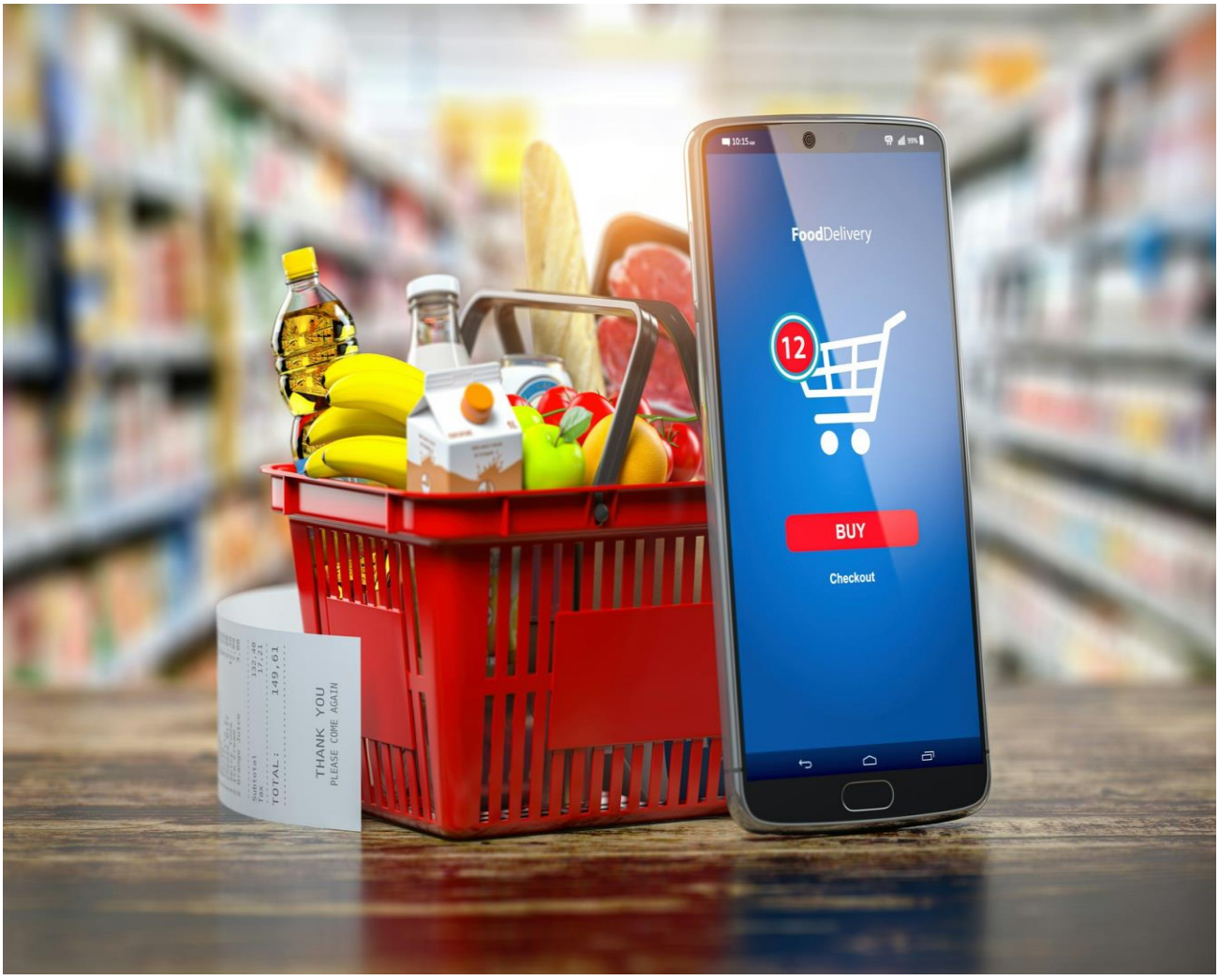
E-Food: Success Factors for Establishing Online Food Retailing



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Introduction

Today we would like to talk about efood or food retailing online. In this study we find objective, limitation, advantages, disadvantages, benefits, AIMs and so on with help of example.

Food

As we know food is very important part of our life. Human can not live without food.

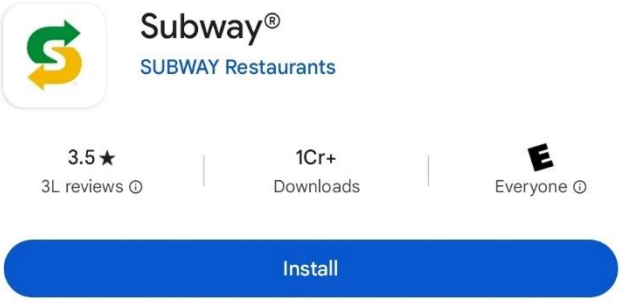
Basically, Food is the source of carbohydrates, fat, proteins, vitamins and other ingredients which gives us energy for word, body repair and other substance that human need to live. Mainly, we have 2 types for retailing food i.e. visit shop for food and Online Food Retailing.

E-Food

Electronic Food (E-Food) deals with the use of Information and Communication Technologies (ICTs) as a mean that supports and coordinates actions for food production, manufacture and safety. E-food involves the conceptualization, design, development, evaluation and application of innovative ways of use of Information and Communication Technologies (ICTs) with primary focus on food sector. It provides all the required information for food including farming, marketing, environment, learning, laws, specialists, scientists, consumers and technology (including automation). It covers the fields of food safety, health, proper treatment of animals and crops and food refining, manufacture and handling. It is able to offer data that can be used for actions and key declarations focused on future strategies in the field of food production and manufacture. It could also assist food sector stakeholders to create communities for ideas exchange, experiences, good practices and resources related to E-Food and this approach will assist the knowledge created to be effectively shared and globally used. It is widely accepted in the scientific community that ICTs consist of part of food development, production and manufacturing but still there are not clear borders between e-food and other e-scientific disciplines in which it intersects. This paper deals with E-Food issues and trends and shows that E-food is a separate application-sector of ICTs for food production, manufacturing and safety. [1]

So, we can say that **efood** is not just about online **buying or retailing** food online from different websites or applications, it is about **development, manufacture, design and**

bring new ideas. For example, a very famous food brand **“Subway”** has online application with same as brand name “SUBWAY”. On that site, we can design, customize or develop our own meal from different interfaces.



History of Online Food Retailing

Technology has become key and central to supermarket activities. The list of in-store and logistical technologies that make all retailer channels of distribution more efficient and effective are being developed. However, all the various food retail channels are capable of developing new ways of satisfying the customer. Already in the US “no checkout stores” are being developed using RFID and other methods to allow consumers to simply pick up their products and walk out the door. New alternative methods of supply chain capabilities are appearing every day. But these technologies don't give any single retail channel an advantage as any format could adopt this technology. Peapod, a company owned by a traditional supermarket chain Ahold (a Dutch company), offers home delivery. What makes the company special is that you can actually order based on billboards placed in various areas with electronic codes to simply scan the desired items and then they will appear at your home. Tesco has a “click and collect” which allows you to order online and then go to a specific location (not necessarily a supermarket) to pick up your items. Tesco is expanding its concept of home delivery to go wherever the shopper is. Tesco is planning to build a national network of online-only stores called “Dark Stores” as it looks to cash in on the surge in popularity of internet grocery shopping. Auchan, has drive-through markets and Marche has its own home delivery trucks.[2]

Problem in online food retailing

1. **Delivery inefficiency: -** Due to navigation problems, traffic issues or other issues while delivery efficiency is affected. Order can be delay or cancel. So, it effected on both customers and manufactures.

2. **Cost effective: -** Online food retailing is coast effective. Because when we buy food online delivery charges are included and some time it effects on tax rate as compared to offline food retailing so the Prices can fluctuate.

3. **Technology challenges: -** Sometime a person like old ages people do not know about new technology also, they can't understand the interface of application or website to buy food. Also, many site or application have different interfaces or pages while order that make it complicated and time taking.

4. **Storage: -** To save taxes delivery charges or other charge people like to buy bulk grocery so that cost effective rate can be less. Cause of this they have storage issues many times.

Hypothesis

- Provide quick and adaptable delivery times.
- Services for selling e-food increase privacy and resistance.
- There is an increase in the dependability of e-food commerce services.
- Provide mobility in terms of services.
- Increase service accessibility.
- The cost of services for selling e-food is competitive.
- Provide rich food information.
- Provide rare items.
- Increase customer loyalty by providing loyalty points.

Study objectives

Study objectives: - In this, our objective is to tell about efood. How food related to the technology, how we can establish it online, what are advantages, disadvantages, hypothesis, methodology, limitations, concepts and other of efood.

eFood objectives: - Main objective of efood is helping to buy food like grocery and precook food. With this people can buy all the food online from home, workplace and other. They also can set time of delivery. It saves their time also make a choice

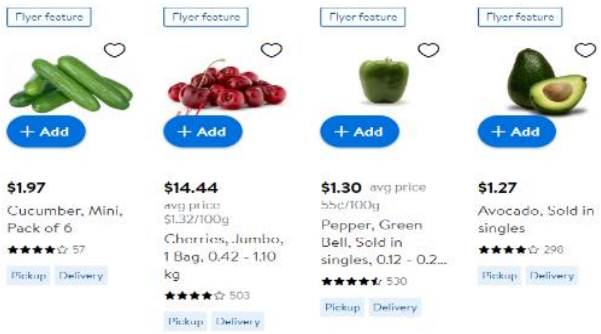
whenever they want food. Moreover, people can search for ingredients, food chemicals, reviews, rating of that food by efood.

Scope of the food retailing online

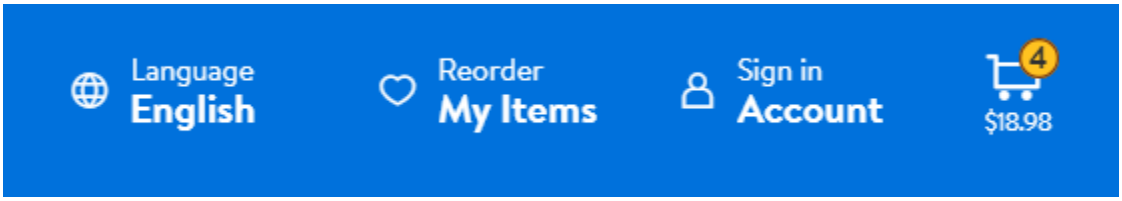
Nowadays, buy online grocery became very easy they have to just click, add to cart, check your cart, pay and that's it. Also, there is an option pay on delivery or cash on delivery. So, with these easy steps that make very easy to buy online food.

For Example: - Walmart

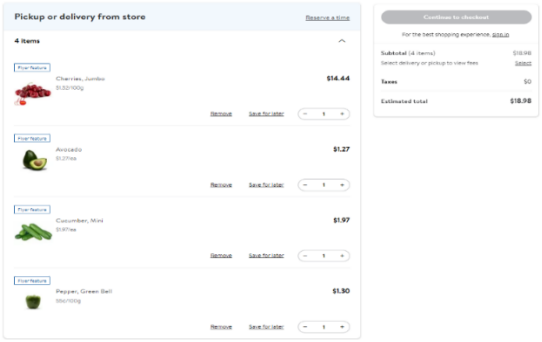
1. First, we have to **select,**



2. Then **go for checkout**,



3. Continue to **checkout**,

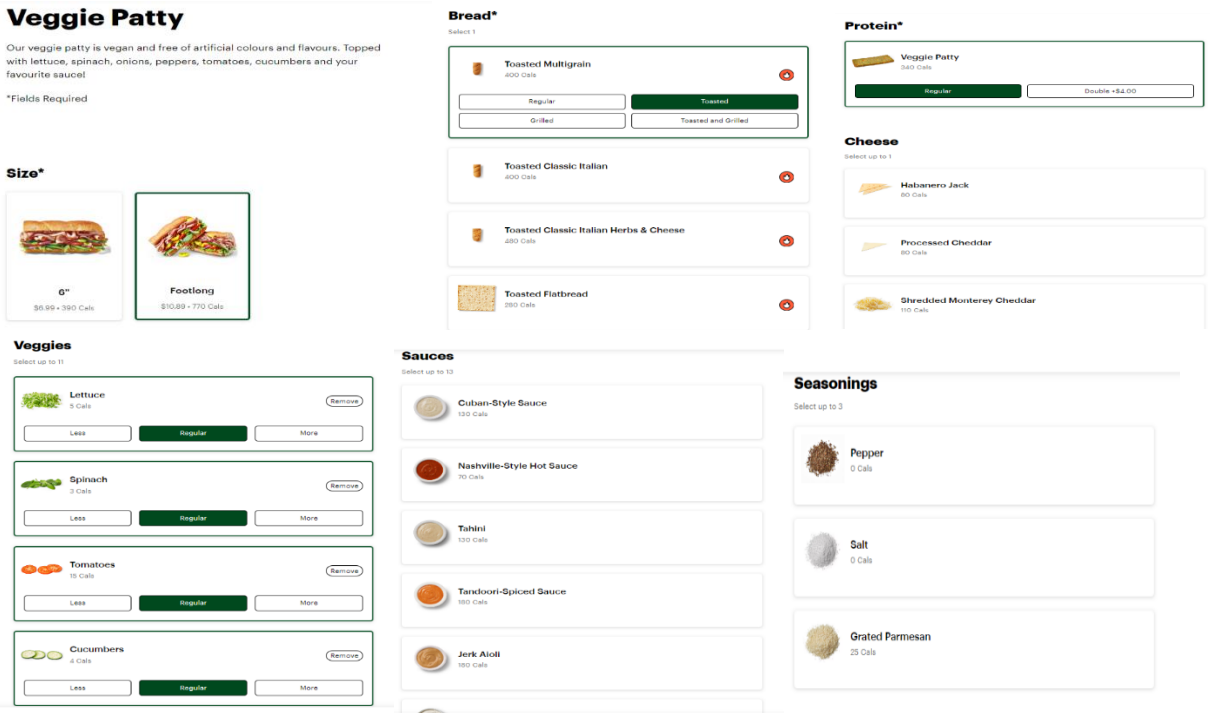


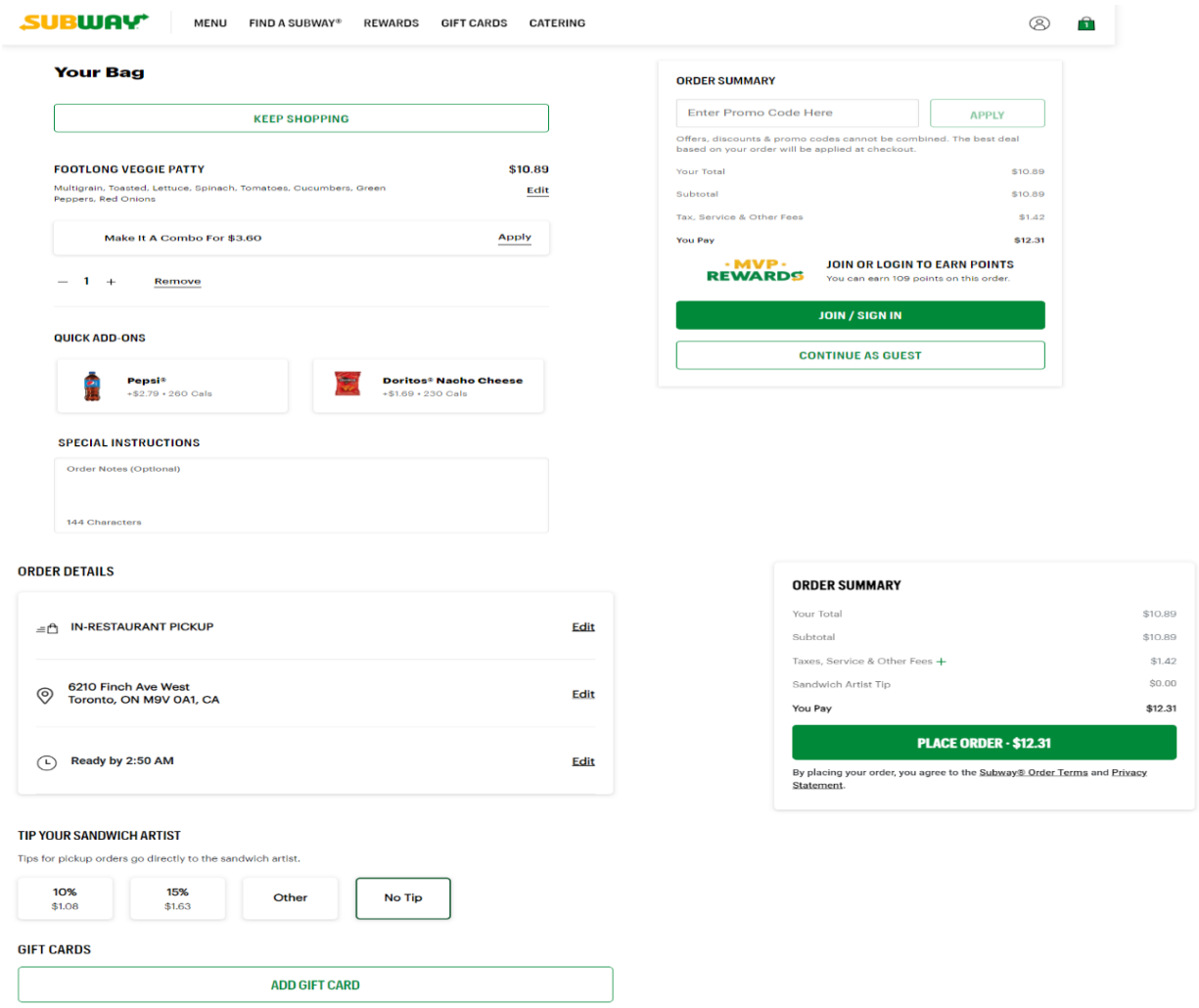
4. Click to **Pay**.

It is quite hard in precook food because we have to select all the options in different pages or phases.

For example, in subway we have first what **type of sub** you want,

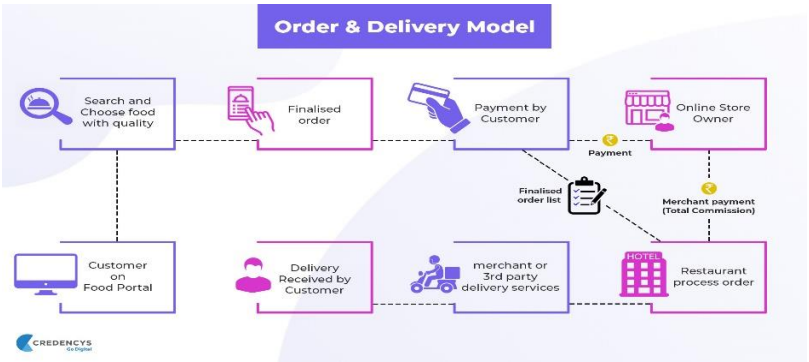
Than **go** through **different phases or pages** for order.





eFood Methodology

In eFood Methodology we have various steps. That are shown in figure.



1. As shown in figure, first customer has to go on food portal of store or company.
2. Then search choose the food with how much quantity and quality customer want.
3. Then finalized and checkout the order.
4. At last, customer have to pay for order.
5. After paying by customer, payment send to owner of store and order send to store or restaurant for process.
6. Owner sends commissions to store or restaurant.
7. Then delivery service delivers the order. Service can be do by 3rd party company or self by store.
8. At last of process the customer receives the order.

eFood Questionnaire or survey

We conduct a survey regarding efood.

Questions are Follow.

Q1. Name

Q2. Age

Q3. Email address

Q4. What is your marital status?

Q5. How often do you go to traditional food retailers?

Q6. How much time do you spend in the food retailers to make purchases?

Q7. Have you ever used e-food retailing services before to order food?

Q8. How often do you used e-food retailers services?

Q9. How much time do you spend using e-food retailing services to make purchases?

Q10. According to your experience, do you prefer to use e-food retailing services over traditional food retailers?

Q11. Which of the following factors considers a concern to use e-food retailing services instead of the traditional food retailers.[3]

Outcomes from establish food online

Name	Age	Email address	marital status	traditional food retailers preferred	spend time on food retailers	Ever used e-food retailing services	preferred e-food retailing services	Time spends using e-food retailing services	do you prefer to use e-food retailing service	Benefit of efood
Navpreet paul	23		Single	When needed	30-60 Minutes	Yes	When needed	0-30 Minutes	Yes	Delivery cost
Divya Sharma	26	divyasharma26@gmail.com	Single	Weekly	30-60 Minutes	Yes	Weekly	30-60 Minutes	Delivery cost	
Akash Singh	18	akashsingh18@gmail.com	Single	Monthly	1-2 Hours	Yes	Daily	0-30 Minutes	Yes	Delivery cost
Priya Gupta	22	priyagupta22@gmail.com	Single	Weekly	30-60 Minutes	Yes	Daily	30-60 Minutes	Yes	Services availability
Rohan Verma	27	rohanverma27@gmail.com	Married	Weekly	30-60 Minutes	Yes	When needed	0-30 Minutes	Yes	Services availability
Anjali Patel	19	anjalipatel19@gmail.com	Single	Weekly	1-2 Hours	Yes	Daily	0-30 Minutes	Yes	Reliability
Arjun Reddy	23	arjunreddy23@gmail.com	Single	When needed	0-30 Minutes	Yes	When needed	0-30 Minutes	Yes	Delivery time
Nisha Kapoor	30	nishakapoor28@gmail.com	Married	Daily	30-60 Minutes	Yes	When needed	0-30 Minutes	Yes	Services availability
Vikas Singh	20	vikassingh20@gmail.com	Single	Daily	0-30 Minutes	Yes	When needed	0-30 Minutes	Yes	Services availability
Maya Mishra	29	mayamishra2144@gmail.com	Married	Weekly	More than 2 hours	Yes	When needed	30-60 Minutes	Yes	Delivery time
Rahul Sharma	21	rahuls.459@gmail.com	Single	Weekly	0-30 Minutes	Yes	When needed	0-30 Minutes	Yes	Order packaging
Sandy	26	sandeepkalsicanada@gmail.com	Single	Weekly	0-30 Minutes	No	When needed	0-30 Minutes	No	Services availability
Neha Singh	28	nehasingh4421@gmail.com	Married	Daily	0-30 Minutes	Yes	When needed	0-30 Minutes	Yes	Reliability
Janvi	24	Clairejanvi@gmail.com	Married	When needed	0-30 Minutes	Yes	When needed	30-60 Minutes	No	Order packaging
Karan Gupta	25	karangupta2445@gmail.com	Married	Weekly	30-60 Minutes	Yes	When needed	1-2 Hours	Yes	Reliability
Tamanna	25	tamannalagah@gmail.com	Married	When needed	0-30 Minutes	No	Monthly	0-30 Minutes	Yes	
Shreya Verma	30	shreyaverma18@gmail.com	Married	Weekly	1-2 Hours	Yes	When needed	1-2 Hours	Yes	Delivery cost
Rajat Patel	25	rajatpatel2542@gmail.com	Single	Monthly	More than 2 hours	Yes	When needed	30-60 Minutes	Yes	Delivery time
Aarti Mishra	28	aartimishra5544@gmail.com	Married	Monthly	1-2 Hours	Yes	Weekly	0-30 Minutes	Yes	Delivery cost
Aditya Kapoor	32	adityakapoor3011@gmail.com	Married	Weekly	1-2 Hours	Yes	When needed	1-2 Hours	Yes	Delivery time
Priyanka Sharma	26	priyankasharma4519@gmail.com	Single	Daily	30-60 Minutes	Yes	When needed	0-30 Minutes	Yes	Delivery cost
Rohit Verma	19	rohitverma2473@gmail.com	Single	Weekly	1-2 Hours	Yes	Daily	0-30 Minutes	Yes	Reliability

Ananya Singh	29	singhananya2744@gmail.com	Married	Monthly	More than 2 hours	Yes	When needed	30-60 Minutes	Yes	Order packaging
Karthik Patel	23	karthikpatel2022@gmail.com	Married	Daily	0-30 Minutes	Yes	When needed	0-30 Minutes	Yes	Reliability
Kavita Sharma	22	kavitasharma2421@gmail.com	Single	Monthly	More than 2 hours	Yes	When needed	0-30 Minutes	Yes	Reliability
Siddharth Reddy	28	siddharthreddy2328@gmail.com	Single	Weekly	30-60 Minutes	Yes	Monthly	1-2 Hours	Yes	Order packaging
Aradhya Guptas	25	aradhyagupta1121@gmail.com	Married	Daily	0-30 Minutes	Yes	When needed	30-60 Minutes	Yes	Reliability
Deepak Singh	31	deepaksingh4425@gmail.com	Married	Daily		Yes	Daily	30-60 Minutes	Yes	Order packaging
Priya Patel	30	priyapatel3129@gmail.com	Single	Monthly	30-60 Minutes	Yes	When needed	1-2 Hours	Yes	Reliability
Priyanka Sharma	22	priyankasharma2511@gmail.com	Single	Daily	30-60 Minutes	Yes	When needed	30-60 Minutes	Yes	Services availability
Rohit Patel	21	rohitpatel19@gmail.com	Single	Weekly	30-60 Minutes	Yes	When needed	0-30 Minutes	No	
Aarti Singh	25	aartisingh2121@gmail.com	Married	Daily	30-60 Minutes	Yes	Weekly	1-2 Hours		Order packaging
Vikrant Reddy	38	vikrantreddy2888@gmail.com	Married	Monthly	More than 2 hours	Yes	When needed	0-30 Minutes	Yes	Delivery time
Neha Kapoor	26	nehakapoor198@gmail.com	Married	Weekly	30-60 Minutes	Yes	Monthly	More than 4 hours	Yes	Delivery cost
Arjun Verma	19	arjunverma1424@gmail.com	Single	Daily	0-30 Minutes	Yes	Daily	0-30 Minutes	Yes	Services availability
Ananya Mishra	19	ananyamishra1218@gmail.com	Single	Daily	30-60 Minutes	Yes	Weekly	1-2 Hours	Yes	Delivery cost
Rajesh Singh	19	rajeshsingh26@gmail.com	Single	Weekly	30-60 Minutes	No			No	
Kavita Reddy	18	kavitareddy1721@gmail.com	Single	When needed	1-2 Hours	No			No	
Siddharth Patel	29	spatel729@gmail.com	Married	Monthly	More than 2 hours	No	When needed	0-30 Minutes	No	
Shreya Verma	22	shreyaverma1623@gmail.com	Single	Weekly	0-30 Minutes	Yes	When needed	30-60 Minutes	Yes	Delivery cost
Kartik Gupta	19	kartikgupta217@gmail.com	Single	Daily	0-30 Minutes	Yes	When needed	30-60 Minutes	Yes	Order packaging
Priya Kapoor	32	priyakapoor818@gmail.com	Married	Monthly	More than 2 hours	No	When needed	No		
Anil Singh	31	anilsingh1124@gmail.com	Married	Weekly	More than 2 hours	No	Monthly		No	Services availability
Meera Sharma	30	meerasharma30@gmail.com		Daily	30-60 Minutes	No	Weekly	0-30 Minutes	No	Delivery time

. Rahul Verma	19	rahulverma21@gmail.com	Single	Daily	0-30 Minutes	Yes	Daily	0-30 Minutes	Yes	Reliability
Alisha Patel	21	alishapatel215@gmail.com	Single	Daily	0-30 Minutes	Yes	Monthly	1-2 Hours	Yes	Delivery time
Yash Sharma	33	yashsharma1991@gmail.com	Married	Monthly	1-2 Hours	No	When needed	1-2 Hours	Yes	Reliability
Anjali Singh	21	anjalisigh2002@gmail.com	Single	Weekly	30-60 Minutes	No	When needed	0-30 Minutes	Yes	Delivery time
Arnav Gupta	28	arnavgupta2656@gmail.com	Married	Daily	30-60 Minutes	Yes	Weekly	30-60 Minutes	No	
Priyanka Reddy	26	priyankareddy20@gmail.com	Married	Daily	0-30 Minutes	Yes	Daily	0-30 Minutes	Yes	Services availability
Vikas Kapoor	18	vikas.kapoor24@gmail.com	Single	Weekly	30-60 Minutes	Yes	Daily	0-30 Minutes	Yes	Delivery time
Neha Verma	30	nehaverma1129@gmail.com	Married	Weekly	30-60 Minutes	Yes	When needed	30-60 Minutes	Yes	Services availability
Karthik Singh	29	karthiksingh1800@gmail.com	Married	When needed	1-2 Hours	Yes	When needed	30-60 Minutes	Yes	Services availability
Ritu Patel	20	ritupatel2173@gmail.com	Single	Weekly	30-60 Minutes	No	Weekly	0-30 Minutes	No	Delivery cost
Rohan Verma	18	rohanverma2117@gmail.com	Single	When needed	0-30 Minutes	Yes	When needed	1-2 Hours	Yes	Reliability
Ananya Singh	22	ananyasingh1221@gmail.com	Single	Weekly	More than 2 hours	Yes	When needed	1-2 Hours	Yes	Services availability
Arjun Reddy	29	arjunreddy1625@gmail.com	Single	Monthly	More than 2 hours	Yes	When needed	0-30 Minutes	Yes	Reliability
Pooja Kapoor	25	poojakapoor19@gmail.com	Single	Weekly	1-2 Hours	Yes	When needed	30-60 Minutes	Yes	Services availability
Rajesh Gupta	26	rajeshgupta1822@gmail.com	Single	Monthly	30-60 Minutes	Yes	When needed	0-30 Minutes	No	
Kavita Singh	27	kavitasingh1128@gmail.com	Single	Daily	30-60 Minutes	Yes	Weekly	30-60 Minutes	No	Order packaging
Siddharth Mishra	25	siddharthmishra2001@gmail.com	Single	Monthly	30-60 Minutes	No	When needed	30-60 Minutes	No	Services availability
Shreya Patel	27	shreyapatel1424@gmail.com	Single	Weekly	1-2 Hours	Yes	Daily	0-30 Minutes	Yes	Services availability
. Vikram Sharma	19	vikramsharma1829@gmail.com	Single	Daily	0-30 Minutes	Yes	When needed	1-2 Hours	No	
Neha Mishra	22	nehamishra1818@gmail.com	Married	Weekly	1-2 Hours	Yes	When needed	30-60 Minutes	Yes	Delivery time
Karan Kapoor	26	karankapoor1923@gmail.com	Single	Weekly	1-2 Hours	Yes	When needed	0-30 Minutes	Yes	Delivery time
Aarti Reddy	18	aartireddy1127@gmail.com	Single	Daily	0-30 Minutes	Yes	When needed	1-2 Hours	Yes	

Ankit Gupta	24	ankitg21@gmail.com	Married	When needed	0-30 Minutes	Yes	When needed	30-60 Minutes	No	
Priya Verma	18	priyaverma25@gmail.com	Single	Weekly	1-2 Hours	No	Weekly	1-2 Hours		
Rohit Singh	27	rohitsingh1997@gmail.com	Single	Daily	0-30 Minutes	Yes	When needed	30-60 Minutes	No	
Anjali Kapoor	27	anjalikapoor22@gmail.com	Single	Weekly	1-2 Hours				No	
Arjun Sharma	28	arjunsharma26@gmail.com	Married	Daily	1-2 Hours	No		30-60 Minutes	No	Delivery time
Kavita Mishra	29	kavitamishra20@gmail.com	Married	Monthly	30-60 Minutes	Yes	When needed			
Siddharth Patel	28	siddharthpatel24@gmail.com	Single	Weekly	0-30 Minutes	No			No	
Sneha Verma	29	snehaverma29@gmail.com	Single			No	Weekly	1-2 Hours	Yes	
Rajesh Mishra	29	rajeshmishra18@gmail.com	Single	When needed	1-2 Hours	No	Weekly	1-2 Hours	Yes	Order packaging
Priyanka Singh	19	priyankasingh23@gmail.com	Single	Weekly	30-60 Minutes	No	Weekly	More than 4 hours	No	Order packaging
Arvind Kapoor	29	arvindkapoor27@gmail.com	Married	Monthly	1-2 Hours	No	Monthly	More than 4 hours	No	Delivery cost
Ayesha Gupta	19	ayeshagupta21@gmail.com		Daily	30-60 Minutes	Yes	Weekly	0-30 Minutes	Yes	Delivery cost
Vivek Patel	29	vivekpatel25@gmail.com	Single	Daily	1-2 Hours	No	Monthly	More than 4 hours	Yes	Delivery time
Aditi Choudhury	29	aditichoudhury22@gmail.com	Single	Weekly	0-30 Minutes	Yes	Daily	30-60 Minutes	Yes	Delivery time
Vikram Mishra	27	vikrammishra24@gmail.com	Married	Weekly	30-60 Minutes	No	Monthly	1-2 Hours	Yes	Delivery cost
Priyanka Reddy	24	priyankareddy19@gmail.com	Single	Weekly	More than 2 hours	No	Weekly	1-2 Hours	No	Order packaging
Rohan Kapoor	19	rohankapoor2611@gmail.com	Single	Weekly		Yes	When needed	More than 4 hours	Yes	Delivery cost
Ayesha Sharma	17	ayeshasharma4420@gmail.com	Single	When needed	More than 2 hours	Yes	Weekly	More than 4 hours	Yes	Delivery cost
Arjun Singh	25	arjunsingh23@gmail.com	Married	When needed	30-60 Minutes	No		30-60 Minutes	Delivery cost	
Ananya Verma	24	ananya25@gmail.com	Single	Monthly	30-60 Minutes	Yes	Weekly	More than 4 hours	No	
Karthik Patel	26	karthikpatel21@gmail.com	Single	Monthly	30-60 Minutes					
Meera Gupta	25	meeragupta27@gmail.com	Single			Yes	Weekly	30-60 Minutes	No	Delivery cost

Siddharth Sharma	18	siddharthsharma18@gmail.com	Other	Weekly	More than 2 hours	Daily	30-60 Minutes	Delivery cost		
Nandini Patel	29	nandinipatel22@gmail.com	Married	Daily		No			No	Delivery cost
Raj Kapoor	25	rajkapoor28@gmail.com	Married	Daily	1-2 Hours	No	Monthly	More than 4 hours	Yes	Services availability
Neha Choudhury	25	nehachoudhury19@gmail.com	Married	Daily	1-2 Hours	Yes	Weekly	0-30 Minutes	No	Services availability
Varun Singh	24	singh24@gmail.com	Single	Monthly	30-60 Minutes	Yes	Monthly	1-2 Hours	Yes	Order packaging
Anjali Reddy	26	anjalireddy20@gmail.com	Single	Daily	0-30 Minutes	Yes	When needed	1-2 Hours	Yes	Delivery time
Rishi Kumar	25	rishikumar29@gmail.com	Single	Weekly	More than 2 hours	No	When needed	1-2 Hours	No	Order packaging
Maya Verma	26	mayaverma21@gmail.com	Single	Daily	0-30 Minutes	No	Monthly	30-60 Minutes	No	Order packaging
Kartik Sharma	24	kartiksharma25@gmail.com	Married	When needed	1-2 Hours	No	Monthly	30-60 Minutes	Yes	Services availability
Sneha Patel	25	snehapatel18@gmail.com	Single	Monthly	30-60 Minutes	Yes	When needed	0-30 Minutes	No	Order packaging
Rahul Gupta	25	rahulgupta26@gmail.com	Single	Monthly	1-2 Hours	No	Monthly	30-60 Minutes	Yes	Services availability
Priya Singh	25	priyasingh22@gmail.com	Single	Weekly	30-60 Minutes	Yes	Weekly	More than 4 hours	No	Reliability
. Arnav Sharma	24	arnavsharma27@gmail.com	Single	Monthly	1-2 Hours	Yes	Weekly	1-2 Hours	No	Delivery cost
Deepika Reddy	18	deepikareddy19@gmail.com	Single	When needed	30-60 Minutes	Yes	Weekly	1-2 Hours	Yes	Delivery cost
Vikas Mishra	24	vikasmishra28@gmail.com	Married	Weekly	0-30 Minutes	Yes	Weekly	0-30 Minutes	Yes	Order packaging
Aarti Patel	24	aartipatel20@gmail.com	Married	Weekly	30-60 Minutes	Yes	Weekly	1-2 Hours	Yes	Delivery cost
Sameer Singh	28	sameersingh29@gmail.com	Single	Daily	30-60 Minutes	Yes	Monthly	1-2 Hours	Yes	Delivery cost
Shruti Choudhury	25	shrutichoudhury21@gmail.com	Single	When needed	30-60 Minutes	Yes	Weekly	More than 4 hours	No	Delivery cost
Karan Verma	25	karanverma25@gmail.com	Single	Weekly	1-2 Hours	No	When needed	1-2 Hours	Yes	Delivery cost
Kavita Sharma	24	kavitasharma18@gmail.com	Single	Weekly	0-30 Minutes	No	Monthly	0-30 Minutes	No	Order packaging
Rohit Kapoor	24	rohitkapoor22@gmail.com	Single	When needed	1-2 Hours	No	Monthly	30-60 Minutes	Yes	Order packaging
Alisha Gupta	24	alishagupta26@gmail.com	Single	Monthly	More than 2 hours	Yes	Monthly	1-2 Hours	No	Services availability

Yash Patel	27	yashpatel19@gmail.com	Single	Weekly	1-2 Hours	Yes	When needed	More than 4 hours	No	Services availability
Sanya Singh	25	sanyasingh23@gmail.com	Married	Weekly	1-2 Hours	Yes	Monthly	30-60 Minutes	Yes	Delivery cost
Ajay Reddy	25	ajayreddy27@gmail.com	Married	Weekly	30-60 Minutes	No	Monthly	More than 4 hours	Yes	Services availability
Ritu Sharma	19	ritusharma20@gmail.com	Single	Monthly	0-30 Minutes	Yes	Monthly	30-60 Minutes	No	Services availability
Parth Kapoor	25	parthkapoor24@gmail.com	Single	Weekly	30-60 Minutes	Yes	Weekly	1-2 Hours	Yes	Delivery cost
Ishita Verma	24	ishitaverma28@gmail.com	Single	Monthly	30-60 Minutes	Yes	Weekly	1-2 Hours	Yes	Reliability
Anil Mishra	24	anilmishra21@gmail.com	Single	Monthly	30-60 Minutes	Yes	Monthly	30-60 Minutes	Yes	Reliability
Siddharth Choudhury	24	siddharthchoudhury18@gmail.com	Single	Weekly	1-2 Hours	Yes	Weekly	30-60 Minutes	No	Services availability
Arvind Sharma	24	arvindsharma29@gmail.com	Married	Monthly	30-60 Minutes	Yes	Weekly	0-30 Minutes	No	Reliability
Deepa Reddy	24	deepareddy19@gmail.com	Single	Daily	30-60 Minutes	Yes	Weekly	More than 4 hours	Yes	Reliability
Rohini Kapoor	24	rohinikapoor23@gmail.com	Single	Weekly	30-60 Minutes	No	Monthly	30-60 Minutes	Yes	Reliability

Here we have 121 observations.

To clean this first we have to find the mean or mode and replace the missing values.

In this first we assign the “eFood” to “f”.

For Q2. Age

In this “age” column assign to “a” and “vector of age” to “x”.

```
---
title: "Project 1(age column)"
author: "Manish Kataria(W0865937)"
date: "2024-06-09"
output:
  pdf_document: default
  html_document: default
---
```

18:1 (Top Level) R Markdown

Console Terminal Render Background Jobs

R 4.4.0 · ~/

```
> f<- (eFood)
> a<- (f$Age)
> x<- c(a)
> summary(f)
     Name                Age
 Length:121         Min.   :17.00
 Class :character   1st Qu.:22.00
 Mode  :character   Median :25.00
                    Mean   :24.68
                    3rd Qu.:27.00
                    Max.   :38.00
 Email.address      marital.status
 Length:121         Length:121
 Class :character   Class :character
 Mode  :character   Mode  :character


 traditional.food.retailers.prefered
 Length:121
 Class :character
 Mode  :character
```

```
---
title: "Project 1(age column)"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
```

3:42 # Project 1(age column) R Markdown

Console Terminal Render Background Jobs

R 4.4.0 · ~/

```
spend.time.on.food.retailers
Length:121
Class :character
Mode  :character


Ever.used.e.food.retailing.services
Length:121
Class :character
Mode  :character


prefered.e.food.retailing.services
Length:121
Class :character
Mode  :character


Time.spend.using.e.food.retailing.services
Length:121
Class :character
Mode  :character


do.you.prefer.to.use.e.food.retailing.service
Length:121
Class :character
Mode  :character
```

Here we find the summary of table.

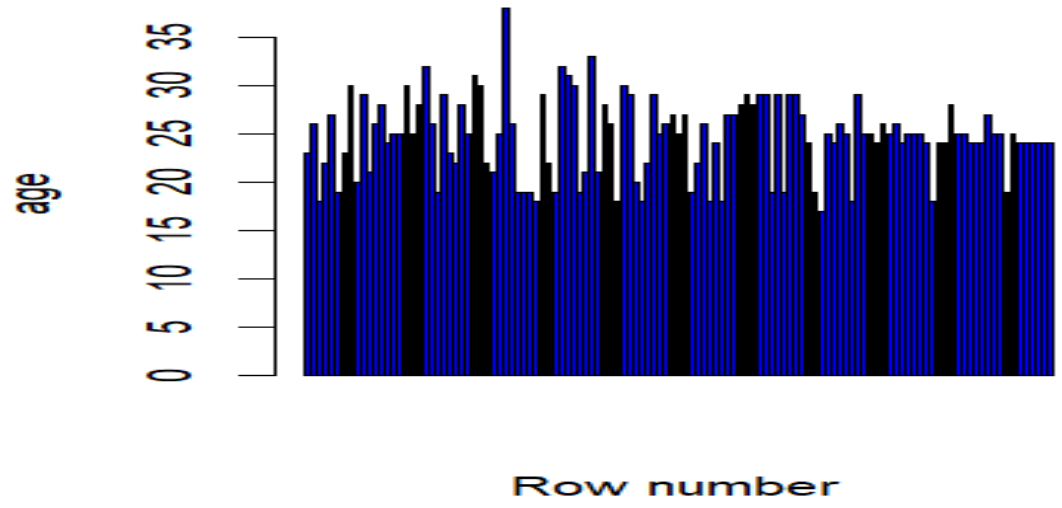
```
eFood | Untitled1* | eFood Age Column.Rmd*
Knit on Save | Knit | Run
Source | Visual | Outline
1  ---
2  title: "Project 1(age column)"
3  author: "Manish Kataria and Manpreet Kaur"
4  date: "2024-06-09"
3:42 | Project 1(age column) | R Markdown
Console | Terminal | Render | Background Jobs
R 4.4.0 · ~/
Mode   :character

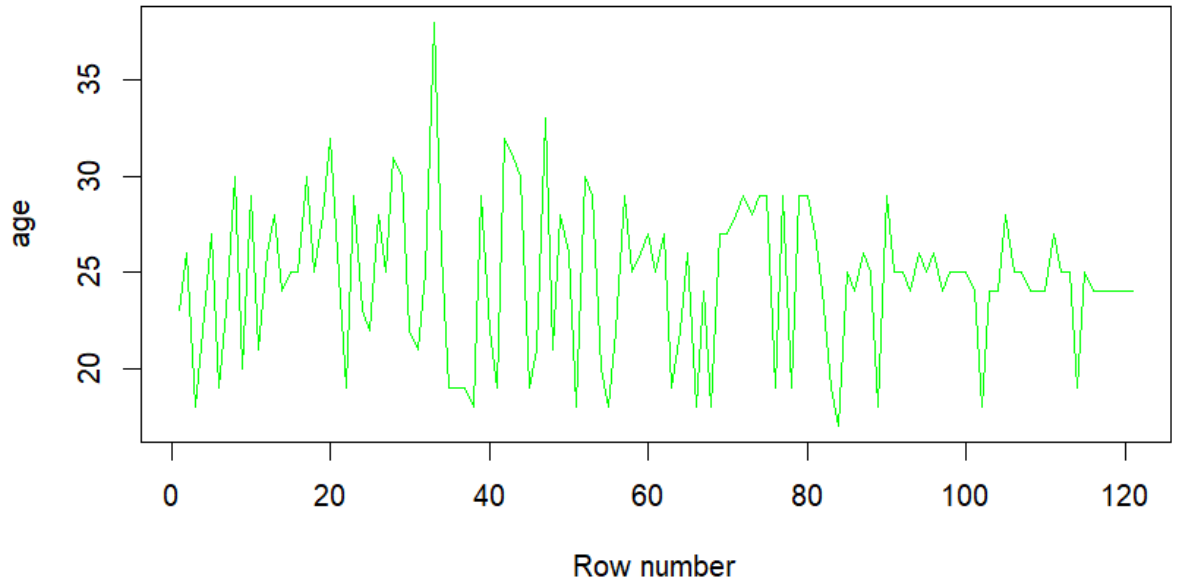

 do.you.prefer.to.use.e.food.retailing.service
 Length:121
 Class :character
 Mode   :character

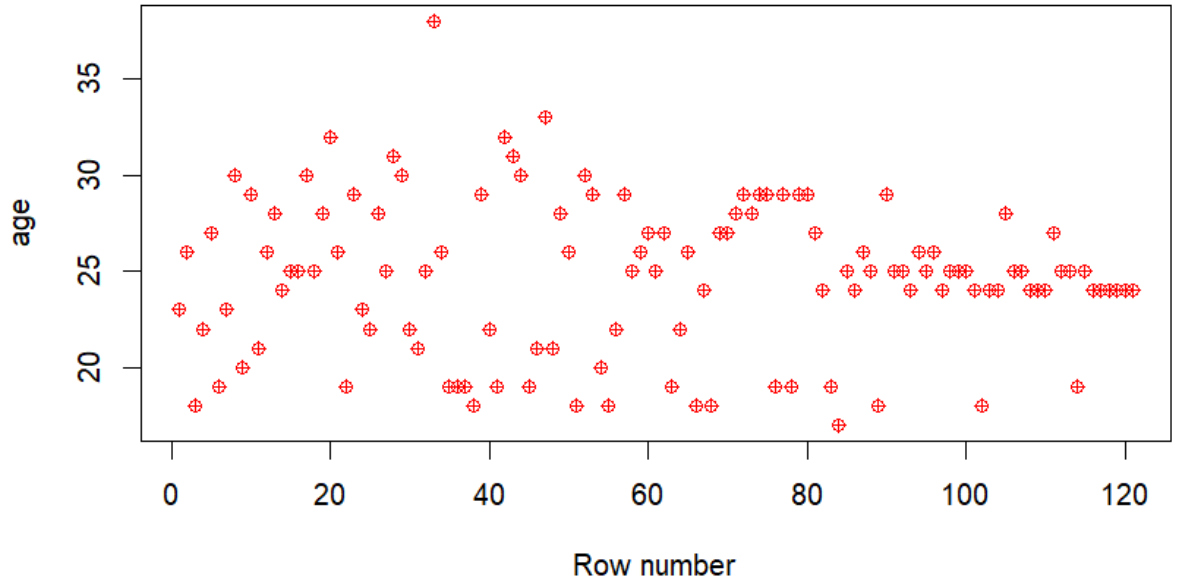

 Benefit.of.efood    marital.status1
 Length:121          Length:121
 Class :character    Class :character
 Mode   :character   Mode   :character

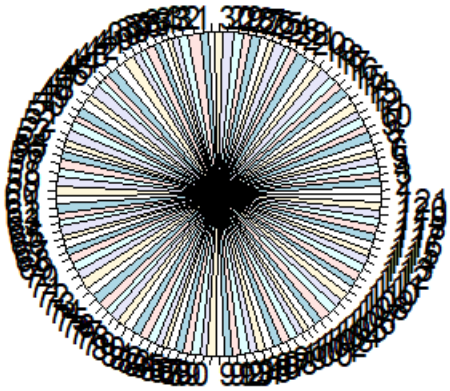

> mean(a)
[1] 24.67769
> #So their is no missing values
> plot(a)
> plot(a, col= "red", pch= 10, xlab = "Row number" , ylab = "age" )
> plot(a,type = "i" col= "green", pch= 10, xlab = "Row number" , ylab = "age" )
Error: unexpected symbol in "plot(a,type = "i" col"
> plot(a,type = "l" col= "green", pch= 10, xlab = "Row number" , ylab = "age" )
Error: unexpected symbol in "plot(a,type = "l" col"
> plot(a,type = "l" ,col= "green", pch= 10, xlab = "Row number" , ylab = "age" )
> pie(a)
> barplot(a ,col= "blue", xlab = "Row number" , ylab = "age" )
> boxplot(a)
>
```

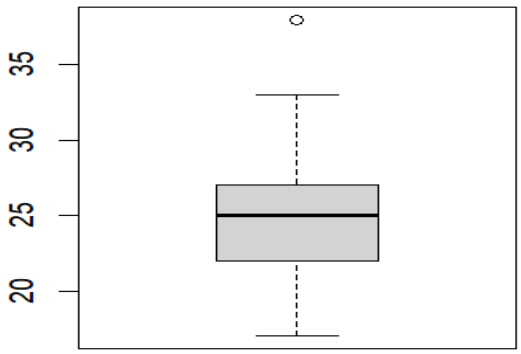
Here we use various commands to print different graphical representations of age and find outliers.




age
20
25
30
35
0
20
40
60
80
100
120
Row number


age
20
25
30
35
0
20
40
60
80
100
120
Row number





For Q4. What is your marital status?

```
---
title: "Project 1 (Marital status)"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---
```{r}
f<- (eFood)
a<- (f$marital.status)
```

```{r}
x<- c(a)
```

```{r}
mymode <- function(m){
  sort(table(m), decreasing = TRUE)[1]
}
```


```{r}
mymode(a)
```
```

```
Single
    77
```

In this first we create a mode function in R Studios and then find the mode of marital status column and replace the null values with mode.

```r
a
```

```
  [1] "Single"  "Single"  "Single"  "Single"  "Married" "Single"  "Single"  "Married"
  [9] "Single"  "Married" "Single"  "Single"  "Married" "Married" "Married" "Married"
 [17] "Married" "Single"  "Married" "Married" "Single"  "Single"  "Married" "Married"
 [25] "Single"  "Single"  "Married" "Married" "Single"  "Single"  "Single"  "Married"
 [33] "Married" "Married" "Single"  "Single"  "Single"  "Single"  "Married" "Single"
 [41] "Single"  "Married" "Married" ""        "Single"  "Single"  "Married" "Single"
 [49] "Married" "Married" "Single"  "Married" "Married" "Single"  "Single"  "Single"
 [57] "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Married"
 [65] "Single"  "Single"  "Married" "Single"  "Single"  "Single"  "Married" "Married"
 [73] "Single"  "Single"  "Single"  "Single"  "Married" ""        "Single"  "Single"
 [81] "Married" "Single"  "Single"  "Single"  "Married" "Single"  "Single"  "Single"
 [89] "Other"   "Married" "Married" "Married" "Single"  "Single"  "Single"  "Single"
 [97] "Married" "Single"  "Single"  "Single"  "Single"  "Single"  "Married" "Married"
[105] "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Married"
[113] "Married" "Single"  "Single"  "Single"  "Single"  "Single"  "Married" "Single"
[121] "Single"
```

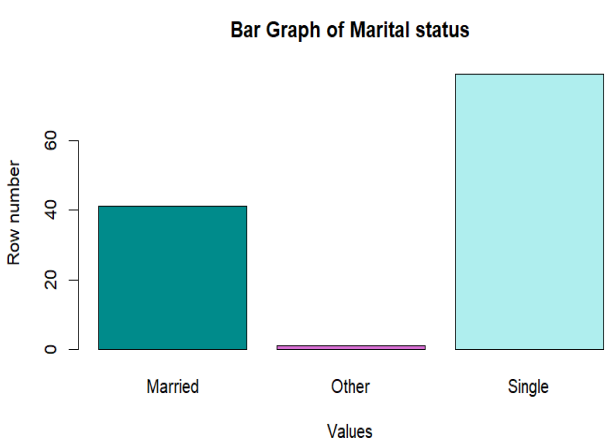
```r
a <- ifelse(a == "", "Single", a)
```

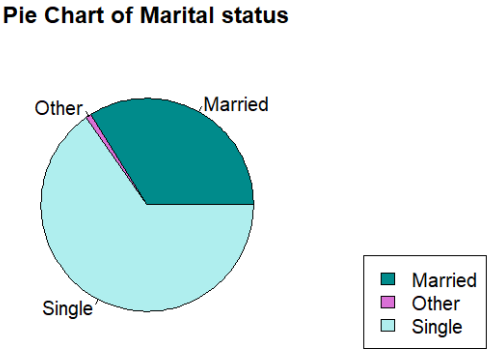
```r
a
```

```
  [1] "Single"  "Single"  "Single"  "Single"  "Married" "Single"  "Single"  "Married"
  [9] "Single"  "Married" "Single"  "Single"  "Married" "Married" "Married" "Married"
 [17] "Married" "Single"  "Married" "Married" "Single"  "Single"  "Married" "Married"
 [25] "Single"  "Single"  "Married" "Married" "Single"  "Single"  "Single"  "Married"
 [33] "Married" "Married" "Single"  "Single"  "Single"  "Single"  "Married" "Single"
 [41] "Single"  "Married" "Married" "Single"  "Single"  "Single"  "Married" "Single"
 [49] "Married" "Married" "Single"  "Married" "Married" "Single"  "Single"  "Single"
 [57] "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Married"
 [65] "Single"  "Single"  "Married" "Single"  "Single"  "Single"  "Married" "Married"
 [73] "Single"  "Single"  "Single"  "Single"  "Married" "Single"  "Single"  "Single"
 [81] "Married" "Single"  "Single"  "Single"  "Married" "Single"  "Single"  "Single"
 [89] "Other"   "Married" "Married" "Married" "Single"  "Single"  "Single"  "Single"
 [97] "Married" "Single"  "Single"  "Single"  "Single"  "Single"  "Married" "Married"
[105] "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Single"  "Married"
[113] "Married" "Single"  "Single"  "Single"  "Single"  "Single"  "Married" "Single"
[121] "Single"
```

```
> value_counts <- table(a)
> colors <- c("darkcyan", "orchid", "paleturquoise" )
> mylabel <- c("Married", "Other" , "Single")
> pie(value_counts, main = "Pie Chart of Marital status", col= colors )
> legend("bottomright", mylabel, fill = colors)
> pie(value_counts, main = "Pie Chart of Marital status", col= colors )
> legend("bottomright", mylabel, fill = colors)
> barplot(value_counts, main = "Bar Graph of Marital status", xlab = "Values", ylab = "Row number",
col = colors)
>
```

After that we run various commands to plot a bar char and pie chat of this column





For Q5. How often do you go to traditional food retailers?

Again, Same Functions and commands apply to clean the data and draw a bar chat and pie chart.

```
---
title: "Poject 1"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---

```{r}
f<- (eFood)
a<- (f$traditional.food.retailers.prefered)
x<- c(a)
```


```{r}
mymode <- function(m){
  sort(table(m), decreasing = TRUE)[1]
}
```

```{r}
mymode(a)
```
```

```
Weekly
    47
```

```{r}
a
```

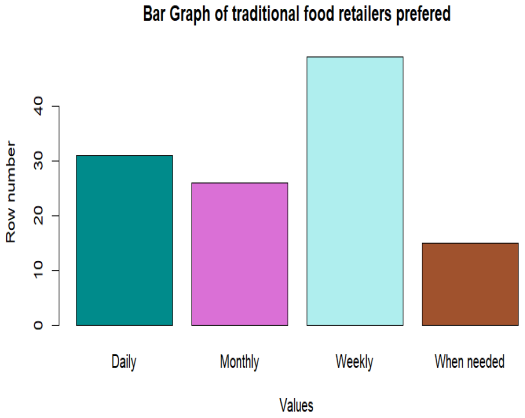
```
  [1] "When needed" "Weekly"      "Monthly"     "Weekly"      "Weekly"
  [6] "Weekly"      "When needed" "Daily"       "Daily"       "Weekly"
 [11] "Weekly"      "Weekly"      "Daily"       "When needed" "Weekly"
 [16] "When needed" "Weekly"      "Monthly"     "Monthly"     "Weekly"
 [21] "Daily"       "Weekly"      "Monthly"     "Daily"       "Monthly"
 [26] "Weekly"      "Daily"       "Daily"       "Monthly"     "Daily"
 [31] "Weekly"      "Daily"       "Monthly"     "Weekly"      "Daily"
 [36] "Daily"       "Weekly"      "When needed" "Monthly"     "Weekly"
 [41] "Daily"       "Monthly"     "Weekly"      "Daily"       "Daily"
 [46] "Daily"       "Monthly"     "Weekly"      "Daily"       "Daily"
 [51] "Weekly"      "Weekly"      "When needed" "Weekly"      "When needed"
 [56] "Weekly"      "Monthly"     "Weekly"      "Monthly"     "Daily"
 [61] "Monthly"     "Weekly"      "Daily"       "Weekly"      "Weekly"
 [66] "Daily"       "When needed" "Weekly"      "Daily"       "Weekly"
 [71] "Daily"       "Monthly"     "Weekly"      ""            "When needed"
 [76] "Weekly"      "Monthly"     "Daily"       "Daily"       "Weekly"
 [81] "Weekly"      "Weekly"      "Weekly"      "When needed" "When needed"
 [86] "Monthly"     "Monthly"     ""            "Weekly"      "Daily"
 [91] "Daily"       "Daily"       "Monthly"     "Daily"       "Weekly"
 [96] "Daily"       "When needed" "Monthly"     "Monthly"     "Weekly"
[101] "Monthly"     "When needed" "Weekly"      "Weekly"      "Daily"
[106] "When needed" "Weekly"      "Weekly"      "When needed" "Monthly"
[111] "Weekly"      "Weekly"      "Weekly"      "Monthly"     "Weekly"
[116] "Monthly"     "Monthly"     "Weekly"      "Monthly"     "Daily"
[121] "Weekly"
```

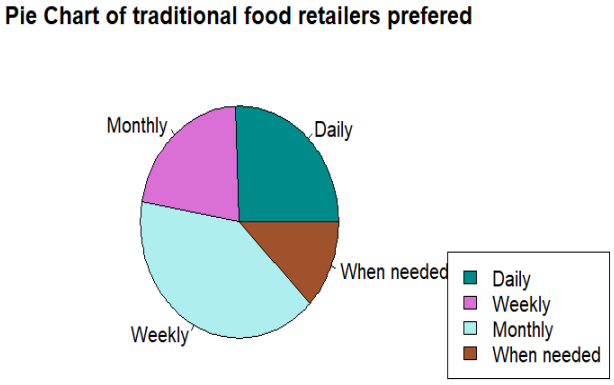
```{r}
a <- ifelse(a == "", "weekly", a)
```

```{r}
a
```

```
  [1] "When needed" "Weekly"      "Monthly"     "Weekly"      "Weekly"
  [6] "Weekly"      "When needed" "Daily"       "Daily"       "Weekly"
 [11] "Weekly"      "Weekly"      "Daily"       "When needed" "Weekly"
 [16] "When needed" "Weekly"      "Monthly"     "Monthly"     "Weekly"
 [21] "Daily"       "Weekly"      "Monthly"     "Daily"       "Monthly"
 [26] "Weekly"      "Daily"       "Daily"       "Monthly"     "Daily"
 [31] "Weekly"      "Daily"       "Monthly"     "Weekly"      "Daily"
 [36] "Daily"       "Weekly"      "When needed" "Monthly"     "Weekly"
 [41] "Daily"       "Monthly"     "Weekly"      "Daily"       "Daily"
 [46] "Daily"       "Monthly"     "Weekly"      "Daily"       "Daily"
 [51] "Weekly"      "Weekly"      "When needed" "Weekly"      "When needed"
 [56] "Weekly"      "Monthly"     "Weekly"      "Monthly"     "Daily"
 [61] "Monthly"     "Weekly"      "Daily"       "Weekly"      "Weekly"
 [66] "Daily"       "When needed" "Weekly"      "Daily"       "Weekly"
 [71] "Daily"       "Monthly"     "Weekly"      "weekly"      "When needed"
 [76] "Weekly"      "Monthly"     "Daily"       "Daily"       "Weekly"
 [81] "Weekly"      "Weekly"      "Weekly"      "When needed" "When needed"
 [86] "Monthly"     "Monthly"     "weekly"      "Weekly"      "Daily"
 [91] "Daily"       "Daily"       "Monthly"     "Daily"       "Weekly"
 [96] "Daily"       "When needed" "Monthly"     "Monthly"     "Weekly"
[101] "Monthly"     "When needed" "Weekly"      "Weekly"      "Daily"
[106] "When needed" "Weekly"      "Weekly"      "When needed" "Monthly"
[111] "Weekly"      "Weekly"      "Weekly"      "Monthly"     "Weekly"
[116] "Monthly"     "Monthly"     "Weekly"      "Monthly"     "Daily"
[121] "Weekly"
```

```
> value_counts <- table(a)
> colors <- c("darkcyan", "orchid", "paleturquoise" , "sienna")
> mylabel <- c("Daily", "Weekly" , "Monthly", "When needed" )
> pie(value_counts, main = "Pie Chart of traditional food retailers prefered", col= colo
rs )
> legend("bottomright", mylabel, fill = colors)
> pie(value_counts, main = "Pie Chart of traditional food retailers prefered", col= colo
rs )
> legend("bottomright", mylabel, fill = colors)
> barplot(value_counts, main = "Bar Graph of traditional food retailers prefered", xlab
= "Values", ylab = "Row number", col = colors)
>
```





For Q6. How much time do you spend in the food retailers to make purchases?

````
---
title: "Project 1 spend.time.on.food.retailers"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---
spend.time.on.food.retailers
```{r}
f<- (eFood)
a<- (f$spend.time.on.food.retailers)
x<- c(a)
```

```{r}
mymode <- function(m){
  sort(table(m), decreasing = TRUE)[1]
}
```

```{r}
mymode(a)
```
````

```
30-60 Minutes
           45
```

```r
a
```

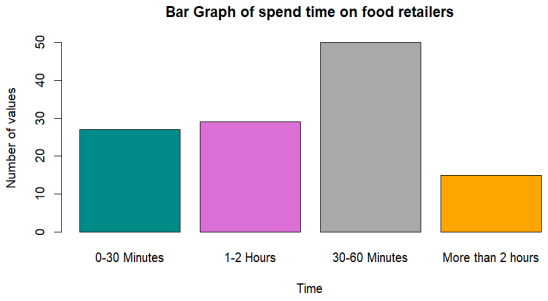
```
  [1] "30-60 Minutes"      "30-60 Minutes"      "1-2 Hours"
  [4] "30-60 Minutes"      "30-60 Minutes"      "1-2 Hours"
  [7] "0-30 Minutes"       "30-60 Minutes"      "0-30 Minutes"
 [10] "More than 2 hours"  "0-30 Minutes"       "0-30 Minutes"
 [13] "0-30 Minutes"       "0-30 Minutes"       "30-60 Minutes"
 [16] "0-30 Minutes"       "1-2 Hours"          "More than 2 hours"
 [19] "1-2 Hours"          "1-2 Hours"          "30-60 Minutes"
 [22] "1-2 Hours"          "More than 2 hours"  "0-30 Minutes"
 [25] "More than 2 hours"  "30-60 Minutes"      "0-30 Minutes"
 [28] ""                   "30-60 Minutes"      "30-60 Minutes"
 [31] "30-60 Minutes"      "30-60 Minutes"      "More than 2 hours"
 [34] "30-60 Minutes"      "0-30 Minutes"       "30-60 Minutes"
 [37] "30-60 Minutes"      "1-2 Hours"          "More than 2 hours"
 [40] "0-30 Minutes"       "0-30 Minutes"       "More than 2 hours"
 [43] "More than 2 hours"  "30-60 Minutes"      "0-30 Minutes"
 [46] "0-30 Minutes"       "1-2 Hours"          "30-60 Minutes"
 [49] "30-60 Minutes"      "0-30 Minutes"       "30-60 Minutes"
 [52] "30-60 Minutes"      "1-2 Hours"          "30-60 Minutes"
 [55] "0-30 Minutes"       "More than 2 hours"  "More than 2 hours"
 [58] "1-2 Hours"          "30-60 Minutes"      "30-60 Minutes"
 [61] "30-60 Minutes"      "1-2 Hours"          "0-30 Minutes"
 [64] "1-2 Hours"          "1-2 Hours"          "0-30 Minutes"
 [67] "0-30 Minutes"       "1-2 Hours"          "0-30 Minutes"
 [70] "1-2 Hours"          "1-2 Hours"          "30-60 Minutes"
 [73] "0-30 Minutes"       ""                   "1-2 Hours"
 [76] "30-60 Minutes"      "1-2 Hours"          "30-60 Minutes"
 [79] "1-2 Hours"          "0-30 Minutes"       "30-60 Minutes"
 [82] "More than 2 hours"  ""                   "More than 2 hours"
 [85] "30-60 Minutes"      "30-60 Minutes"      "30-60 Minutes"
 [88] ""                   "More than 2 hours"  ""
 [91] "1-2 Hours"          "1-2 Hours"          "30-60 Minutes"
 [94] "0-30 Minutes"       "More than 2 hours"  "0-30 Minutes"
 [97] "1-2 Hours"          "30-60 Minutes"      "1-2 Hours"
[100] "30-60 Minutes"      "1-2 Hours"          "30-60 Minutes"
```

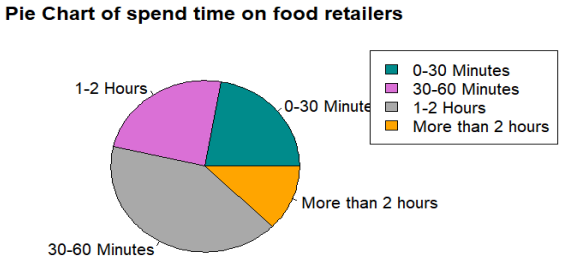
```r
a <- ifelse(a == "", "30-60 Minutes", a)
```

```r
a
```

```
  [1] "30-60 Minutes"      "30-60 Minutes"      "1-2 Hours"
  [4] "30-60 Minutes"      "30-60 Minutes"      "1-2 Hours"
  [7] "0-30 Minutes"       "30-60 Minutes"      "0-30 Minutes"
 [10] "More than 2 hours"  "0-30 Minutes"       "0-30 Minutes"
 [13] "0-30 Minutes"       "0-30 Minutes"       "30-60 Minutes"
 [16] "0-30 Minutes"       "1-2 Hours"          "More than 2 hours"
 [19] "1-2 Hours"          "1-2 Hours"          "30-60 Minutes"
 [22] "1-2 Hours"          "More than 2 hours"  "0-30 Minutes"
 [25] "More than 2 hours"  "30-60 Minutes"      "0-30 Minutes"
 [28] "30-60 Minutes"      "30-60 Minutes"      "30-60 Minutes"
 [31] "30-60 Minutes"      "30-60 Minutes"      "More than 2 hours"
 [34] "30-60 Minutes"      "0-30 Minutes"       "30-60 Minutes"
 [37] "30-60 Minutes"      "1-2 Hours"          "More than 2 hours"
 [40] "0-30 Minutes"       "0-30 Minutes"       "More than 2 hours"
 [43] "More than 2 hours"  "30-60 Minutes"      "0-30 Minutes"
 [46] "0-30 Minutes"       "1-2 Hours"          "30-60 Minutes"
 [49] "30-60 Minutes"      "0-30 Minutes"       "30-60 Minutes"
 [52] "30-60 Minutes"      "1-2 Hours"          "30-60 Minutes"
 [55] "0-30 Minutes"       "More than 2 hours"  "More than 2 hours"
 [58] "1-2 Hours"          "30-60 Minutes"      "30-60 Minutes"
 [61] "30-60 Minutes"      "1-2 Hours"          "0-30 Minutes"
 [64] "1-2 Hours"          "1-2 Hours"          "0-30 Minutes"
 [67] "0-30 Minutes"       "1-2 Hours"          "0-30 Minutes"
 [70] "1-2 Hours"          "1-2 Hours"          "30-60 Minutes"
 [73] "0-30 Minutes"       "30-60 Minutes"      "1-2 Hours"
 [76] "30-60 Minutes"      "1-2 Hours"          "30-60 Minutes"
 [79] "1-2 Hours"          "0-30 Minutes"       "30-60 Minutes"
```

```
> value_counts <- table(a)
> colors <- c("darkcyan", "orchid", "darkgray" ,"orange" )
> mylabel <- c("0-30 Minutes", "30-60 Minutes" , "1-2 Hours", "More than 2 hours")
> pie(value_counts, main = "Pie Chart of spend time on food retailers", col= colors )
> legend("bottomright", mylabel, fill = colors)
> legend("upright", mylabel, fill = colors)
Error in match.arg(x, c("bottomright", "bottom", "bottomleft", "left",  :
  'arg' should be one of “bottomright”, “bottom”, “bottomleft”, “left”, “topleft”, “to
p”, “topright”, “right”, “center”
> legend("topright", mylabel, fill = colors)
> pie(value_counts, main = "Pie Chart of spend time on food retailers", col= colors )
> legend("topright", mylabel, fill = colors)
> barplot(value_counts, main = "Bar Graph of spend time on food retailers", xlab = "Tim
e", ylab = "Row number", col = colors)
> barplot(value_counts, main = "Bar Graph of spend time on food retailers", xlab = "Tim
e", ylab = "Number of values", col = colors)
```





For Q7. Have you ever used e-food retailing services before to order food?

```
---
title: "Project 1 Ever.used.e.food.retailing.services"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---



```{r}
f<- (eFood)
a<- (f$Ever.used.e.food.retailing.services)
x<- c(a)
```

```{r}
mymode(a)
```

 Yes
  84

```{r}
a
```

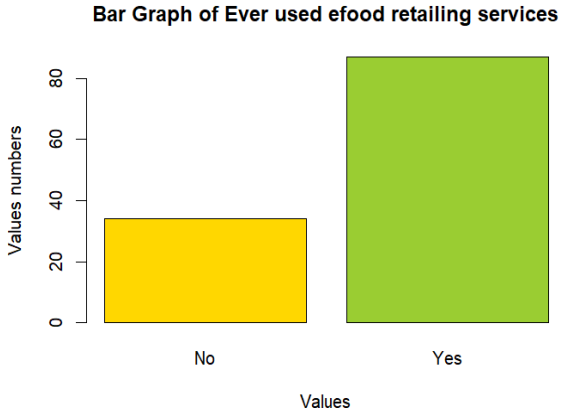
  [1] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [12] "No" "Yes" "Yes" "Yes" "No" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [23] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [34] "Yes" "Yes" "Yes" "No" "No" "No" "Yes" "Yes" "No" "No" "No"
 [45] "Yes" "Yes" "No" "No" "Yes" "Yes" "Yes" "Yes" "Yes" "No" "Yes"
 [56] "Yes" "Yes" "Yes" "Yes" "Yes" "No" "Yes" "Yes" "Yes" "Yes" "Yes"
 [67] "Yes" "No" "Yes" ""   "No" "Yes" "No" "No" "No" "No" "No"
 [78] "Yes" "No" "Yes" "No" "No" "Yes" "Yes" "No" "Yes" ""   "Yes"
 [89] ""   "No" "No" "Yes" "Yes" "Yes" "Yes" "No" "No" "No" "Yes" "No"
[100] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No" "No" "No" "Yes"
[111] "Yes" "Yes" "No" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No"
```

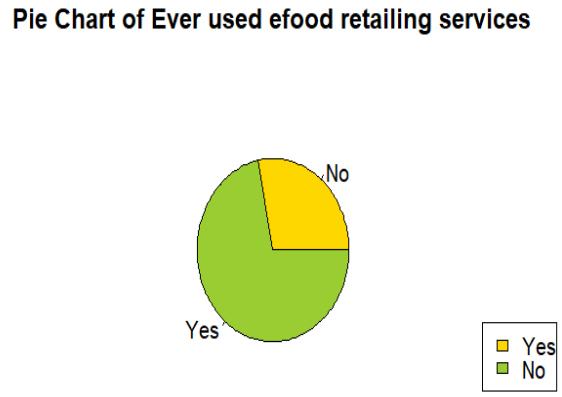
```r
a <- ifelse(a == "", "Yes", a)
```

```r
a
```

```
  [1] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [12] "No"  "Yes" "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [23] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [34] "Yes" "Yes" "Yes" "No"  "No"  "No"  "Yes" "Yes" "No"  "No"  "No"
 [45] "Yes" "Yes" "No"  "No"  "No"  "Yes" "Yes" "Yes" "Yes" "No"  "Yes"
 [56] "Yes" "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "Yes"
 [67] "Yes" "No"  "Yes" "Yes" "No"  "Yes" "No"  "No"  "No"  "No"  "No"
 [78] "Yes" "No"  "Yes" "No"  "No"  "Yes" "Yes" "No"  "Yes" "Yes" "Yes"
 [89] "Yes" "No"  "No"  "No"  "Yes" "Yes" "No"  "No"  "No"  "Yes" "No"
[100] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No"  "No"  "No"  "Yes"
[111] "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No"
```

```
> value_counts <- table(a)
> colors <- c("gold", "yellowgreen" )
> mylabel <- c("Yes", "No")
> pie(value_counts, main = "Pie Chart of Ever used efood retailing services", col= colors )
> legend("bottomright", mylabel, fill = colors)
> barplot(value_counts, main = "Bar Graph of Ever used efood retailing services", xlab = "Values", ylab = "Values
numbers", col = colors)
```





For Q8. How often do you used e-food retailers services?

```
---
title: "Project 1 prefered.e.food.retailing.services"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---
value_counts <- table(a)
```

```r
f<- (eFood)
a<- (f$prefered.e.food.retailing.services)
x<- c(a)
```

```r
mymode(a)
```

```
when needed
          50
```

```r
a
```

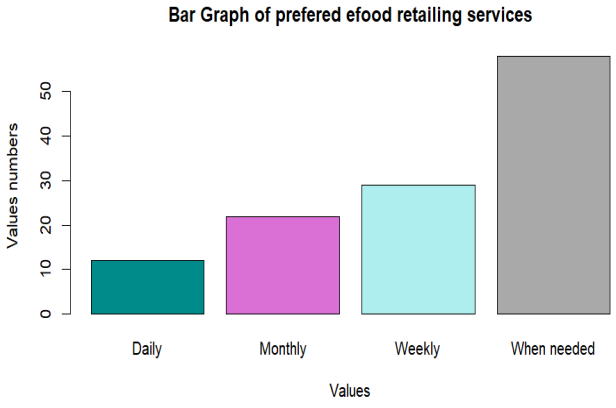
```
  [1] "When needed" "Weekly"      "Daily"       "Daily"       "When needed" "Daily"
  [7] "When needed" "When needed" "When needed" "When needed" "When needed" "When needed"
 [13] "When needed" "When needed" "When needed" "Monthly"     "When needed" "When needed"
 [19] "Weekly"      "When needed" "When needed" "Daily"       "When needed" "When needed"
 [25] "When needed" "Monthly"     "When needed" "Daily"       "When needed" "When needed"
 [31] "When needed" "Weekly"      "When needed" "Monthly"     "Daily"       "Weekly"
 [37] ""            ""            "When needed" "When needed" "When needed" "When needed"
 [43] "Monthly"     "Weekly"      "Daily"       "Monthly"     "When needed" "When needed"
 [49] "Weekly"      "Daily"       "Daily"       "When needed" "When needed" "Weekly"
```

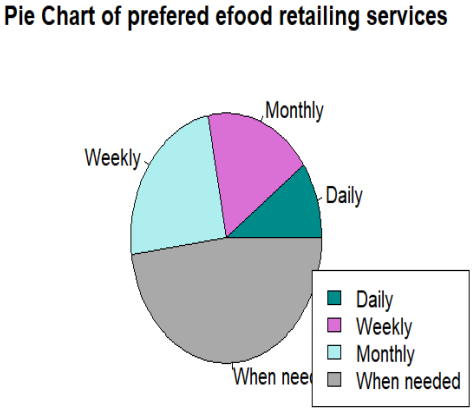
```r
a <- ifelse(a == "", "When needed", a)
```

```r
a
```

```
  [1] "When needed" "Weekly"      "Daily"       "Daily"       "When needed" "Daily"
  [7] "When needed" "When needed" "When needed" "When needed" "When needed" "When needed"
 [13] "When needed" "When needed" "When needed" "Monthly"     "When needed" "When needed"
 [19] "Weekly"      "When needed" "When needed" "Daily"       "When needed" "When needed"
 [25] "When needed" "Monthly"     "When needed" "Daily"       "When needed" "When needed"
 [31] "When needed" "Weekly"      "When needed" "Monthly"     "Daily"       "Weekly"
 [37] "When needed" "When needed" "When needed" "When needed" "When needed" "When needed"
 [43] "Monthly"     "Weekly"      "Daily"       "Monthly"     "When needed" "When needed"
 [49] "Weekly"      "Daily"       "Daily"       "When needed" "When needed" "Weekly"
 [55] "When needed" "When needed" "When needed" "When needed" "When needed" "Weekly"
 [61] "When needed" "Daily"       "When needed" "When needed" "When needed" "When needed"
 [67] "When needed" "Weekly"      "When needed" "When needed" "When needed" "When needed"
 [73] "When needed" "Weekly"      "Weekly"      "Weekly"      "Monthly"     "Weekly"
 [79] "Monthly"     "Daily"       "Monthly"     "Weekly"      "When needed" "Weekly"
 [85] "When needed" "Weekly"      "When needed" "Weekly"      "Daily"       "When needed"
 [91] "Monthly"     "Weekly"      "Monthly"     "When needed" "When needed" "Monthly"
 [97] "Monthly"     "When needed" "Monthly"     "Weekly"      "Weekly"      "Weekly"
[103] "Weekly"      "Weekly"      "Monthly"     "Weekly"      "When needed" "Monthly"
[109] "Monthly"     "Monthly"     "When needed" "Monthly"     "Monthly"     "Monthly"
[115] "Weekly"      "Weekly"      "Monthly"     "Weekly"      "Weekly"      "Weekly"
[121] "Monthly"
```

```
> value_counts <- table(a)
> colors <- c("darkcyan", "orchid", "paleturquoise", "darkgray"  )
> mylabel <- c("Daily", "Weekly" , "Monthly", "When needed")
> pie(value_counts, main = "Pie Chart of prefered efood retailing services", col= colors
)
> legend("bottomright", mylabel, fill = colors)
>
> barplot(value_counts, main = "Bar Graph of prefered efood retailing services", xlab =
"Values", ylab = "Row number", col = colors)
> barplot(value_counts, main = "Bar Graph of prefered efood retailing services", xlab =
"Values", ylab = "Values numbers", col = colors)
```





For Q9. How much time do you spend using e-food retailing services to make purchases?

```
---
title: "Project 1 Time.spend.using.e.food.retailing.services"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---
value_counts <- table(a)

```{r}
f<- (eFood)
a<- (f$Time.spend.using.e.food.retailing.services)
x<- c(a)
```

```{r}
mymode(a)
```
```

```
0-30 Minutes
          36
```

```
```{r}
a
```
```

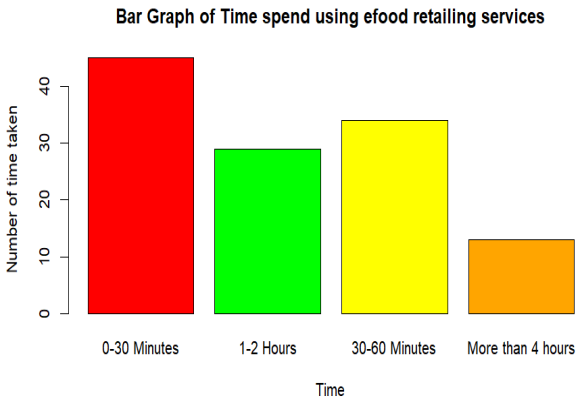
```
  [1] "0-30 Minutes"      "30-60 Minutes"     "0-30 Minutes"
  [4] "30-60 Minutes"     "0-30 Minutes"      "0-30 Minutes"
  [7] "0-30 Minutes"      "0-30 Minutes"      "0-30 Minutes"
 [10] "30-60 Minutes"     "0-30 Minutes"      "0-30 Minutes"
 [13] "0-30 Minutes"      "30-60 Minutes"     "1-2 Hours"
 [16] "0-30 Minutes"      "1-2 Hours"         "30-60 Minutes"
 [19] "0-30 Minutes"      "1-2 Hours"         "0-30 Minutes"
 [22] "0-30 Minutes"      "30-60 Minutes"     "0-30 Minutes"
 [25] "0-30 Minutes"      "1-2 Hours"         "30-60 Minutes"
 [28] "30-60 Minutes"     "1-2 Hours"         "30-60 Minutes"
 [31] "0-30 Minutes"      "1-2 Hours"         "0-30 Minutes"
 [34] "More than 4 hours" "0-30 Minutes"      "1-2 Hours"
 [37] ""                  ""                  "0-30 Minutes"
 [40] "30-60 Minutes"     "30-60 Minutes"     ""
 [43] ""                  "0-30 Minutes"      "0-30 Minutes"
 [46] "1-2 Hours"         "1-2 Hours"         "0-30 Minutes"
 [49] "30-60 Minutes"     "0-30 Minutes"      "0-30 Minutes"
 [52] "30-60 Minutes"     "30-60 Minutes"     "0-30 Minutes"
 [55] "1-2 Hours"         "1-2 Hours"         "0-30 Minutes"
 [58] "30-60 Minutes"     "0-30 Minutes"      "30-60 Minutes"
 [61] "30-60 Minutes"     "0-30 Minutes"      "1-2 Hours"
 [64] "30-60 Minutes"     "0-30 Minutes"      "1-2 Hours"
 [67] "30-60 Minutes"     "1-2 Hours"         "30-60 Minutes"
 [70] ""                  "30-60 Minutes"     ""
 [73] ""                  "1-2 Hours"         "1-2 Hours"
 [76] "More than 4 hours" "More than 4 hours" "0-30 Minutes"
 [79] "More than 4 hours" "30-60 Minutes"     "1-2 Hours"
 [82] "1-2 Hours"         "More than 4 hours" "More than 4 hours"
 [85] "30-60 Minutes"     "More than 4 hours" ""
 [88] "30-60 Minutes"     "30-60 Minutes"     ""
 [91] "More than 4 hours" "0-30 Minutes"      "1-2 Hours"
 [94] "1-2 Hours"         "1-2 Hours"         "30-60 Minutes"
 [97] "30-60 Minutes"     "0-30 Minutes"      "30-60 Minutes"
```

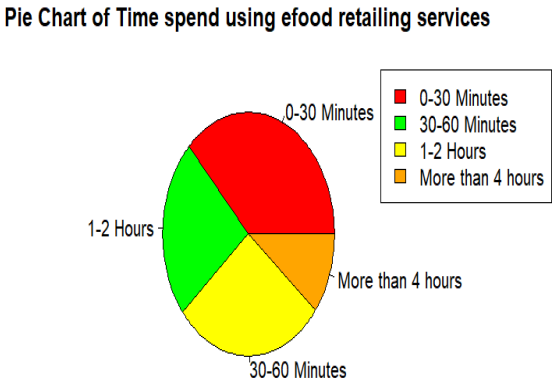
```r
```{r}
a <- ifelse(a == "", "0-30 Minutes", a)
```

```{r}
a
```
```

```
  [1] "0-30 Minutes"      "30-60 Minutes"     "0-30 Minutes"      "30-60 Minutes"
  [5] "0-30 Minutes"      "0-30 Minutes"      "0-30 Minutes"      "0-30 Minutes"
  [9] "0-30 Minutes"      "30-60 Minutes"     "0-30 Minutes"      "0-30 Minutes"
 [13] "0-30 Minutes"      "30-60 Minutes"     "1-2 Hours"         "0-30 Minutes"
 [17] "1-2 Hours"         "30-60 Minutes"     "0-30 Minutes"      "1-2 Hours"
 [21] "0-30 Minutes"      "0-30 Minutes"      "30-60 Minutes"     "0-30 Minutes"
 [25] "0-30 Minutes"      "1-2 Hours"         "30-60 Minutes"     "30-60 Minutes"
 [29] "1-2 Hours"         "30-60 Minutes"     "0-30 Minutes"      "1-2 Hours"
 [33] "0-30 Minutes"      "More than 4 hours" "0-30 Minutes"      "1-2 Hours"
 [37] "0-30 Minutes"      "0-30 Minutes"      "0-30 Minutes"      "30-60 Minutes"
 [41] "30-60 Minutes"     "0-30 Minutes"      "0-30 Minutes"      "0-30 Minutes"
 [45] "0-30 Minutes"      "1-2 Hours"         "1-2 Hours"         "0-30 Minutes"
 [49] "30-60 Minutes"     "0-30 Minutes"      "0-30 Minutes"      "30-60 Minutes"
 [53] "30-60 Minutes"     "0-30 Minutes"      "1-2 Hours"         "1-2 Hours"
 [57] "0-30 Minutes"      "30-60 Minutes"     "0-30 Minutes"      "30-60 Minutes"
 [61] "30-60 Minutes"     "0-30 Minutes"      "1-2 Hours"         "30-60 Minutes"
 [65] "0-30 Minutes"      "1-2 Hours"         "30-60 Minutes"     "1-2 Hours"
 [69] "30-60 Minutes"     "0-30 Minutes"      "30-60 Minutes"     "0-30 Minutes"
 [73] "0-30 Minutes"      "1-2 Hours"         "1-2 Hours"         "More than 4 hours"
 [77] "More than 4 hours" "0-30 Minutes"      "More than 4 hours" "30-60 Minutes"
 [81] "1-2 Hours"         "1-2 Hours"         "More than 4 hours" "More than 4 hours"
 [85] "30-60 Minutes"     "More than 4 hours" "0-30 Minutes"      "30-60 Minutes"
 [89] "30-60 Minutes"     "0-30 Minutes"      "More than 4 hours" "0-30 Minutes"
 [93] "1-2 Hours"         "1-2 Hours"         "1-2 Hours"         "30-60 Minutes"
 [97] "30-60 Minutes"     "0-30 Minutes"      "30-60 Minutes"     "More than 4 hours"
[101] "1-2 Hours"         "1-2 Hours"         "0-30 Minutes"      "1-2 Hours"
[105] "1-2 Hours"         "More than 4 hours" "1-2 Hours"         "0-30 Minutes"
[109] "30-60 Minutes"     "1-2 Hours"         "More than 4 hours" "30-60 Minutes"
[113] "More than 4 hours" "30-60 Minutes"     "1-2 Hours"         "1-2 Hours"
```

```
> value_counts <- table(a)
> colors <- c("red",  "green", "yellow" ,"orange" )
> mylabel <- c("0-30 Minutes", "30-60 Minutes" , "1-2 Hours", "More than 4 hours")
> pie(value_counts, main = "Pie Chart of Time spend using efood retailing services", col= co
lors )
> legend("topright", mylabel, fill = colors)
> barplot(value_counts, main = "Bar Graph of Time spend using efood retailing services", xla
b = "Time", ylab = "Number of time taken ", col = colors)
>
```





For Q10. According to your experience, do you prefer to use e-food retailing services over traditional food retailers?

```
---
title: "Projct 1 do.you.prefer.to.use.e.food.retailing.service"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---
value_counts <- table(a)
```{r}
f<- (eFood)
a<- (f$ do.you.prefer.to.use.e.food.retailing.service)
x<- c(a)
```

```{r}
mymode(a)
```
```

```
Yes
 75
```

```{r}
a
```
```

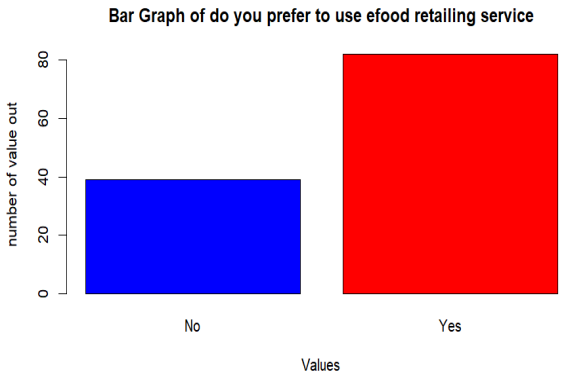
```
  [1] "Yes" ""    "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No"
 [13] "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [25] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No"  ""    "Yes" "Yes" "Yes" "Yes"
 [37] "No"  "No"  "No"  "Yes" "Yes" "No"  "No"  "No"  "Yes" "Yes" "Yes" "Yes"
 [49] "No"  "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "No"  "No"
 [61] "No"  "Yes" "No"  "Yes" "Yes" "Yes" "No"  ""    "No"  "No"  "No"  ""
 [73] "No"  "Yes" "Yes" "No"  "No"  "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "Yes"
 [85] ""    "No"  ""    "No"  ""    "No"  "Yes" "No"  "Yes" "Yes" "No"  "No"
 [97] "Yes" "No"  "Yes" "No"  "No"  "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "No"
[109] "Yes" "No"  "No"  "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "No"  "No"  "Yes"
[121] "Yes"
```

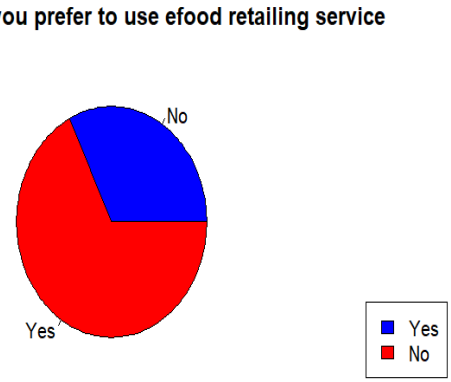
```{r}
a <- ifelse(a == "", "Yes", a)
```

```{r}
a
```
```

```
  [1] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No"
 [13] "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "Yes"
 [25] "Yes" "Yes" "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "Yes"
 [37] "No"  "No"  "No"  "Yes" "Yes" "No"  "No"  "No"  "Yes" "Yes" "Yes" "Yes"
 [49] "No"  "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "Yes" "No"  "No"
 [61] "No"  "Yes" "No"  "Yes" "Yes" "Yes" "No"  "Yes" "No"  "No"  "No"  "Yes"
 [73] "No"  "Yes" "Yes" "No"  "No"  "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "Yes"
 [85] "Yes" "No"  "Yes" "No"  "Yes" "No"  "Yes" "No"  "Yes" "Yes" "No"  "No"
 [97] "Yes" "No"  "Yes" "No"  "No"  "Yes" "Yes" "Yes" "Yes" "No"  "Yes" "No"
[109] "Yes" "No"  "No"  "Yes" "Yes" "No"  "Yes" "Yes" "Yes" "No"  "No"  "Yes"
[121] "Yes"
```

```
> value_counts <- table(a)
> colors <- c("blue", "red" )
> mylabel <- c("Yes", "No")
> pie(value_counts, main = "Pie Chart of do you prefer to use efood retailing service", col=
colors )
> legend("bottomright", mylabel, fill = colors)
> barplot(value_counts, main = "Bar Graph of do you prefer to use efood retailing service",
xlab = "Values", ylab = "number of value out", col = colors)
>
```





For Q11. Which of the following factors considers a concern to use e-food retailing services instead of the traditional food retailers.

````
---
title: "Project 1 Benefit.of.efood"
author: "Manish Kataria and Manpreet Kaur"
date: "2024-06-09"
output: html_document
---
```{r}
f<- (eFood)
a<- (f$ Benefit.of.efood)
x<- c(a)
```

value_counts <- table(a)

```{r}
mymode(a)
```
````

```
Delivery cost
           27
```

````
```{r}
a
```
````

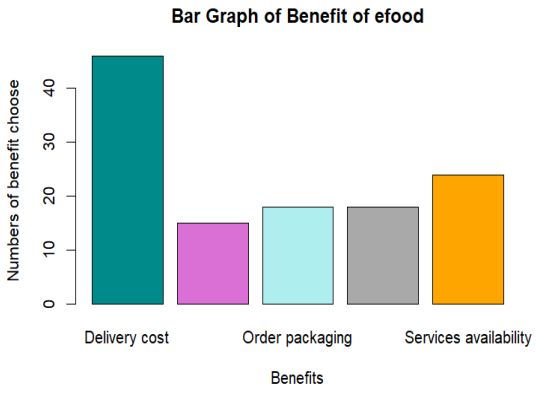
```
  [1] "Delivery cost"         "Delivery cost"         "Delivery cost"
  [4] "Services availability" "Services availability" "Reliability"
  [7] "Delivery time"         "Services availability" "Services availability"
 [10] "Delivery time"         "Order packaging"       "Services availability"
 [13] "Reliability"           "Order packaging"       "Reliability"
 [16] ""                      "Delivery cost"         "Delivery time"
 [19] "Delivery cost"         "Delivery time"         "Delivery cost"
 [22] "Reliability"           "Order packaging"       "Reliability"
 [25] "Reliability"           "Order packaging"       "Reliability"
 [28] "Order packaging"       "Reliability"           "Services availability"
 [31] ""                      "Order packaging"       "Delivery time"
 [34] "Delivery cost"         "Services availability" "Delivery cost"
```

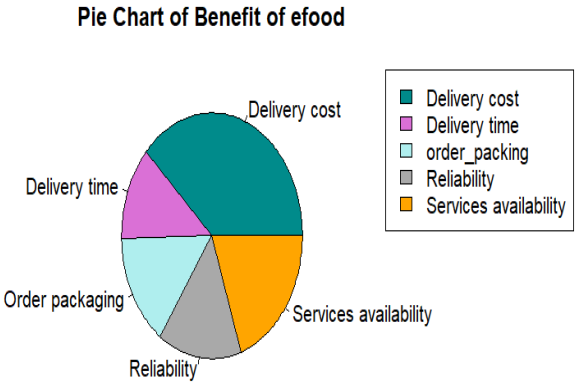
```r
a <- ifelse(a == "", "Delivery cost", a)
```

```r
a
```

```
 [1] "Delivery cost"         "Delivery cost"         "Delivery cost"
 [4] "Services availability" "Services availability" "Reliability"
 [7] "Delivery time"         "Services availability" "Services availability"
[10] "Delivery time"         "Order packaging"       "Services availability"
[13] "Reliability"           "Order packaging"       "Reliability"
[16] "Delivery cost"         "Delivery cost"         "Delivery time"
[19] "Delivery cost"         "Delivery time"         "Delivery cost"
[22] "Reliability"           "Order packaging"       "Reliability"
[25] "Reliability"           "Order packaging"       "Reliability"
[28] "Order packaging"       "Reliability"           "Services availability"
[31] "Delivery cost"         "Order packaging"       "Delivery time"
[34] "Delivery cost"         "Services availability" "Delivery cost"
[37] "Delivery cost"         "Delivery cost"         "Delivery cost"
[40] "Delivery cost"         "Order packaging"       "Delivery cost"
[43] "Services availability" "Delivery time"         "Reliability"
[46] "Delivery time"         "Reliability"           "Delivery time"
[49] "Delivery cost"         "Services availability" "Delivery time"
[52] "Services availability" "Services availability" "Delivery cost"
[55] "Reliability"           "Services availability" "Reliability"
[58] "Services availability" "Delivery cost"         "Order packaging"
[61] "Services availability" "Services availability" "Delivery cost"
[64] "Delivery time"         "Delivery time"         "Delivery cost"
[67] "Delivery cost"         "Delivery cost"         "Delivery cost"
[70] "Delivery cost"         "Delivery time"         "Delivery cost"
[73] "Delivery cost"         "Delivery cost"         "Order packaging"
[76] "Order packaging"       "Delivery cost"         "Delivery cost"
[79] "Delivery time"         "Delivery time"         "Delivery cost"
[82] "Order packaging"       "Delivery cost"         "Delivery cost"
[85] "Delivery cost"         "Delivery cost"         "Delivery cost"
```

```
> value_counts <- table(a)
> colors <- c("darkcyan", "orchid", "paleturquoise", "darkgray" ,"orange")
> mylabel <- c("Delivery cost","Delivery time" ,"order_packing","Reliability","Services availability")
> pie(value_counts, main = "Pie Chart of Benefit of efood", col= colors )
> legend("bottomright", mylabel, fill = colors)
> pie(value_counts, main = "Pie Chart of Benefit of efood", col= colors )
> legend("topright", mylabel, fill = colors)
> barplot(value_counts, main = "Bar Graph of Benefit of efood", xlab = "Benefits", ylab = "Numbers of benefit c
hoose", col = colors)
```





So, here we have all the results after cleaning for each column.

Ethical issues

Deceptive or misleading marketing: - Sometimes, restaurants or stores upload wrong information or visual of products which are unrealistic, at that time consumer can be go through misleading or deceptive marketing.

Poor treatment of consumers: - Many time stores or restaurants processed wrong order or do not pack it correctly. So, the customer faces poor treatment that effect much.

Misleading sales tactics: - Many time food places do not upload correct information about sales tactics and also upload fake reviews that are Misleading sales tactics.

Potential benefits of the food retailing online

Faster buying process: - When we buy online food it is faster process compare with offline retailing food. Because as we say, we have followed just few steps like add to cart, go to checkout, make a checkout and pay. So that's why it is easier than others.

Affordable advertising and marketing: - In online shopping we have so many offers and deals shown first as advertisement that is not only attraction is also beneficial for us. Also, marketing like promotion, sponsors also help to customers in retailing online

Flexibility for customers: - Online shopping is more flexible than offline shopping because customers have to walk and visit different stores. But online customer can manage all grocery and shops from different website and their application, so this is more flexible.

No reach limitations: - We have also a very reliable benefit that is, we have no limitations to visit online stores or restaurants. But, Due to time we can't visit more shops, stores or restaurants.

Product and price comparison: - Nowadays Product and price comparison is a useful feature of online shopping we can compare the price or product details for various site on one application like, "reebee".

Limitation of the food retailing online

Penetration into small towns: - In so many old or small towns online food or efood is not much popular so people like to retail food in traditional way like visit the stores and buy something.

Reduce brand knowledge: - Online retailing reduce our brand knowledge. Let us assume that we have to buy tomato sauce, On online shopping we have to visit so many different sites or pages for different brands but in offline shopping we have a tomato sauce in a particular section and also available in different brand in same section so that customer can pick, compare and buy easily.

You can not get your food straight away: - In online shopping we have to wait for several process like making, cooking, picking by delivery person, delver and so on. So, maybe it takes more time than offline retailing.

Conclusion

We would like to say that each have their on objective, limitation, advantages, disadvantages, benefits, AIMs. But as time passes problems can be solved. So, we think efood or retail food online is very good option for them who have busy schedules like worker, students, employes, drivers. We can say that efood is not important now days, but we can say that is a very successful business or option nowadays with their benefits.

Also we are student, we also prefer online food retailing because we have a busy schedule with our classes and part time work.

At last, people should have to try efood or food retailing online because it bind us with modern world and also helpful in so many ways.

[1] Melissa Anne Fernandez, *"Digital Food Retail: Public Health Opportunities"*, *Nutrients* ***2021****, 13(11)*

[2] John Stanton, *"A brief history of food retail"*, *November 2017, British Food Journal 120(1):00-00*

[3] Hamza Khlefat, Homam Attar and Abdallah Qusef, *"E-Food: Success Factors for Establishing Online Food Retailing: a Case Study from Jordan", October 2022, EasyChair Preprint*