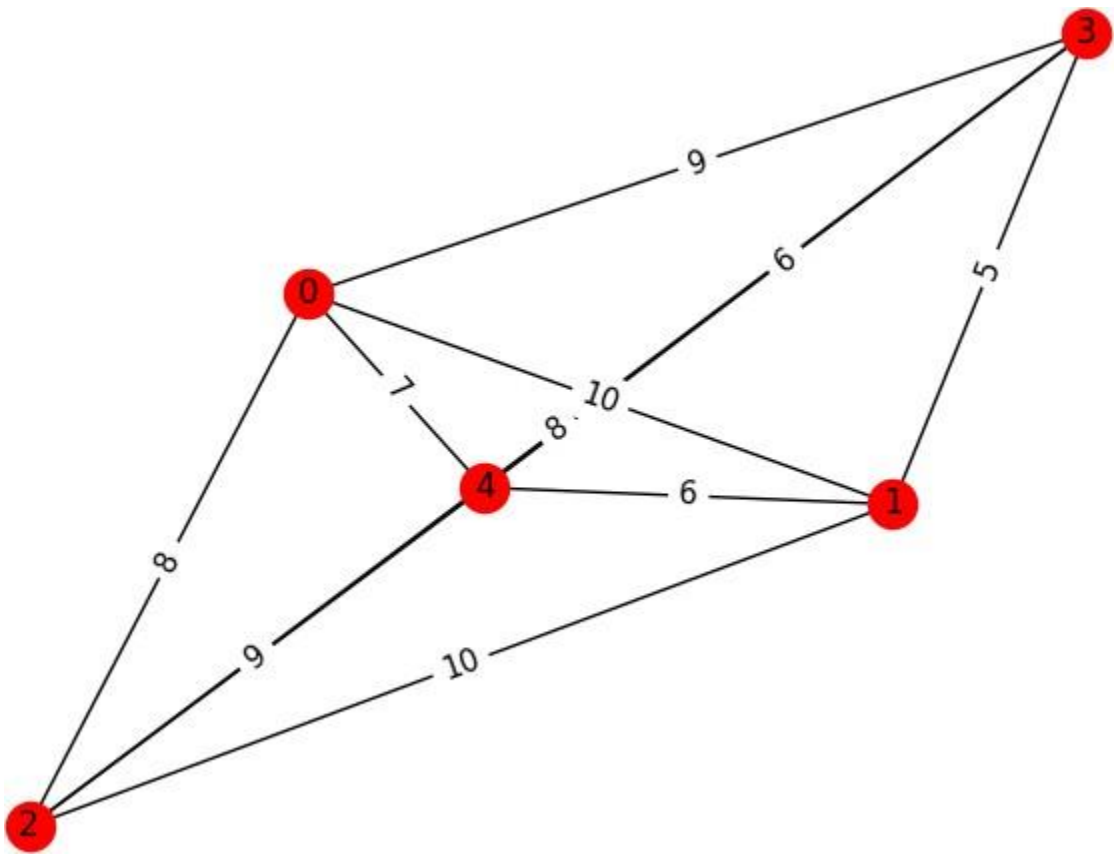
Table Name : Order_Product

Attribute	Datatype	Constrain
Ord_id	Varchar(25)	
Product	Varchar(25)	Not null

7. WORK BREAK DOWN

NAME	REG NO.	WORK DONE.
UMAR	18BCE0196	
RAHUL	18BCE0029	

7. OLD ALGORITHM FCFS(FIRST COME FIRST SERVE)



1. In this algorithm the person who ordered the first will be served first by Hotel.

2. Suppose dominos is at point (4) and surrounded by four corner L-block(point 0), k-block(point 1), P and Q-block (point 2 and 3) respectively.

3. So according to this algorithm if P-block person ordered the first then will get the first Irrespective of L-block person ordered after P-block come before the P-block.

7. NEW ALGORIHTM

Christofides algorithm:

1. Create a minimum spanning tree MST of G. (using Kruskal's or Prim's algorithm)

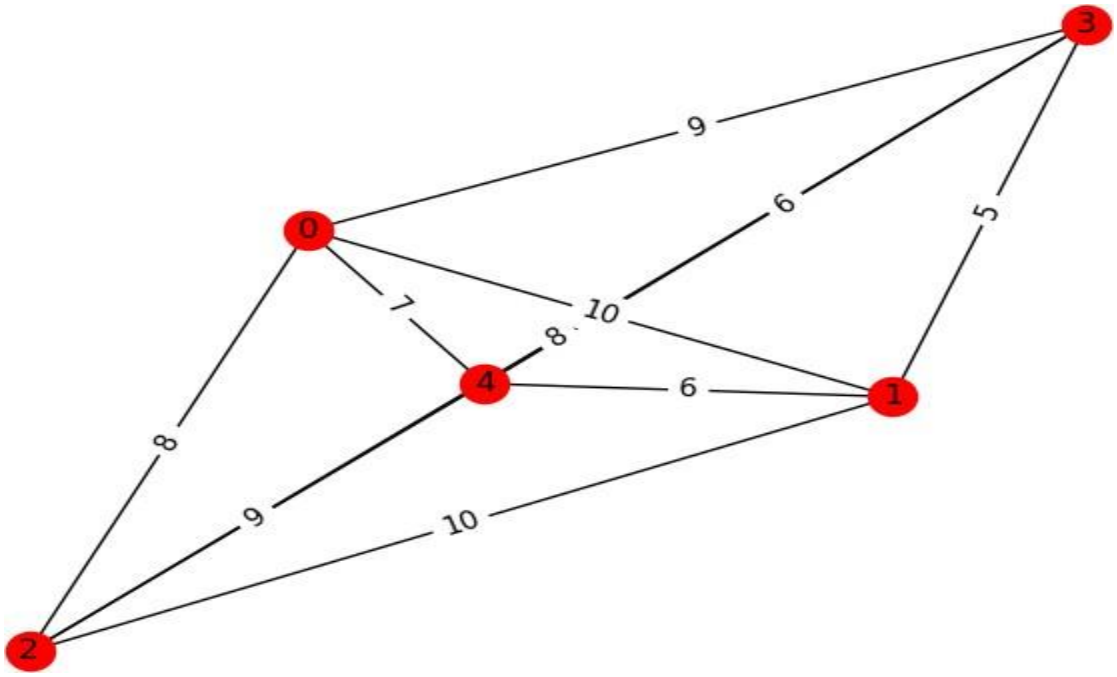
2. Let odd_vert be the set of vertices with odd degree in MST. The number of vertices with odd_degree is guaranteed to be even(Proof: HandshakingLemma).

3. Find a minimum-weight perfect matching pairs in the induced subgraph given by the vertices from odd_vert. Add those edges to MST. The resulting MST now has all the vertices with even degree- hence, is a Eulerian circuit.

4. Make the circuit found in previous step into a Hamiltonian circuit by skipping repeated vertices.

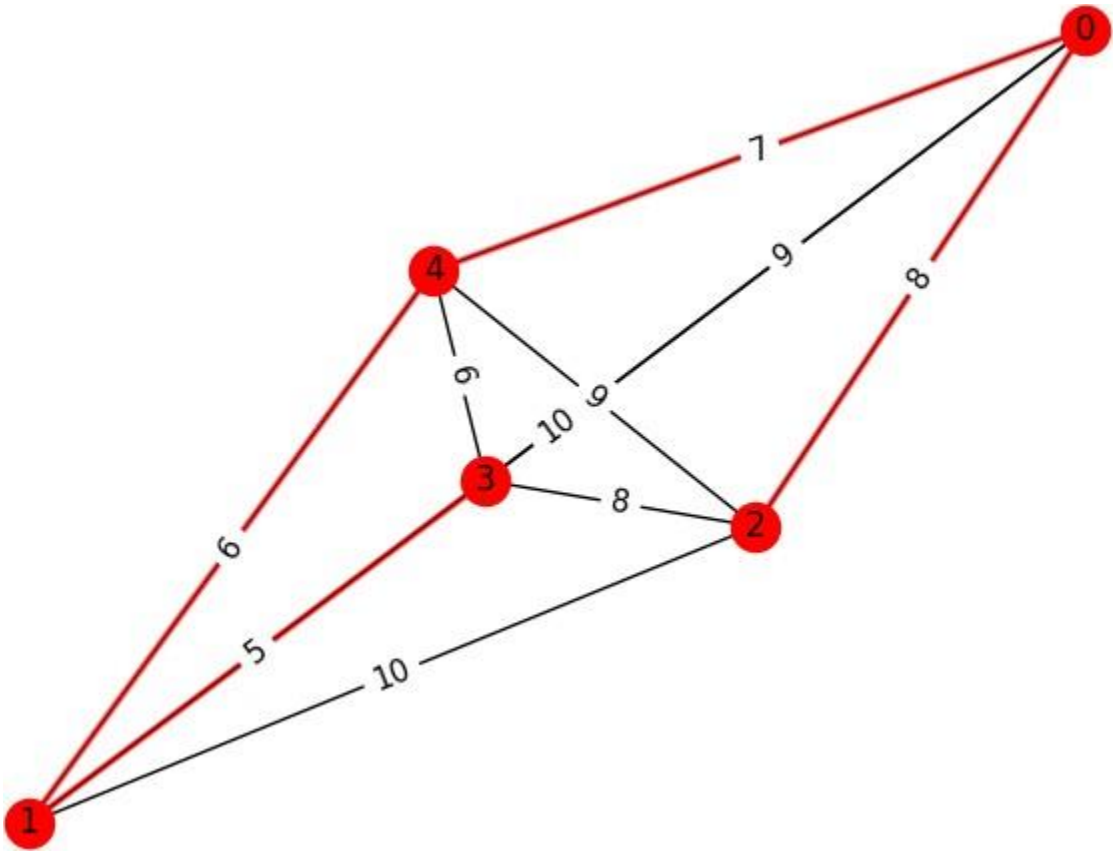
Draw Graph

An undireced graph is drawn with nodes representing the cities and egde labels denoting the distance between them



Step 1:

A minimum spanning tree MST is obtained from the given grapg G (using Kruskal's algorithm)

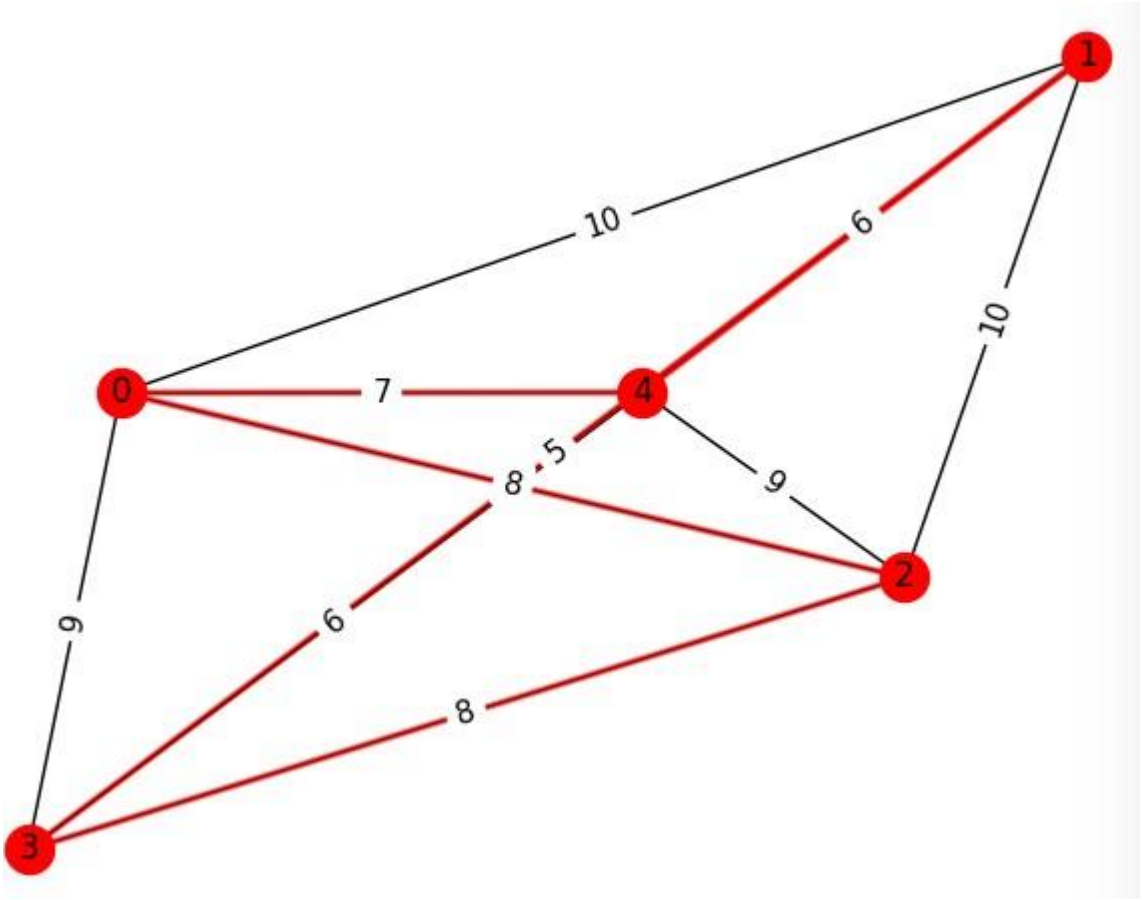


Step 2:

There are 2 vertices with odd degree in MST graph, that is, node 2 and node 3. Hence, odd_vert = [2,3]

Step 3:

Since there are only 2 vertices in odd_vert, we get one minimum weight matching pair, i,e, (2,3). Adding this edge to MST, we have the below graph.



Step 4:

Finding the shortest hamiltonian circuit from the above graph (by skipping already visisted vertices) , we have

```
0 -> 2 -> 3 -> 1 -> 4 ->0
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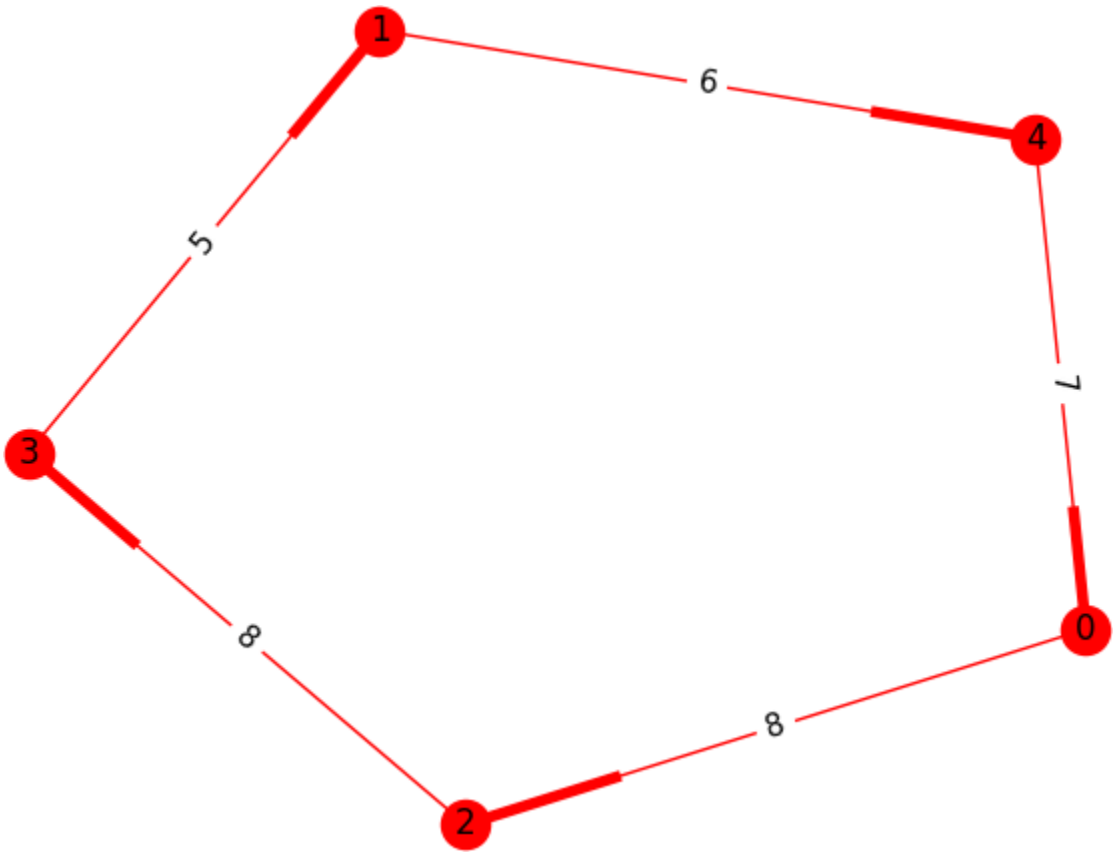
The below diagram shows the shortest route for TSP. PS: The arrows here are just for visual purposes to denote the route. The cycle could be traversed in anydirection.



The shortest route for TSP

Comparision of algorithms

1. From the above two algorithm (FCFS AND CHRISTOFIDES) I concluded that second algorithm is more effective as because it use shortest distance path which help the man to serve the person in shortest time and satisfy everyone person .

2. It also have one shortcoming like if two person order from same distance but person first is order first so by using christofides algorithm it should go to the second person but if he do so then first person have to wait more than the usual time.

3. In the last CHRISTOFIDES algorithm is better than FCFS.

CONCLUSION:

Therefore, conclusion of the proposed system is based on user's need and is user centered. The system is developed in considering all issues related to all user which are included in this system. Wide range of people can use this if they know how to operate android smart phone. Various issues related to Mess/Tiffin Service will be solved by providing them a full-fledged system.Thus, implementation of Online Food Ordering system is done to help and solve one of the important problems of people. Based on the result of this research, it can be concluded: it helps customer in making order easily; it gives information needed in making order to customer. The Food website application made for restaurant and mess can help restaurant and mess in receiving orders and modifying is data and it is also made for admin so that it helps admin in controlling all the Food system. With online food ordering systesm, a restaurant and mess menu online can be set up and the customers can easily place order. Also with a food menu online, tracking the orders sdone easily, it maintain customer's database and improve the food delivery service. The restaurants and mess can even customize online restaurant menu and upload mages easily. Having a restaurant menu on internet, potential customers can easily access it and place order at theirconvenience. Thus, an automated food ordering system is presented with features of feedback and wireless communication. The proposed system would attract customers and adds to the efficiency of maintaining the restaurant and mess ordering and billing sections. Scope of the proposed system is justifiable because in large amount peoples are shifting to different cities so wide range of people can make a use of proposed system.

REFERENCES :

[1]. Kirti Bhandge, Tejas Shinde, Dheeraj ingale, Neeraj Solanki, Reshma Totare,"A Proposed System for Touchpad Based Food Ordering System Using Android Application", international Journal of Advanced Research in Computer Science Technology (JARCST 2015).

[2]. Varsha Chavan, Priya Jadhav,Snehal Korade,Priyanka Teli, " implementing Customizable Online Food Ordering System Using Web Based Application", international Journal of innovative Science, Engineering Technology(JISET) 2015.

[3]. Resham Shinde, Priyanka Thakare, Neha Dhomne, Sushmita Sarkar, "Design and implementation of Digital dining n Restaurants using Android", international Journal of Advance Research in Computer Science and Management Studies 2014.

[4]. Ashutosh Bhargave, Niranjan Jadhav, Apurva Joshi, Prachi Oke, S. R Lahane,"Digital Ordering System for Restaurant Using Android", international Journal of Scientific and Research Publications 2013.

[5]. Khairunnisa K., Ayob J., Mohd. Helmy A. Wahab, M. Erdi Ayob, M. Izwan Ayob, M. Afif Ayob, "The Application of Wireless Food Ordering System" MASAUM Journal of Computing 2009.

[6]. Noor Azah Samsudin, Shamsul Kamal Ahmad Khalid, Mohd Fikry Akmal Mohd Kohar, Zulkifli Senin, Mohd Nor hkasan," A customizable wireless food ordering system with real time customer feedback", EEE Symposium on Wireless Technology and Applications(SWTA) 2011.

[7]. Serhat Murat Alagoza, Haluk Hekimoglub," A study on tam: analysis of customer attitudes in online food ordering system", Elsevier Ltd. 2012.

[8]. Patel Krishna, Patel Palak, Raj Nirali, Patel Lalit," Automated Food Ordering System", international Journal of Engineering Research and Development (JERD) 2015.

[9]. Mayur D. Jakhete, Piyush C. Mankar," implementation of Smart Restaurant with e-menu Card," international Journal of Computer Applications 2015 of Smart Restaurant with e-menu Card, " international Journal of Computer Applications 2015.