TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR GIRLS, MULUGU

DEPARTMENT OF COMPUTER SCIENCE

ETURUNAGARAM MANDAL, MULUGU DISTRICT

Student Study Projects

(2021-2023)

List of Student Study projects

S.No.	Name of the Student & Group	Topic	Year
1	A Sandhya (BSc MPCS II Year) – 643-21-4003 T Soumya (BSc MPCS II Year) – 643-21-4031	"Normal Forms in DBMS"	14th June 2022
2	B Laxmi (BSc MPCS II Year) – 643-22-4004 B Srilatha (BSc MPCS II Year) – 643-22-4005 K prasanna (BSc MPCS II Year) – 643-22-4012	"Case Study on Search Engines"	12th Jan 2023
3	S Navya (BCOM CA 1st Year) – 643-24-2021	"Mail Merge" in MS-Word	14th Sep 2023
	CH Shalini, R nithyasri, K Nagasri, M Sindhu, N Akhila, CH Chandhini,, CH Sreeja, D Jeerthana, A Poojitha, A Tharuni from BCOM CA II Year	Study project on "Covid-19"	Oct. 2023
4	B Anitha (MPCS II Year) – 643-23-4004 B Suma (MPCS II Year) – 643-23-4003	Study Project on "Normal Forms in DBMS"	3rd Nov 2023
5	V Ramya Sri(BCOM CA 1st Year) – 643-24-2023	"MS-DOS Commands"	6th Nov 2023

Study Project

ON

Normal Forms in DBMS

Head
Department of Computer Science
TTWRDC (G) Mulugu-643

June-14-2022

Principal
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by

Sandhaya, T. Saumya
MPCS - II year II Sem

Objectives:

Storing the same information redundantly, that is, in more than one place within a database, can lead to several problems.

* Redundant Storage :- Some information is stored repeatedly.
* Update Anomalies :- If one copy of such repeated data is updated, an inconsistency is created unless all copies are similarly updated.
* Insertion Anomalies :- It may not be possible to delete certain information, possible to store certain information unless some other, unrelated, information is stored as well.
* Deletion Anomalies :- It may not be possible to delete certain information without losing some other, unrelated, information as well.

Normalization

Normalization is a process of correcting and evaluating table structures to minimize data redundancies and reducing data anomalies.

(or)

It is a step-by-step decomposition of complex records into simple records.

* Normalization follows series of stages called "normal-forms" like.

1. First Normal Form (1NF)
2. Second Normal form (2NF)
3. Third Normal form (3NF)
4. Boyce-codd Normal form (BCNF)
5. Fourth Normal form (4NF)

* Normalization involve decomposition (division) of "tables with anomalies" in "smaller well structured tables".

Rules of Data Normalization :-

1. Eliminate Repeating Groups :- Make a separate table for each set of related attributes, and give each table a primary key.

2. Eliminate Redundant Data :- If an attribute depends on only Part of multi-Valued key, remove it to a Separate table.

3. Eliminate columns Not Dependent on key :- If attributes do not contribute to a description of the key, remove them to a Separate table.

4. Isolate Independent Multiple Relationships :- No table may contain two or more 1:m or m:n relationships that are not directly related.

5. Isolate Semantically Related Multiple Relationships: There may be Practical constraints on information that justify Separating logically related many-to-many relationships.

Consider the following STUDENT table and see how the table is normalized form 1NF to 3NF.

rno	Sname	group	fee	Skills.
101	Sai	MBA	30,000	C C++ Java.

The above STUDENT table consists of multi-valued attributes (Skills). This can be removed in 1NF. It consists of Partial dependencies which are removed in 2NF and also it consists of Transitive dependencies which are removed in 3NF.

First Normal Form (1NF) :- The lowest possible implementation of normal forms is 1NF. A database table in 1NF must satisfy the following conditions.

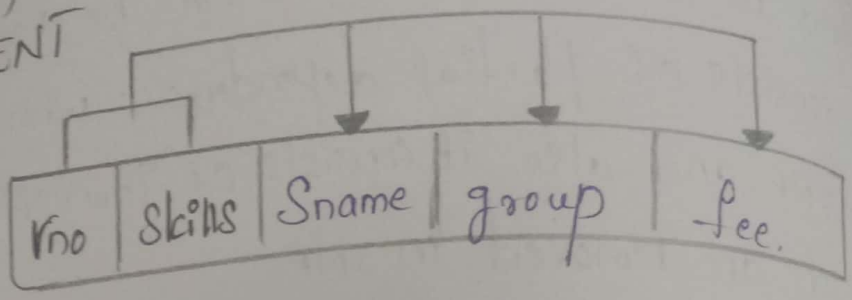
* The primary key entity requirements are met.
* Each row and column intersections can contain one and only one value.
* All the table's attributes are dependent on the primary key attribute.

The above table is changed into following table to satisfy 1NF.

rno	Sname	group	fee	Skills.
101	Sai	MBA	30000	C
101	Sai	MBA	30000	C++
101	Sai	MBA	30000	Java.

Data Dependency is

table : STUDENT



Second Normal form (2NF) :- A database table in 2NF must satisfy the following conditions.

* The table must be 1NF.
* The table contains no Partial dependencies. It means every non-key attribute is fully depended on key-attribute.

A dependency based on only part of Primary key is know as Partial dependency. The above table consists of Partial dependency (sname, group, fee are dependent on rno, i.e Part of Primary key). so we need to remove this partial dependency from the above table to satisfy 2NF. For this we decompose the STUDENT table into STUDENT and SKILLS tables.

STUDENT

rno	Sname	group	fee.
101	Sai	MBA	30000

SKILLS.

rno	skills.
101	C
101	C++
101	Java.

Removing Partial dependency

Table : STUDENT

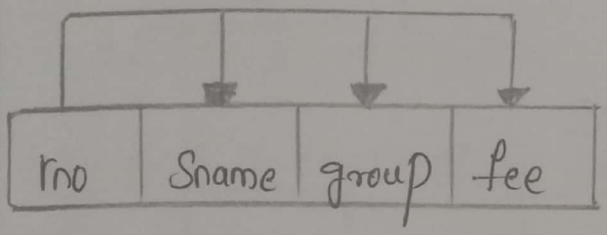
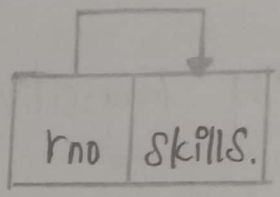


Table : SKILLS.



Now the above table is in Second Normal form.

Third Normal Form (3NF) :— A database table in 3NF must satisfy the following conditions.

- The table must be in 2NF.
- The table contains no Transitive dependencies.

A dependency based on an attribute that is not part of primary key is known as Transitive dependency. The above STUDENT table has transitive dependency i.e. dependency between "fee" and "group" attributes.

So we need to remove this transitive dependency by decomposing the STUDENT table into STUDENT and GROUP.

STUDENT

rno	Sname	group
101	Sai	MBA

GROUP

group	fee
MBA	30000

SKILLS.

rno	Skills
101	C
101	C++
101	Java.

Removing Transitive dependencies.

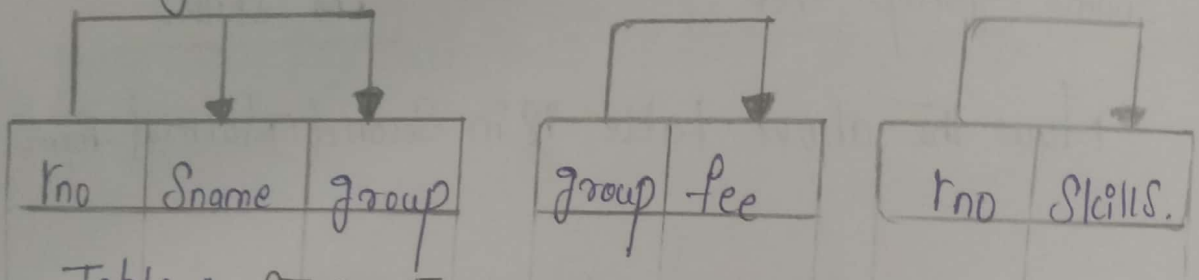
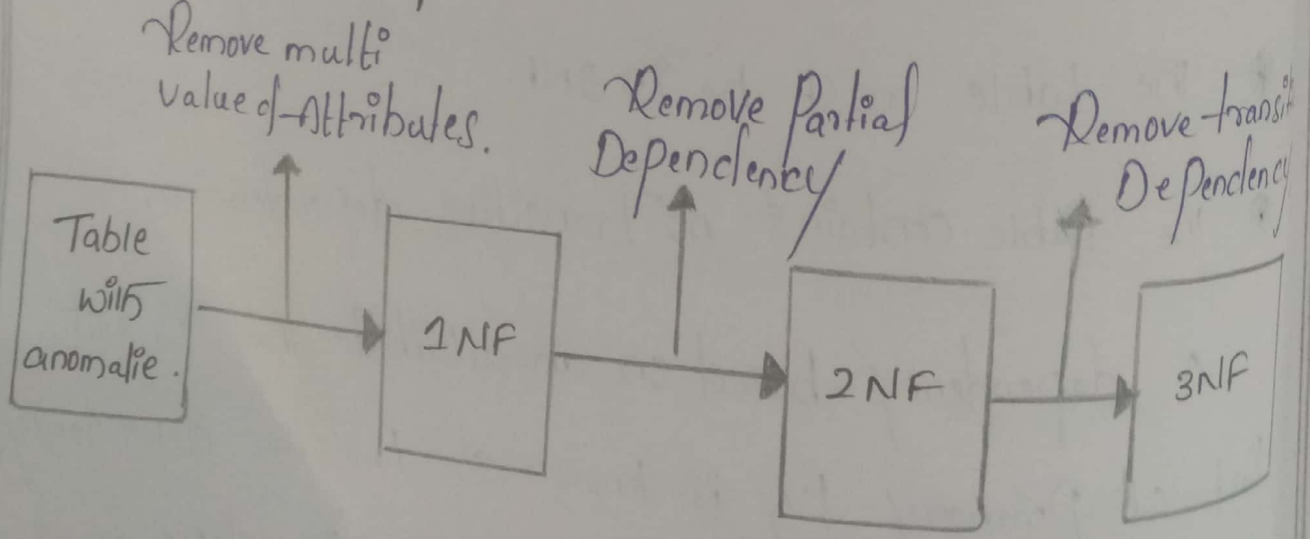


Table :- STUDENT Table :- GROUP Table :- SKILLS.

Diagrammatic Representation of Normalization.



BCNF (Boyce-codd Normal Form) :- BCNF stands for Boyce-codd Normal form. This normal-form is considered to be a special case of 3NF. But there are few differences between BCNF and 3NF.

* 3NF is satisfying 2NF and Removing Transitive dependency.
* Transitive dependency exists only when a non-key attribute determines another non-key attribute.
* But it is possible for a non-key attribute to the determinant of PK or part of PK without violating the 3NF requirements. This is nothing but BCNF.
* A table is in BCNF if and only if every determinant in the relation is a candidate key.

Consider the following table.

Sid	Subject	faculty
132	phy	Sai
132	Cs	chanti
423	phy	Sai
423	Cs	chanti
537	Cs	Mahesh

The above table that is in 3NF can be converted to a table in BCNF using simple two step process.

1. The table is modified so that the determinant in the table is not a candidate key (Faculty) becomes a component of pk of the revised table.

Sid	Faculty	Subject

2. In the above, Subject is partially dependend on Faculty i.e. there exist partial dependency. So decompose the table to eliminate the partial dependency and then the tables satisfy BCNF.

Sid	Faculty
132	Sai
132	chanti
423	Sai
423	chanti
537	Mahesh

Faculty	Subject
Sai	phy
chanti	CS
Mahesh	CS.

Fourth Normal form (4NF) :- A Relation or a table is in a 4NF, if it is already in the BCNF and it has no multivalued dependency.

conditions :-

1) All the attributes must dependent on up on the pk.

2) No row can contain two or more multivalued facts about an entity.

consider the following table with multivalued dependencies.

Course	Faculty	Textbook
Java	Murali	Diekel
	Silaram	Norton
	Sanjay	Norton
oracle	Naveen	Peters
		Hofer.

which on Removing multiple values for the attributes the table becomes.

Course	Faculty	Textbook
Java	Murali	Dietel
Java	Murali	Dietel
Java	Silaram	Dietel
Java	Silaram	Norton
Java	Venu	Dietel
Java	Venu	Norton
oracle	Smith	Peters
Oracle.	Smith	Hoffer.

Table in fourth Normal form, we remove multivalued dependency in the above table. And it is split as.

Course	Faculty
Java	Murali
Java	Silaram
Java	Venu
Oracle	Smith.

Course	Textbook.
Java	Norton
Java	Dietel
Oracle	Peters
Oracle	Hoffer.

Conclusion:

Relational databases can be arranged according to a set of rules called Normal forms in database administration (1NF, 2NF, 3NF, BCNF, 4NF and 5NF) which reduces data redundancy and preserve data integrity.

by

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References: 1) Fundamentalas of Database systems by / Ramez Elmasri, 2007.

2) Database Management Systems by by - Raghu Ramakrishnan, 1996.

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Study Project

ON

Normal forms in DBMS

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Date: Nov-3-2023

by:
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Objectives:

- Online Examination system can reduce the hectic job of assessing the answers given by candidates manually.
- Responses or the answers by the candi-dates can be checked automatically and instantly.
- It will reduce paper work to be an integrated online examination system.
- The result can be shown immediately to the students reducing the anxiety.
- Can create various reports and graphs for evaluation purpose almost instantly when and where required.

Online Examination system Project Java

Online Examination system Project Could be a web Portal which is developed or implemented in java domain or platform. This Project is helful for students to Practice different mock examinations from this site. In current generation lots of the examination like GRE, CAT, and MAT...etc is Conducted through online system. This Project will be help students to get Practised to online examination method by taking mock tests from this web Portal. Online examinati-on System Portal is implemented in 2 modules Student examination module and examination admin module. Admin module will add multiple courses under different branches so students Can easily know about test details. Student Examination module students ought to register with application and choose interested courses and participate in the online test.

Project Objective

⇒ Online Examination System can reduce the hectic job of assessing the answers given by Candidates manually.

⇒ Responses or the answers by the Candidates can be checked automatically and instantly

⇒ It will reduce paper work to be an integr -ated Online Examination System

⇒ The result can be shown immediately to the students reducing the anxiety.

⇒ Can Create various reports and graphs for evaluation purpose almost instantly when and where required.

Project Modules

1- Administrator module
2- Student module

After feeding the desired infor(s) to the login window the system checks user style of the corresponding user ID.

If it is admin then it'll settle for adminis -trator login & provides Administrator view else

Student View.

Major Operations

The following are the major operations of this application.

⇒ Administrator input or enter password to enter into system
⇒ Adding new course
⇒ Adding new batch
⇒ Adding students to batch
⇒ Adding questions of courses
⇒ Listing examinations details
⇒ Listing questions, bathes etc.
⇒ Changing of password

Online Examination System features

⇒ Secure
⇒ Time bar prevention
⇒ Straightforward to use
⇒ Reliable and correct
⇒ No want of examiner
⇒ Consistency
⇒ No debugging depetion.

improvement each moment. However performin -g all the necessary testing, we will conclud -e that our design will implement property that it absolutely was made.

Online Exam Project in Java Swing without database

In this project, there are given 10 questions to play. User can bookmark any question for the reconsideration while going to result.

We are using here java array to store the question, options and answers not database. You can use collection framework or databa -se in place of array.

```
1  /*Online Java Paper Test*/
2
3  import java.awt.*;
4  import java.aut.event.*;
5  import javax.swing.*;
6
7  class Online Test extends JFrame implements
       ActionListener
```

```
8  {
9      JLabel l;
10     JRadioButton jb[] = new JRadioButton[5];
11     JButton b1, b2;
12     ButtonGroup bg;
13     int count = 0, current = 0, X = 1, Y = 1, now = 0;
14     int m[] = new int[10];
15     OnlineTest(String s)
16     {
17     super(s);
18     l = new JLabel();
9      add(l);
10     bg = new ButtonGroup();
21     for(int i=0; i<5; i++)
22     {
23     jb[i] = new JRadioButton();
4      add(jb[i]);
5      bg.add(jb[i]);
6      }
```

```
27}     b1 = new JButton("Next");
28}     b2 = new JButton("Bookmark");
29}     b1.addActionListener(this);
30}     b2.addActionListener(this);
31}     add(b1); add(b2);
32}     set();
33}     l.setBounds(30,40,450,20);
34}     jb[0].setBounds(50,80,100,20);
35}     jb[1].setBounds(50,110,100,20);
36}     jb[2].setBounds(50,140,100,20);
37}     jb[3].setBounds(50,170,100,20);
38}     b1.setBounds(100,240,100,30);
39}     b2.setBounds(270,240,100,30);
40}     setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
41}     setLayout(null);
42}     setLocation(250,100);
43}     setVisible(true);
44}     setSize(600,350);
45}  }
```

```
46  public void actionperformed (ActionEvent e)
47  {
48   if (e.getSource()==b1)
49   {
50   if (check())
51      count = count + 1;
52   current++;
53   set();
54   if (current==9)
55   {
56    b1.setEnabled(false);
57    b2.setTex("Result);
58   }
59  }
60  if (e.getActionCommand().equals("Bookmark"))
61  {
62   JButton bk = new JButton("Bookmark"+x);
63   bk.setBounds(450,20+30*x,100,30);
64   add(bk);
65   bk.addActionListener(this);
```

```
66)     m[x] = current;
67)     x++;
68)     current++;
69)     set();
70)     if (current == 9)
71)     ba.setText("Result");
72)   setVisible(false);
73)   setVisible (true);
74) }

75) for(int i=0, Y=1; i<x;i++,Y++)
76) {
77) if ( e.getActionCommand().equals("Bookmark"+y))
78) {
79)   if (check())
80)     count = count + 1;
81)   now = current;
82)   current = m[Y];
83)   set();
84)   ((JButton) e.getSource()).setEnabled(false);
85)   current = now;
```

```
86        }
87      }
88
89    if (e.getActionCommand().equals("Result"))
90    {
91      if (check())
92        count = count + 1;
93    current++;
94    //System.out.println("correct ans = "+count);
95    JOptionPane.showMessageDialog(this,"Correct ans="
                                          +count);
96    System.exit(0);
97    }
98  }
99  void set()
100       {
101         jb[4].setSelected(true);
102         if(current==0)
103         {
104         l.setText("Ques: Which one among these
105             is not a primitive datatype?");
106
```

```
105  jb[0].setText("int"); jb[1].setText("float");
     jb[2].setText("boolean"); jb[3].setText("char");
106  }
107  if(current == 1)
108  {
109  l.setText("Que2: Which class is available to all
     the class automatically?");
110  jb[0].setText("Swing"); jb[1].setText("Applet");
     jb[2].setText("Object"); jb[3].setText("ActionEvent");
111  }
112  if(current == 2)
113  {
114  l.setText("Que3: Which package is directly
     available to our class without importing it?");
115  jb[0].setText("swing"); jb[1].setText("applet");
     jb[3].setText("lang");
116  }
117  if(current == 3)
118  {
119  l.setText("Que4: string class is defined in which
                    package?");
120
```

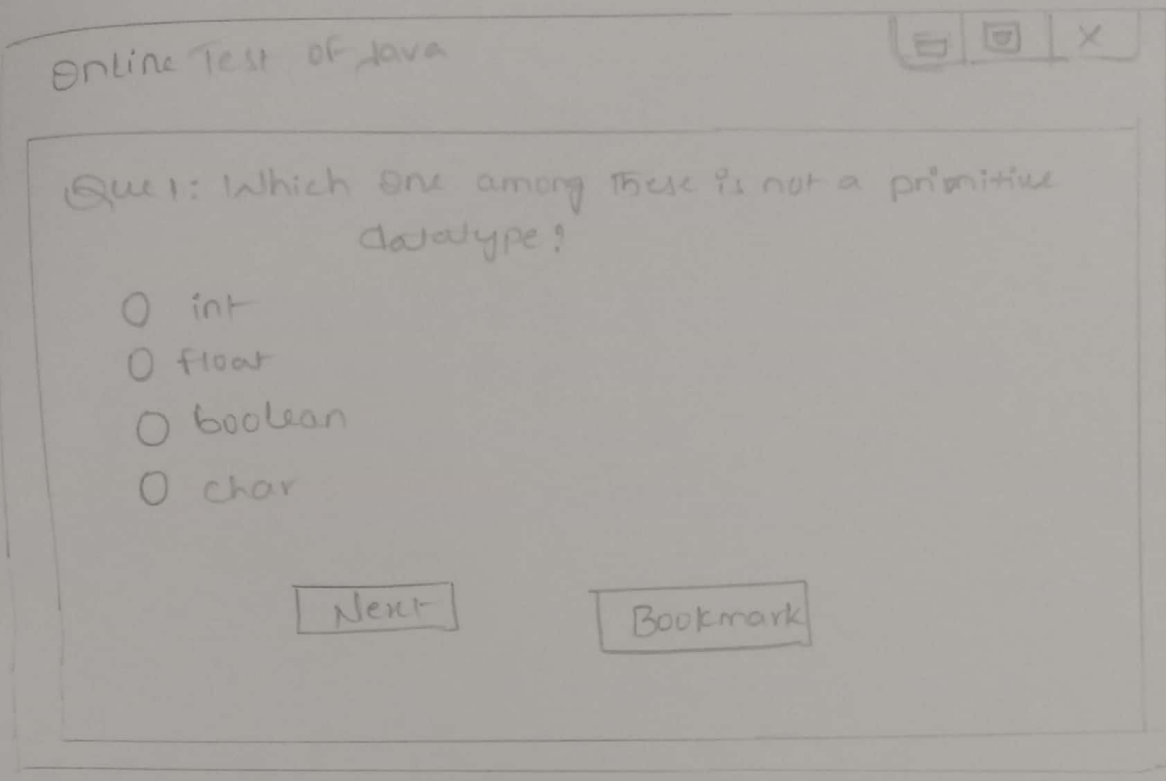
```
        jb[0].setText("Lang"); jb[1].setText("Swing");
        jb[2].setText("Applet"); jb[3].setText("Awt");
    }
    if (current == 4)
    {
        l.setText("Que5: Which institute is best for
                   java Coaching?");
        jb[0].setText("Utek"); jb[1].setText("Aptech");
        jb[2].setText("SSSIT"); jb[3].setText("Jtek");
    }
    if (current == 5)
    {
        l.setText("Que6: Which one among These is not
                   a keyword?");
        jb[0].setText("class"); jb[1].setText("int");
        jb[2].setText("get"); jb[3].setText("if");
    }
    if (current == 6)
    {
        l.setText("Que7: Which one among these is
                   not a class?");
```

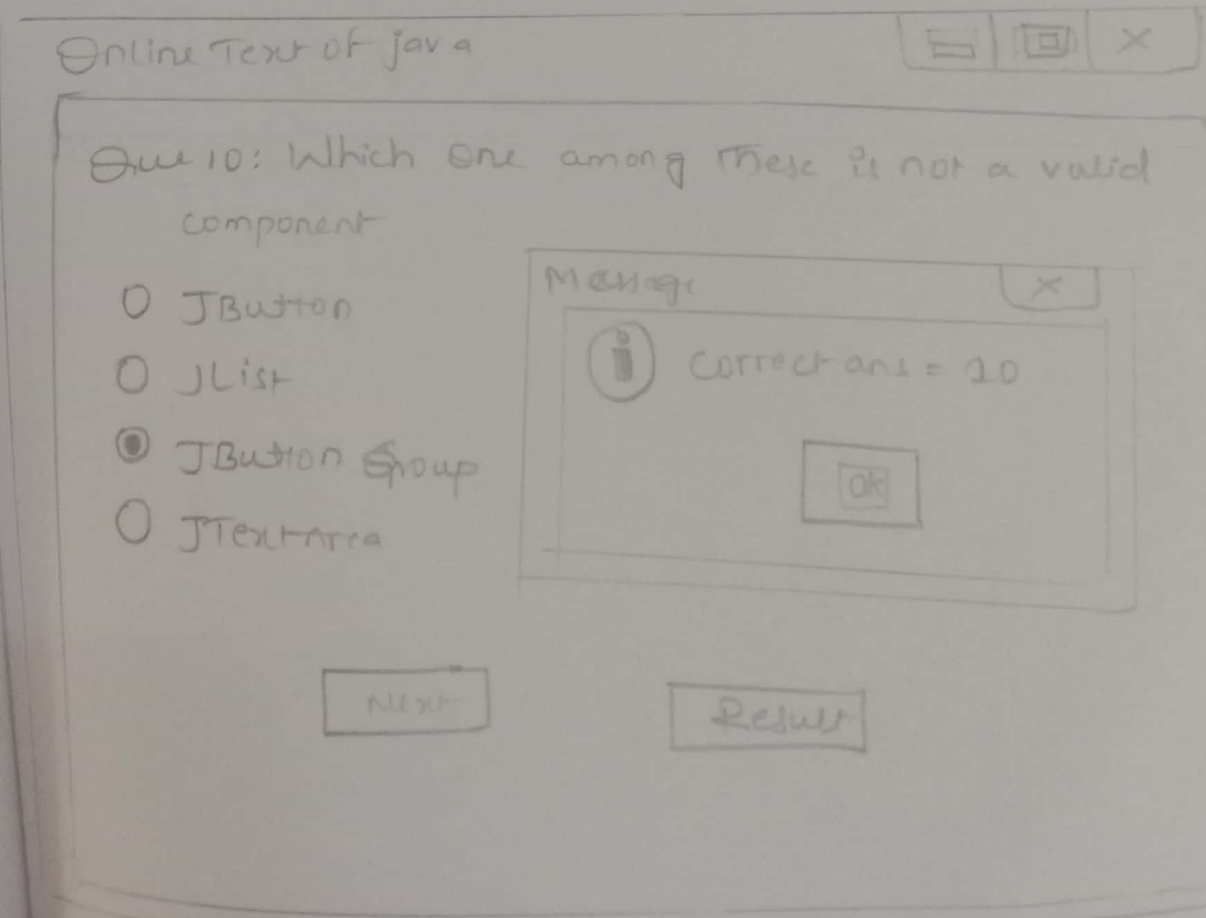
```
135  jb[0].setText("Swing"); jb[1].setText("Action
       -performed"); jb[2].setText("ActionEvent");
136  jb[3].setTex("Button");
137  }
138  if(current==7)
139  {
140  l.setText("Que8: Which one among these is not a
                function of Object class!");
141  jb[0].setText("to string"); jb[1].setText("finalize");
                jb[2].setText("equals");
142    jb[3].setText("getDocumentBase");
143  }
144  IF(current==8)
145  {
146  l.setText("Que9: Which function is not present
                in Applet class?");
147  jb[0].setText("int"); jb[1].setText("main");
       jb[2].setText("start"); jb[3].setText("destory");
148  }
149  if(current==9)
150  {
```

```
151}   l.setText("Que 10: Which One among These is
       not a valid component?");
152}   jb[0].setText("JButton");jb[1].setText("JList");
       jb[2].setText("JButton Group");
153}       jb[3].setText("JTextArea");
154}   }
155}   l.setBounds(30,40,450,20);
156}   for(int i=0,j=0;i<=90;i+=30,j++)
157}   jb[j].setBounds(50,80+i,200,20);
158}   }
159}   boolean check()
160}   {
161}    if(current==0)
162}      return(jb[1].isSelected());
163}    if(current==1)
164}      return(jb[2].isSelected());
165}    if(current==2)
166}      return(jb[3].isSelected());
167}    if(current==3)
168}      return(jb[0].isSelected());
169}    if(current==4)
```

```
        return (jb[1].isSelected());
    if (current==5)
        return (jb[2].isSelected());
    if (current==6)
        return (jb[1].isSelected());
    if (current==7)
        return (jb[3].isSelected());
    if (current==8)
        return (jb[1].isSelected());
    if (current==9)
        return (jb[1].isSelected());
    return false;
}
public static void main(String s[])
{
    new OnlineTest("Online Test of java");
}
}
```

Output





Conclusion;

As far as design is concerned no design is Complete ever and there are chance -s of improvement each moment. However performing all the necessary testing, we will Conclude that our design will implement properly that it absolutely was made.

References:

Book Name := Database Management System

Author Name := Raghu Ramakrishnan and Johannes Gehrke

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Project Work

Topic := case study on search Engine

Group := MPCs II year

Group Members := B. Laxmi (643224004)
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1. Introduction
2. Web search engine google
   A. system Anotomy
   B. System features
      * page Rank
      → * Description of payre rank formula
      → * Anchor text
   C. Crawling
   D. Indexing

   Other features

      → * Google
      → * Yahoo
      → * Ask
      → * MSN
3. Google Services - 2010 update
      → * Google (TV)
      → * Google chrome
      → * Google Apps
      → * Google Mission
4. Previous Case study updates
5. Update - trends in usage of google Services
6. Conclution

1) Introduction

All Google it is one of the most renowned terms in Internet World Google's brand Lau become so universally recognizable that now days; people use it like a verb for example if someone asks "Hey what is the meaning of that word? the answers is I don't know Google it.

Google Inc is an American public Corporation Specializing in internet search technology and many products. Google's mission is based on the funda-mentals of collaborative teamwork it main motive is to organize the would's information and make it universally accessible and useful. Google Company was founded by larry page and Sergey Brin while studying PHD at standford university in 1998 (1)

the main idea behind the Google's search engine is that the web can be represented as a series of interconnected links, and its structure can be portrayed by a giant and complex mathe-matical graph. Google's innovative search engine technologies connect millions of people around the would with information every second

the name "Google" derived from the

word "Google" which refers to 10^{100}.

2) WEB SEARCH ENGINE Google

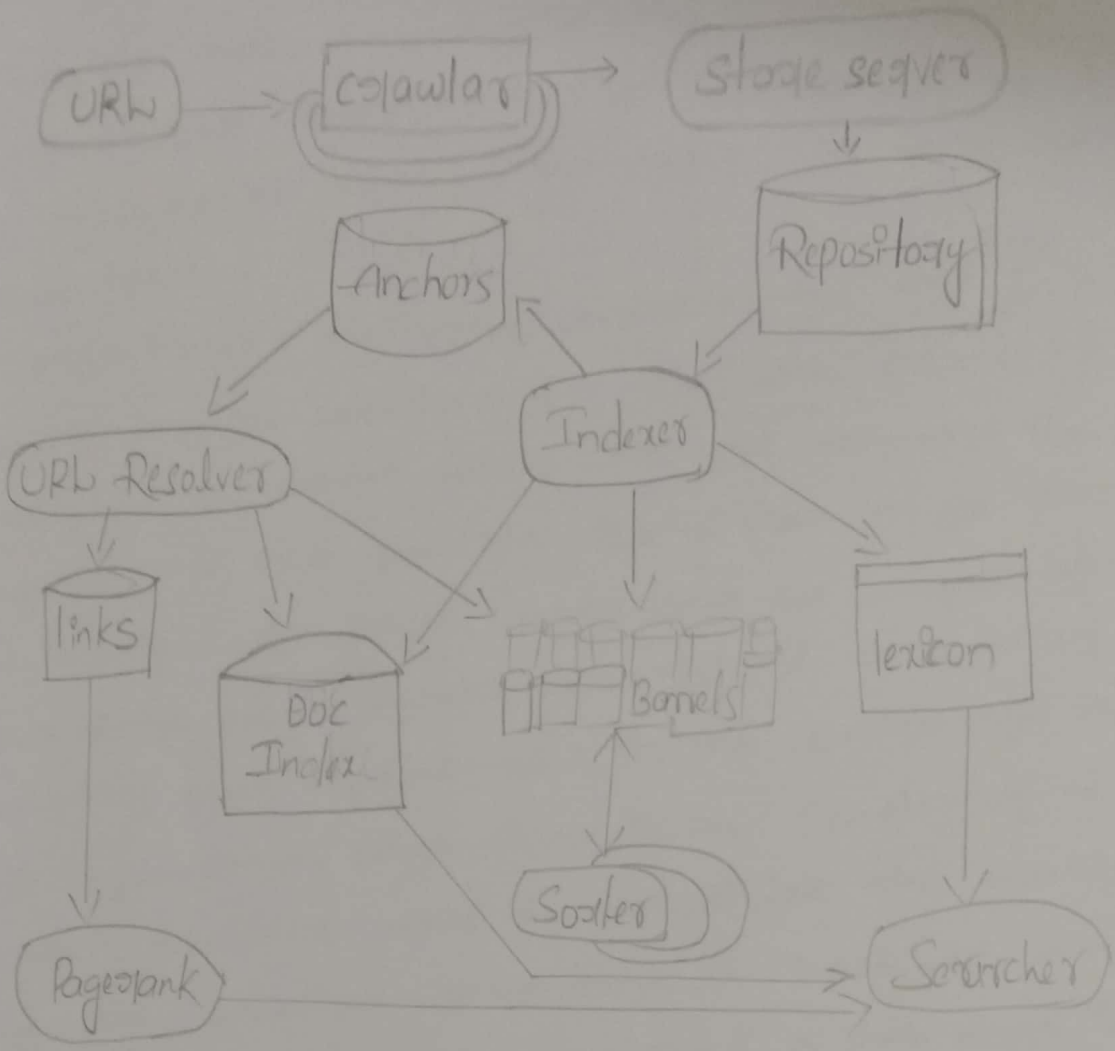
Developing a search engine that matches even to today's Web World presents many challeges before us. storage technologies must be used optimized to storage the documents and the indices to gather the up to date Web documents and information fast Crawling technology (browsing the Would Wide Web) is required and it ensures that we can find Latest we use. news blogs and status updates, the indexing system must process hundreds of gigabyles of data effeciently, speed is the major priority in searching Queries response time must be very fasfer

Google is designed to scale well to keep up with the growth of Web It gives exactly what we want. for fast and efficient access. its data. stay -ctured are optimized in addition to smart coding on the back end it devoloped distributed Computing systems around that globle that ensure fast res -ponse times.

A. System Anatomy

first we will provide a high level discussion of the Google's architechure finally the major methods craw -ling indexing and searching will be examined in depth

1) Google architecture Overiew.



In Google the web crawling (downloading of web pages) is done by several destributed crawlers which is a Computer program that browses the world wide web by employing many computers URL server sends lists lists of URL (uniform that are fetched are they sent to the store the web pages into a repository every web page has an associated ID number.

B. System features

Google's most important feature is page Rank. a method that determined the "importance" of a webpage by analyze at what other pages link to it as well as other data.

1. page Rank: Bringing order to the web

serch engine searches for the web pages or documents available on world wide web and returns the relevant results it is not possible for a user to go through all the millions of pages presented as output of seareh. thus all the pages should be weighted according to their priority and represented in the order of their weights and importance page Rank is an (order of their weights and/or) excellent way to prioritize the results of web keyword searches. page Rank is basically a numeric value that represents how much a web page is impor -tant on the web

2. Description of payre rank formula

page Rank is calculated by Counting citations or backlinks to a given page. In the paper "the Anatomy of a large - scale Hypertentual web search Engine" founders of google.

3. Anchor tent:

the anchor tent is defined as the visible highlighted clickable tent that is displayed for a hyperlink. in an HTML page Search engine treat the anchor tent in a different way. the anchor tent

can determine the rank of the page It pro-vides more accurate determine of web pages that are indicated in anchors than the pages themselves. Anchors may exist for documents which cannot be indexed by text-based search engine as images programs and databases.

C. Crawling

Web Crawling or spidering is a process of brow-sing the world wide web in a methodical auto-mated manner by software program called web crawler running on a search engine's server web crawler are also called indexers, bots, web spiders, ants, web robots.

Crawlers start by fetching a few web pages then they follow all the links contained on those pages and fetch the pages they point to and so on. It is a recursive process and it produce many billions of pages stored across thousands of machines. Running a web crawler is a challenging task beca-use crawling is the most fragile application since it involves interacting with hundreds of thousands of web servers.

D. Indexing

The spider collects the data and stored in "index" when we are doing searching we are not searching the web but the cache of the web or index provided by search engine Rather than

Searching each page for a query phrase or keywords "search engine" inverts the index to produce a table of the documents containing particular words for example for the search "online shopping" the search engine might find the word online in documents 13, 28, 49, 54 and 99 and the word "shopping" in documents 13, 28, 49, and 57 follows.

Other feature

- Apart from page Rank calculations and the use of anchor text google has several other features

⇒ first, it has location information for all hits a set of all word occurences so it makes extensive use of proximity or probability in searching

⇒ Second. Google keeps information about some visual presentation details such as font size of words, words in a larger or bolder font are weighted higher than other words

⇒ third, full raw HTML of pages is available in a repository.

Google :-

Google has been in the search game a long time, it has the highest share market of search Engine (about 81%)

1) Web crawller - based service provides both Comprehensive coverage of the Web along with great relevanly.

2) google is much better than the other engines at determining whether a link is an artificial link or true edition editorial link.

3) Google gives much importance to sites which add fresh content on a regular basis, this is why Google likes blogs, especially popular ones

4) Google prefer information pages to commercial sites

5) A Page on a site or sub domain of a site with significant age or link can rank much better than it should, Even with no external citations.

YAHOO :-

1) It shares the second largest share market of the Search engine (about 12%) Yahoo has been in the Search game for many years [7]
2) When it comes to counting back lings, Yahoo is the most accurate search engine [7]
3) Yahoo is better than MSN but near as good as Google at determining whether a link is a artificial or natural
4) Crawl rate of the Yahoo's spiders is at least 3 times faster than Google's spiders (3)
5) Yahoo! tends to prefer commercial pages to Informational pages as comparing with Google [7]

MSN :-

1) MSN has the share of 3% of the total search engine market (7)
2) MSN Search uses its own web database and also has separate News, Images and local databases

3) Its strength include this large unique database its query building "Search Builder" and Boolean Searching. Cached copies of web pages including data cached and automatic local search options.

4) the spider crawls only the beginning of the pages (as opposed to the other two search engine which crawl the entire content) and also the number of Pages found in this index or database is Extremely Low [8]

ASK :-

1) the Ask search engine has the lowest share [about - 1%] out of the total search engine market [7]

2) Ask is a topical search site, It gives more importance to sites that are linked to topical communities

3) Ask is more susceptible to spanning (7)

3) Google Services - 2010 update :-

The range of established Google Services is well known. Many of these achieve through acquisition See this 2010 Summary of Google acquisitions

Google's Commitement to innovation is indicated by these more recent additions to their Services which show that their ambitions extend for beyand search and information management through developing operating systems and hardware across multiple platforms to fulfill their mission to organize the world's information... and make it universally accessible and useful."

* Google TV (Google TV announced 2010) as part of a patenership agreement with Sony and other hardware vendors

Google chrome : a browser announced as a beta in 2008 and full product for windows in 2009

Google Apps :- Announced in 1997 when Google Apps premier edition became available for $50 per user account per year. and includes phone support. additional storage and a new set administration and business integration capabilities

4) Google Mission :-

google's mission is encapsulated into SEC filing statement "to organize the World information.. and make it universally accessible and useful"

Google ultimately that it believes that the most effective and ultimately the most profitable. way to accomplish our mission is to put the needs of our users first, offering a high-quality user experience has led to strong word of mouth promotion and strong traffic growth.

Read further details on the culture and ethics of Google in their ten things manifesto Notable text of the Google philosophy are.

1) focus on the user and all else will follow
2) It's best to do one thing really well.
3) you can make without doing evil (the founders are well known and chastised for making this statement)

4) Previous Case study updates :-

→ Google founders letter - published may 2009 - this note from the founders of Google outlines future strategy and priorities of Google key services

→ Number of Google advertisers - currently 1.3 to 1.5 million indicating plenty of potential for growth See analysis on Number of Google advertisers

5) Update - trends in usage of Google Services:-
Techcrush has a useful Summary of us trends is usage of Google services, this catalog -ues the continuous growth of Google in the US in its core services but shows Google video.

scholar and Google product search falling substantially.

click on the top left link on the widget below to see tech crunches take on Google's product staregy :-

Conclusion :-

Google is in a rapidly charging industry where it also needs be able to respond immediately and adjust to the new trends in the industry, as a company that deals with information and needs, the best strategies to keep up with the demand and the competitions, it must not only focus on creating and maintaining their differentiation competitive advantage, but it must also make fast and aggressive moves that " focuse on their capability to dynamica -lly adjust their organizational resources, valuing agility itself as the competitive advantage [" pearlson & Saunders 2013] Google has acquired excellent stakeholder satisfaction by offering a

a high-class product to its customers and continuously adding new features, products and services that delivers value of customers is important key keep aligning its strategies with its mission and maintain the balance in the IT strategy Triangle.

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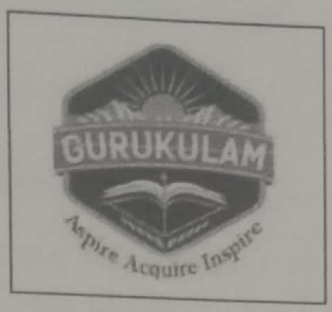
Government Of Telangana

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN

ETUNAGARAM MULUGU



Department of Computer Science

Student study project on covid -19 (2022-23)

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COVID 19

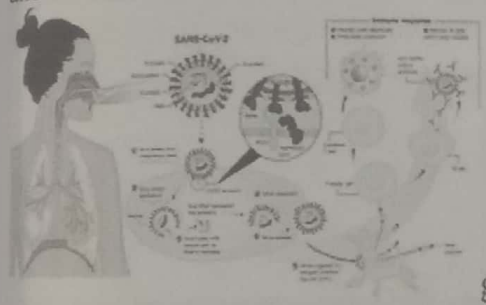
Coronavirus disease 2019 (COVID-19) is a contagious disease caused by the virus SARS-CoV-2. The first known case was identified in Wuhan, China, in December 2019.[6] The disease quickly spread worldwide, resulting in the COVID-19 pandemic.

Coronavirus disease 2019 (COVID-19)	
Other names	COVID, (the) coronavirus

Transmission and life-cycle , which causes COVID-19

The virus first appeared on a small scale in November 2019 with the first large cluster appearing in Wuhan, China in December 2019. It was first thought SARS-CoV-2 made the jump to humans at one of Wuhan, China's open-air "wet markets." Later theories voiced concern that it may have originated as a biological weapon in a lab in China.

As COVID-19 spread both inside and outside China, it infected people who have had no direct contact with animals. That meant the virus is transmitted from one human to another. Its spread continued to the U.S. and around the



globe, meaning that people are unwittingly catching and passing on the coronavirus. The worldwide transmission is what is now a pandemic declared on March 11, 2020 by the World Health Organization.

Key facts

- **COVID-19 is a disease caused by a virus. The most common symptoms are fever, chills, and sore throat, but there are a range of others.**
- **Most people make a full recovery without needing hospital treatment. People with severe symptoms should seek medical care as soon as possible.**
- **Over 760 million cases and 6.9 million deaths have been recorded worldwide since December 2019, but the actual number is thought to be higher.**

People over age 60 and those with existing medical conditions have a higher risk of getting seriously ill. These conditions include high blood pressure, diabetes, obesity, immunosuppression including HIV, cancer and pregnancy. Unvaccinated people also have a higher risk of severe symptoms.

Symptoms

- confusion
- drowsiness or loss of consciousness
- persistent pain or pressure in the chest
- skin being cold or clammy, or turning pale or a bluish colour
- loss of speech or movement.

People who have pre-existing health problems are at higher risk when they have COVID-19; they should seek medical help early if worried about their condition. These include people taking immunosuppressive medication; those with chronic heart, lung, liver or rheumatological problems; those with HIV, diabetes, cancer. obesity or dementia.

People with severe disease and those needing hospital treatment should receive treatment as soon as possible. The consequences of severe COVID-19 include death, respiratory failure, sepsis, thromboembolism (blood clots), and multiorgan failure, including injury of the heart, liver or kidneys.

In rare situations, children can develop a severe inflammatory syndrome a few weeks after infection.

Some people who have had COVID-19, whether they have needed hospitalization or not, continue to experience symptoms. These long-term effects are called long COVID (or post COVID-19 condition). The most common symptoms associated with long COVID include fatigue, breathlessness and cognitive dysfunction (for example, confusion, forgetfulness, or a lack of mental focus or clarity). Long COVID can affect a person's ability to perform daily activities such as work or household chores

Wear a mask properly

To properly wear your mask:

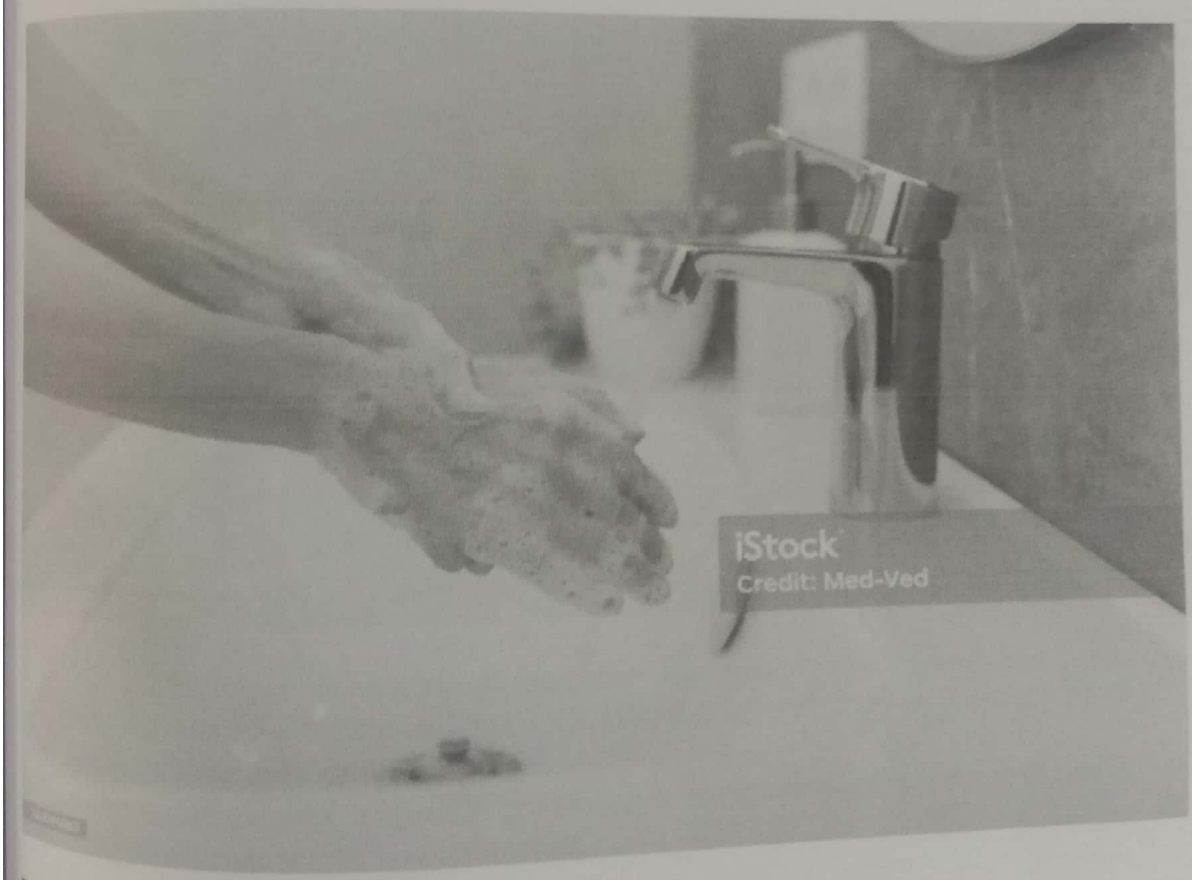
- Make sure your mask covers your nose, mouth and chin.
- Clean your hands before you put your mask on, before and after you take it off, and after you touch it at any time.
- When you take off your mask, store it in a clean plastic bag, and every day either wash it if it's a fabric mask or dispose of it in a trash bin if it's a medical mask.

Keep good hygiene

By following good respiratory hygiene you protect the people around you from viruses that cause colds, flu and COVID-19.

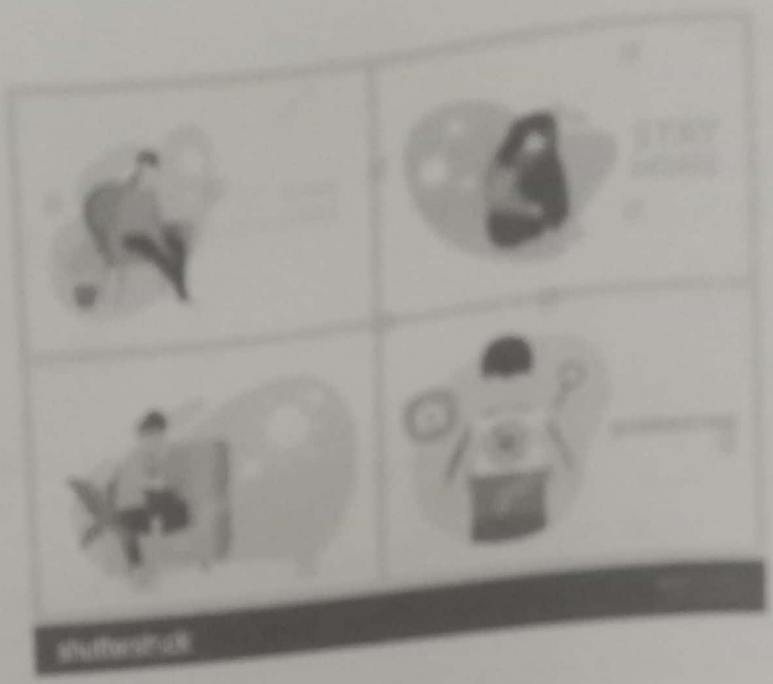
To ensure good hygiene you should:

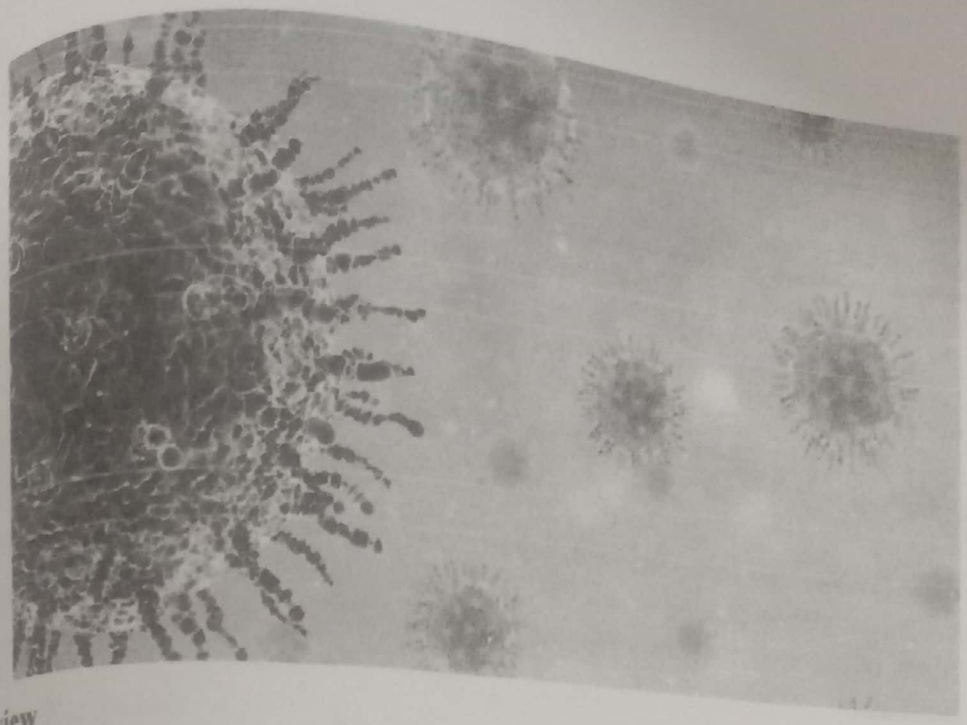
- Regularly and thoroughly clean your hands with either an alcohol-based hand rub or soap and water. This eliminates germs that may be on your hands, including viruses.
- Cover your mouth and nose with your bent elbow or a tissue when you cough or sneeze. Dispose of the used tissue immediately into a closed bin and wash your hands.
- Clean and disinfect surfaces frequently, especially those which are regularly touched, such as door handles, faucets and phone screens.



What to do if you feel unwell

If you feel unwell, here's what to do.





Overview

- COVID-19 is the disease caused by the SARS-CoV-2 coronavirus. It usually spreads between people in close contact

- COVID-19 vaccines provide strong protection against severe illness and death. Although a person can still get COVID-19 after vaccination, they are more likely to have mild or no symptoms.
- Anyone can get sick with COVID-19 and become seriously ill or die, but most people will recover without treatment.

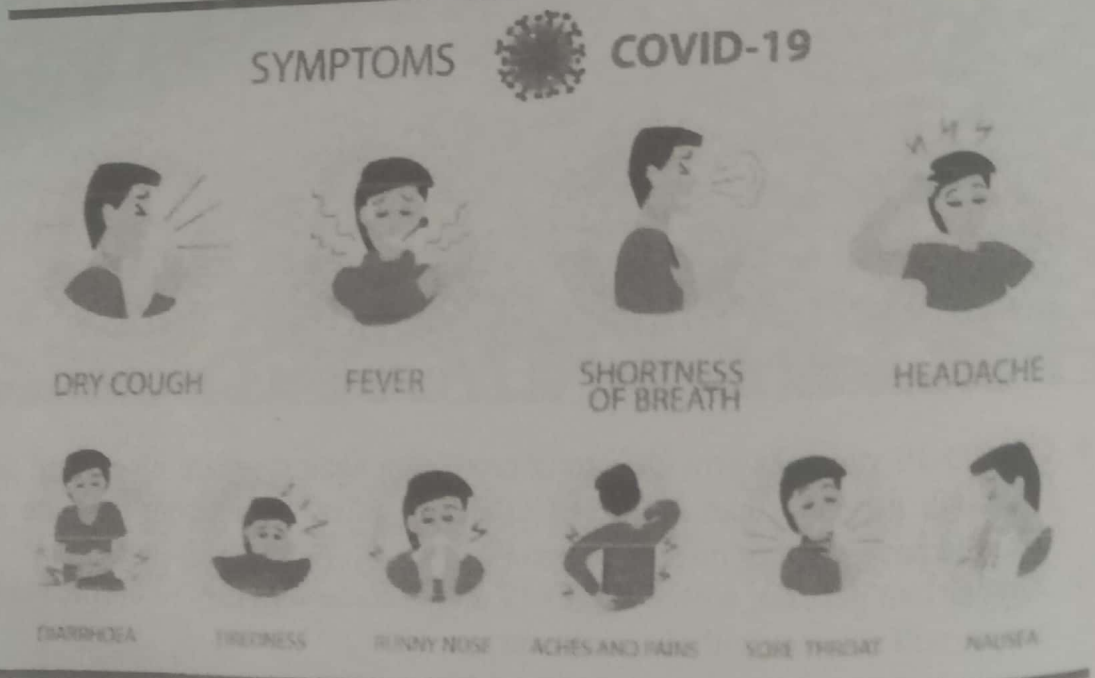
People may experience different symptoms from COVID-19. Symptoms usually begin 5–6 days after exposure and last 1–14 days.

The most common symptoms are:

- fever
- chills
- sore throat.

Less common symptoms are:

- muscle aches and heavy arms or legs
- severe fatigue or tiredness
- runny or blocked nose, or sneezing
- headache
- sore eyes
- dizziness
- new and persistent cough
- tight chest or chest pain
- shortness of breath
- hoarse voice
- numbness or tingling
- appetite loss, nausea, vomiting, abdominal pain or diarrhoea
- loss or change of sense of taste or smell
- difficulty sleeping.



People with the following symptoms should seek immediate medical attention:

- difficulty breathing, especially at rest, or unable to speak in sentences

Treatment

Most people will recover without needing treatment in a hospital.

For those who need it, doctors will suggest treatments for COVID-19 based on the severity of the disease and the risk of it getting worse. They will consider the person's age and if they have other health problems.

Treatments for COVID-19 should be decided on an individual basis between the person and the healthcare professional looking after them. The choice will depend on the severity of disease and the risk of disease worsening (including the person's age and whether they have any health problems). WHO maintains a list of recommended treatments, together with the evidence for each.

Advice for the public

Protect yourself and those around you:

- Get vaccinated as soon as it's your turn and follow local guidance on vaccination.
- Keep physical distance of at least 1 metre from others, even if they don't appear to be sick. Avoid crowds and close contact.
- Wear a properly fitted mask when physical distancing is not possible and in poorly ventilated settings.
- Clean your hands frequently with alcohol-based hand rub or soap and water.
- Cover your mouth and nose with a bent elbow or tissue when you cough or sneeze. Dispose of used tissues immediately and clean hands regularly.
- If you develop symptoms or test positive for COVID-19, self-isolate until you recover.

Make your environment safer

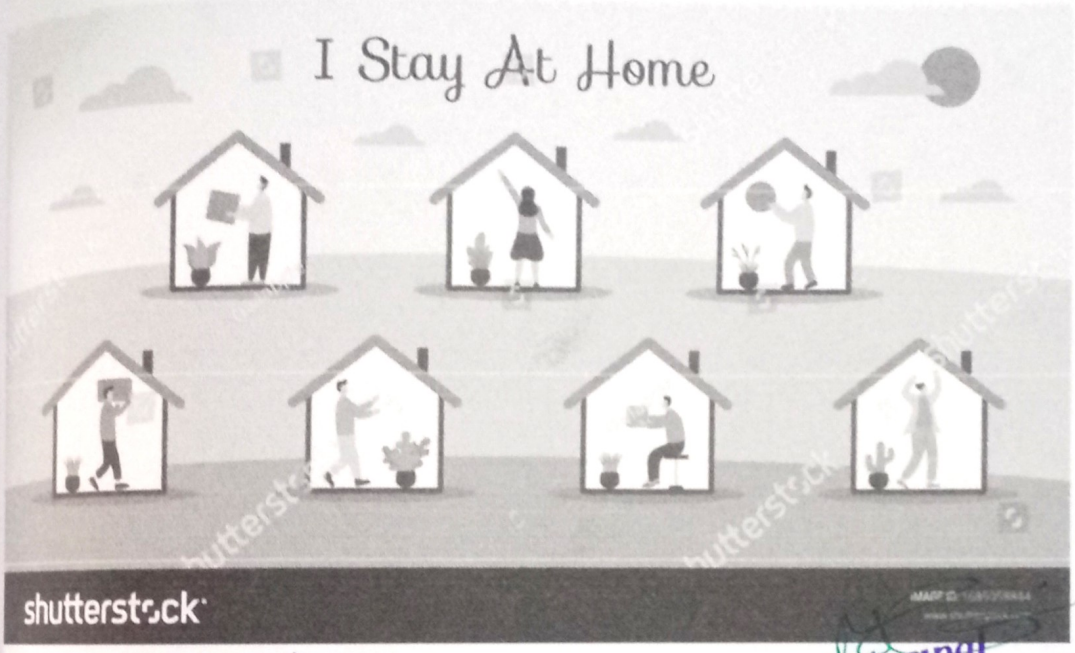
The risks of getting COVID-19 are higher in crowded and inadequately ventilated spaces where infected people spend long periods of time together in close proximity.

Outbreaks have been reported in places where people have gather, often in crowded indoor settings and where they talk loudly, shout, breathe heavily or sing such as restaurants, choir practices, fitness classes, nightclubs, offices and places of worship.

To make your environment as safe as possible:

- Avoid the 3Cs: spaces that are **c**losed, **c**rowded or involve **c**lose contact.
- Meet people outside. Outdoor gatherings are safer than indoor ones, particularly if indoor spaces are small and without outdoor air coming in.
- If you can't avoid crowded or indoor settings, take these precautions:
    - Open a window to increase the amount of natural ventilation when indoors.
    - Wear a mask (see above for more details).

- If you have a fever, cough and difficulty breathing, seek medical attention immediately. Call by telephone first and follow the directions of your local health authority.
- Know the full range of symptoms of COVID-19. The most common symptoms of COVID-19 are fever, dry cough, tiredness and loss of taste or smell. Less common symptoms include aches and pains, headache, sore throat, red or irritated eyes, diarrhoea, a skin rash or discolouration of fingers or toes.
- Stay home and self-isolate for 10 days from symptom onset, plus three days after symptoms cease. Call your health care provider or hotline for advice. Have someone bring you supplies. If you need to leave your house or have someone near you, wear a properly fitted mask to avoid infecting others.
- Keep up to date on the latest information from trusted sources, such as WHO or your local and national health authorities. Local and national authorities and public health units are best placed to advise on what people in your area should be doing to protect themselves.



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5. N. Akhila	N. Akhila
6. Ch. Chandini	ch. chandini
7. Ch. Sreeja	ch. Sreeja
8. D. keerthana	D. keerthana
9. A. poojitha	A. poojitha
10. A. Tharani	A. Tharani

Study Project

on

MAIL MERGE

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[2023-2024]

Sep-14-2023

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Objective :-

Mail merge lets you create a batch of documents that are personalized for each recipient.

For example, a from letter might be personalized to address each recipient by name.

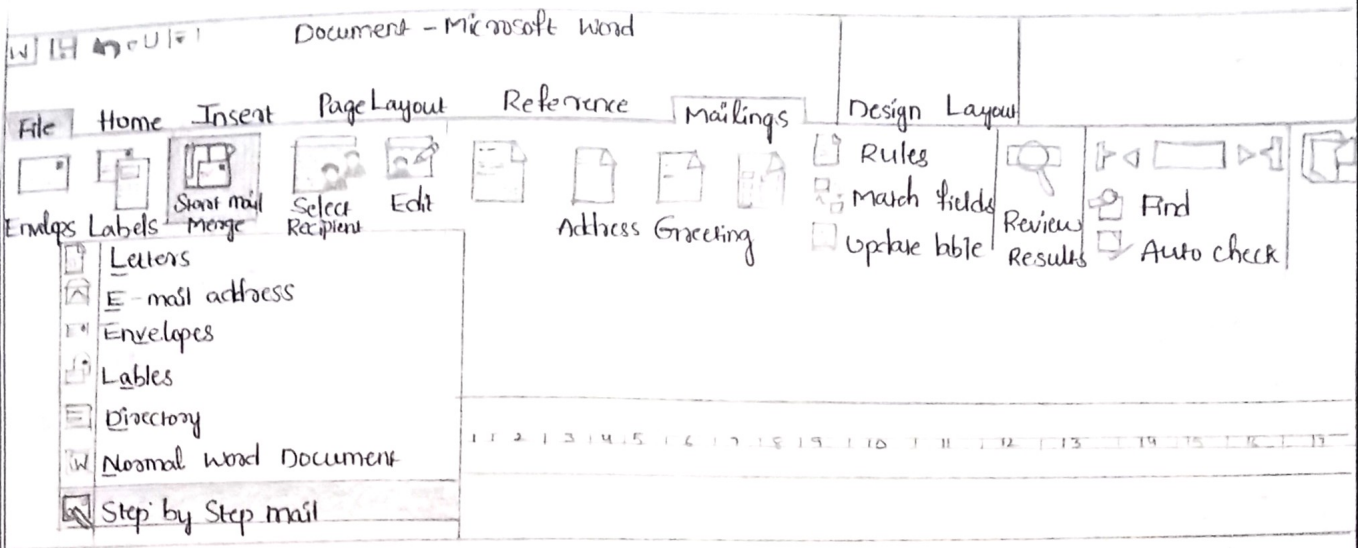
A data source, like a list, spreadsheet, or database, is associated with the document.

- Learn about the mail merge process.
- Use the Mail merge task pane Select a main document
- => Create a data Source
- => Insert mail merge fields into a main document
- => Edit a main document
- => preview a merged document
- => Complete a mail merge
- => Sort and filter a data Source.
- -> Create a Catalog - type document and mailing labels.

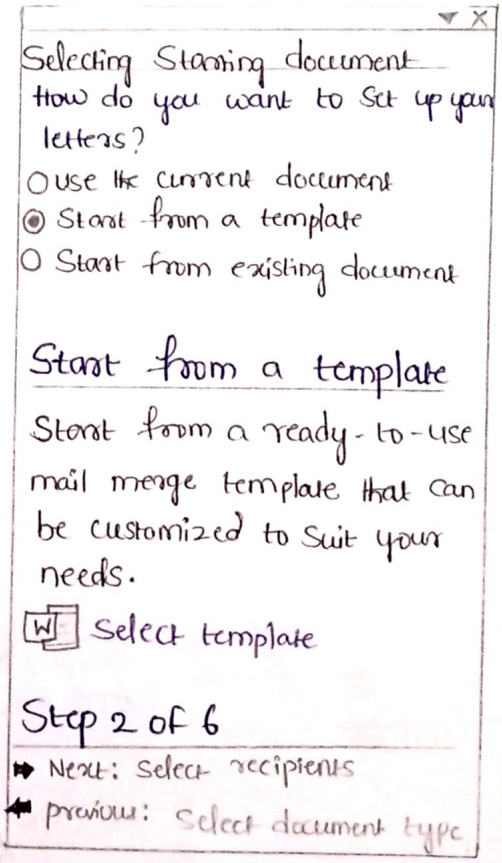
Steps in MAIL MERGE in MS Word

a) Click Mailing tab on the ribbon.

b) Click Start Mail Merge.



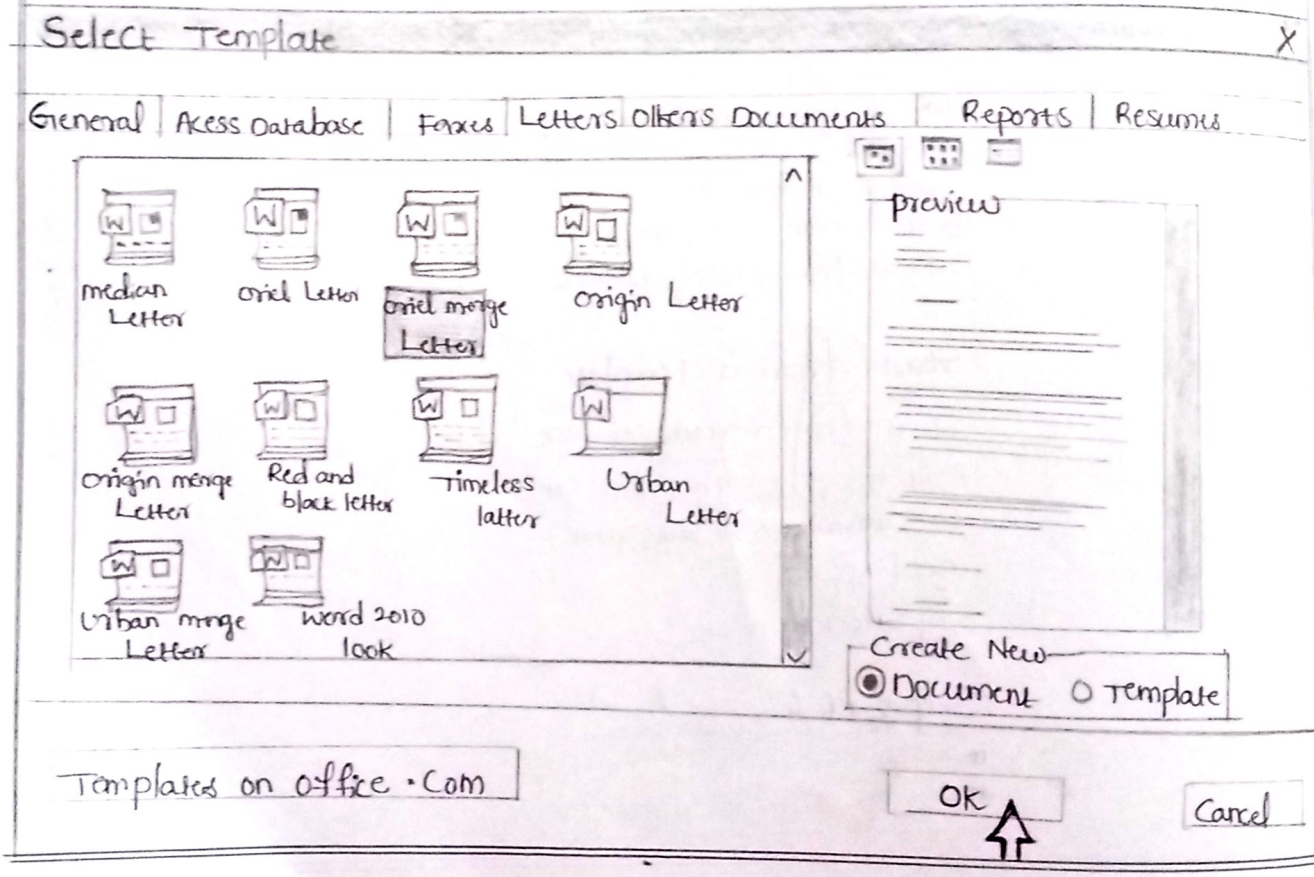
c) Select the last option "Step by Step Mail Merge Wizard". Task panel will be displayed as below on the right side of the Screen.



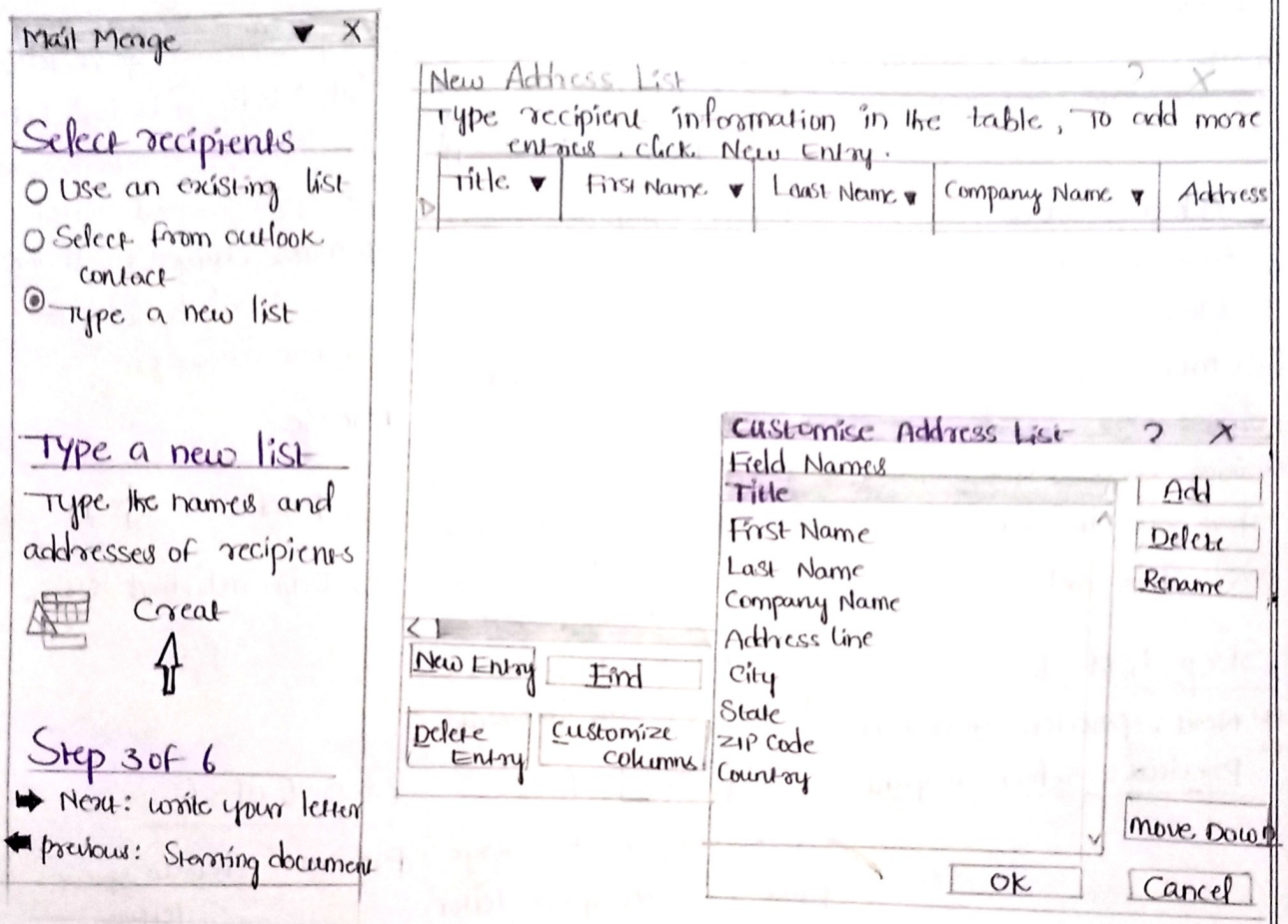
d) Select Letters (or any other type of document you want to work on) as the type of document and then click "Next: Starting document" at the bottom of the task panel.

e) Select "Strat from a template" (for practice purpose) from among the options available like Use the Current document, Start from a template and Start from existing document. Then "Select Template" dialog box will pop up as shown below.

f) Select the "Letter" tab on top, click "Oriel merge Letter" and click OK. Then proceed to the 3rd Step "Select Recipients"

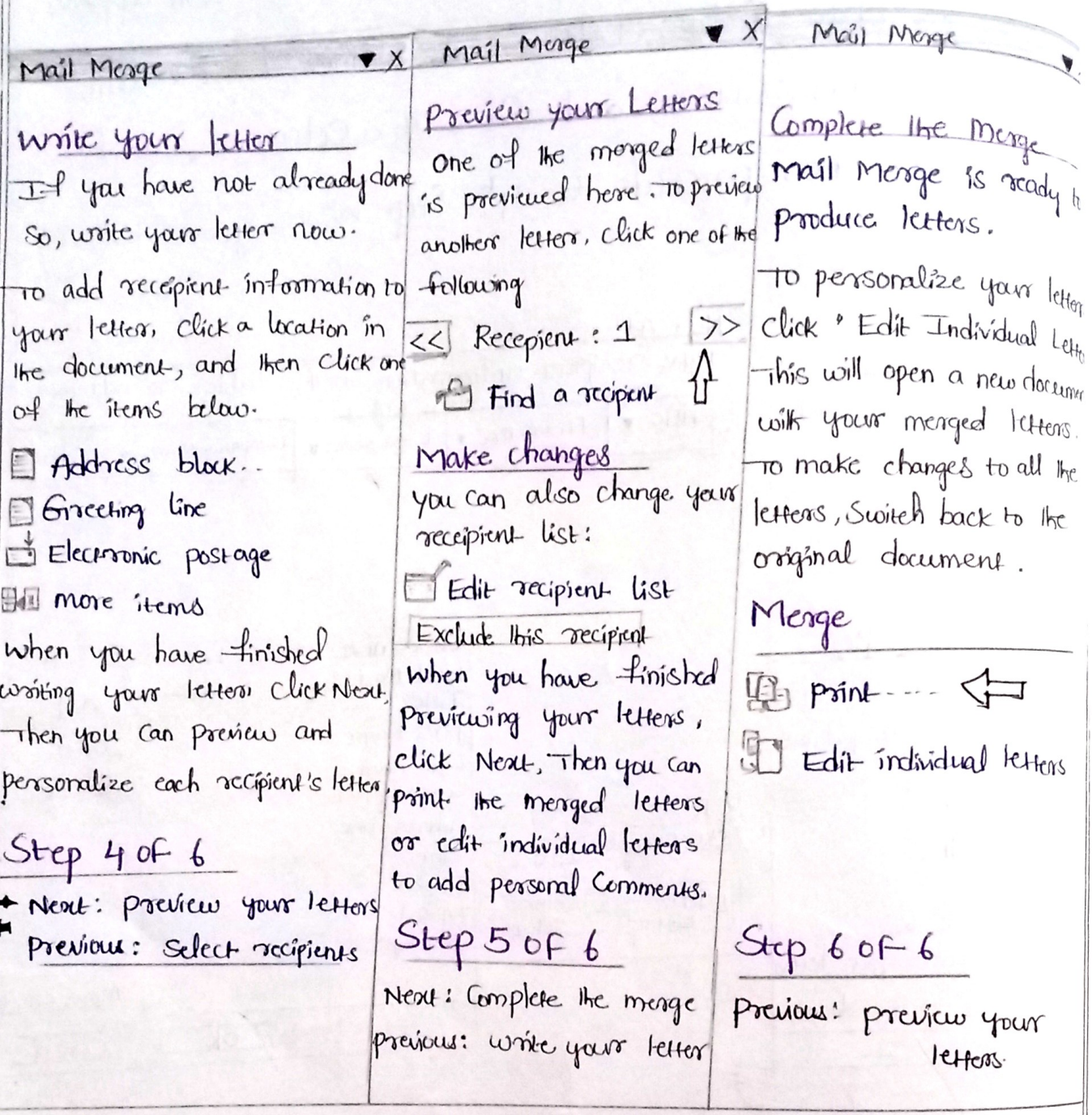


1) Now select Type a new list (for practice) radio button in the Select recipients wizard and proceed to Creat then New address list wizard will appears. Enter the data (like: Title, First Name, Last Name, Company, Address etc.,) and Save it. Columns can be customized. Then proceeds to 4th Step Write your letter.



b) Now proceed to 5th Step preview your letters. Here we can preview the letter of all the Recepients by pressing double next arrows >> in this Step.

9) Then press Next: Complete the merge. Now we can do take print out of the mail merged letter or in PDF format.



Conclusion :-

Mail merge is a handy features that incorporates data from both Microsoft word and Microsoft Excel and allows you to Create multiple documents at once, such as letters, Saving you the time and effort of retyping the Same letter over and over.

- the linking the data Source to the document is done through merged fields.

References :

Information Technology
(Telugu Akademi) - Dr. G. Shashidhar Rao
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Study Project

On

MS-DOS

Commands Prompts

2/Nov-6th-2023

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[2023-2024]

Objective :=

=> MS-DOS is a character-based interface system where Commands are entered by the User in the Command line prompt. MS-DOS

=> Make file management- i.e Creating, Editing, deleting etc MS-DOS is a single User operating system. file Names in MS-DOS are limited to eight characters.

=> : the historical significance of MS-DOS

=> How MS-DOS provided a foundation for early Microsoft windows releases

=> the basis of Command-driven system and how to Construct simple batch files

=> How one processor can be be shared among multiple process.

=> the limitation of ms DOS for many of today's Computer users.

=> start an MS-DOS windows display file listing Navigate

=> Run a program.

Types of Command In ms Dos

The MS Dos is having two types of Commands to proper Execution of programs - they are Internal and External Commands

Internal Command :=

→ All the internal Commands are included in one of the System file i.e Command. Com once the Computer System is booted the Command Com is Loaded into primary/main memory of the Computer.

1 Dir: stand for Directory It means this Command list out all the Directory wicher Created by user in the ward disle of floppy disk syntaxe for Command.

```
C:\> Dir
```

a) Dir /P : to get the directories page wise. i.e one screen at a time this Command is osd

b) dir /w : to get the directories in width wise his Command is used

c) dir [drive] : to list out the directories of another directories

for example : dir A :- this Command list all the files drive A

d) dir < Extension : - this Command lists all the file's in drive A with extension specified for example dir* bat - this Command list out all files with extension ba

e) dir* := - this Command lists all files in the current directory from wich we are currently executing our Command.

f) dir com ???* : - this Command list all files begining with com and followed by any three characters and with any file extension.

for example dir ??* - the out put may be abe com (note : If the directory is com created.

g) DIRS: to get the sub-directories in the current directory and all files within the sub directory this command is used

2. MD or MK DIR: this command stand for making a directory command is used to create a new directory

```
C:\>MD or MKDIR
```

for example if you want create a directory for student- give the following command

```
C:\>MD students
```

3. CD: this command stands for change the directory so directory is created on wich of the command we can move from the directory to another

syntax

```
C:\> CD <directory name>
```

C:\> CD students

then we will get- C:\students>

Ex: suppose we want to create subdirectory say marks in the students directory

1) Create main directory i.e student

2) Create sub directory thorough MD Command MARS in

students

3) type this command :

C:\> CD student (creation of students directory)

C:\> student (After Creation of students d screen

4) CD.. or CD\ :- this Command is used to go back to rool- directory

Syntax

C:\>CD... or CD\

Ex: If you want to go back to the directory students

5) RP : RD : stand for remove directory :- this Command is used to remove the existing directory from memory wich not useful in future

syntax

C:\>RD< SOB - Directory name >

6. Copy :- This command copies a file from one file (source file) to another file (destination file)

syntax

```
C:\> Copy <source file name> <destination file name>
```

Example :- C:\> Copy x file y file

7. Copy con :- This command is used to create a file in a directory.

syntax

```
C:\> Copy con< file name>
```

Example: we want to create a file say B.Com C:\> Copy con B.Com

- The following command instead of ^Z ^Q CTRL to and press Enter key

8) REN :- Ren stands for RENAME :- That is to Change the name of existing file and give New name to that file - This Command is used

syntax

C:\>REN<existing file name >< new file name

Example : C:\>REN x file y file

9, **DEL** :- DEL stand for delete - this command is used to delete created file completely from the memory

syntax

C:\DEL< FILE name

Example: C:\> DEL <y file>

10, **PATH** :- sets or displays directories that will be searched for programes not in the current directory.

syntax

C:\> PATH

C:\> path\ program ; \files \ study : data 2

11, **PROMPT** :- This command is used to change the prompt

syntax :

C:\> prompt

Example of prompt Command

$p current default directory

$G> (greater than sign)

$D system data

$T system time

$V version number

$$ $ sign

- The vsual prompt is pG displays C:\> when root directory.

12. VER : Ver stand for version. This Command shows the current version of Dos wich we are using now

Syntax: C:\>VER

Example : MS DOS version 6.20

13 VOL : This Command display the lable of the disk in the spcified drive

Syntax : C:\>VOL

Example.

Valume in drive c

Syntax :

```
C:\>VOL
```

Example

volume in drive C

volume serial number 783C-8UCE

14, CLS : CLS stands for Clear the Screen By using this Command we can clear the manitor screen

Syntax

```
C:\>CLS
```

15.) Date : this Command display the sestem date the sestem disply Current date and asks to enter New date It displays

Syntax :

```
C:\>Date
```

Current date : Sat 04-03-09

Enter New date (mm-dd-yy)

16, Time : this Command display the Current time and enables it to be changed if requed

syntax:

```
C:\> Date
```

It display as follows

current time 1:15:30

Enter new time

17. type: - This Command display - the contents of - a file

syntax

```
C:\> type < file name
```

EXTERNAL COMMANDS

⇒: Some Commands are do not need to be loaded into memory time you boot - because - they are not used frequently or - they are large and up large amount - of - memory space:

1. Backup: - This Command is used to make backup copies of - the mentioned files or all - the file in a directory or drive

Syntax

C:\>Backup c:

2. Restore :- This Command restores all files which where backed up previously

syntax

C:\>Restore A:C:

3 ATTRIB :- ATTRIB stand for Attributes of a file - This Command is to change the attributes of a file - that is to hide a file or to make it read only or vice versa.

Syntax

C:\>ATTRIB <file name e> [+h] or [-h] or [+R] or [-r]

Attributes :

[+h] = to hide a file

[-h] = to display a file

[+r] = to Make writable a file

[-h] = to Make read only a file

4) ChkDsk : ChkDsk stands for check Disk. - This Command is used to check a disk's formated size and available memory space.

Syntax

```
C:\>ChkDsk c
```

5) Disk Copy :- This Command copies entire floppy disk tweak by track into another disk

Syntax :

```
C:\Disk Copy A:B:
```

6, Comp :- Comp stands for Compare we can Compare two or more files whether they are same are not by using - this Command.

Syntax

```
C:\> Comp A:\B. Com\C:B Com (A)
```

7. Diskcomp :- This command is also used to compare but the difference between these two is the comp command compares files where as this command compare two different diskettes

Syntax :-

```
C:\> Diskcomp A: B:
```

8. format :- This command used to format a new disk

```
C:\> formata:
```

9. PRint :- with the help of this command we can take hard copies of a file or group of files through printer

Syntax :-

```
C:\> print <file name>
```

10. RECOVER :- This command recovers damaged file (that is file with bad sectors)

Syntax

```
C:\> RECover <file name>
```

11, REPLACE :=

A name indicated with this a command we can update a set of files in one directory or drive with another set of similarly named file in another directory or drive.

syntax :

```
C:\> Replace : /* c:\students
```

12) LABEL :

This Command is used to add or delete or modify the volume label of floppy or hard disk

Syntax

```
C:\> LABEL A STUD
```

STUD become the label of the disk in drive A

13, FIND :-

By using this Command user can search for text within a file

syntax

```
C:\> find marks*.txt
```

14, EDIT :-

This Command allows a user to view Create, and wor modify their files with are already created

syntax :-

```
C:\> Edit < file name
```

=> MS-DOS (Microsoft Disk operating system played a pivated role.

=> in the history of personal Computing. its Simplicity, Compatibility and Command line interface made it a foundational operating system.

=> during the formative years of the Computer Industry.

=> Many more upgraded newer versions of ms.DOS, more powerful and most advanced operating system.

References :-

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