

**MENOUFIA
UNIVERSITY**

**SYSTEM ANALYSIS
& DESIGN PROJECT**

SECOND YEAR

2021-2022

جامعة المنوفية
كلية الحاسوبات
والمعلومات

2021-2022



section	Name	GEN
3	إسراء احمد علي احمد	200116
4	آلاء عادل محمد محيي حتحوت	200152
5	آية عادل محمد محيي حتحوت	200196
3	اسراء الخضري محمد الخضرى النجار	200117
3	إسراء حسين عطية محمود	200118

Project Identification

Project Name:

Text editor like Microsoft Word

Current Problem:

- Running slow
- Might crash or freeze when opening a document

Description about project:

This software is a graphical word processing program that users can type with. Its purpose is to allow users to type and save documents.

Similar to other word processors, It has helpful tools to make documents:

- 1-Spelling and grammar checker
- 2-Speech recognition
- 3-Inserting pictures in documents
- 4-Choice of typefaces
- 5-Special codes
- 6-Web pages, graphs , etc.
- 7-Tables.
- 8-Displaying synonyms of words and can read out the text.
- 9-Printing in different ways.

System Request— (Microsoft word Project)	
Project Sponsor:	Ali khaled – Microsoft company
Business Need:	<p>This project has been initiated to:</p> <ul style="list-style-type: none"> • make a simple document to process the words. • 2.edit the text easily and quickly with easy tools. • 3.make a large document. • 4.write a scientific report. • 5.the ability of using special tools as symbols, equations and more. • 6.make hyperlink,bookmark,cross refrence and screen shots.
Business Requirements:	<ul style="list-style-type: none"> • coordinate the document, languages correction. • 2.insert images and tables • 3.export the document in different formats like (pdf...). • 4.make abbreviations to text, search and replacement tool • 5.insert clip art,smart art,word art. • 6.insert quick parts, textbox and a lot of objects. • 7.using page layout as margins,orientation,size,columns and line numbers. • 8.some good tools like watermark,page color and page borders. • 9.use spacing before and after,indent left and right. • 10.insert footnote,endnote,tables of figures,table of authorities and insert index. • 11.insert caption,labels,envelopes,address block,greeting line,merge field,highlight merge field. • 12.start mail,review results,match fields and update tables. • 13.some important tools like bold,italic,underline,superscript and subscript. • 14.text align center,right and left. • 15.change the style of the font like normal,heading,subtitles and no spacing.
Business Value:	<p>We expect that Microsoft word will:</p> <ul style="list-style-type: none"> • increase the marketing of the system or company. • 2.make a good reputation. • 3.wide spread. • 4.satisfying all customers(writers). • 5.improving the idea of electronic writing and reduce the idea of paper writing.
Special Issues or Constraints:	<ul style="list-style-type: none"> • Deadline in Jan. • 2. take the advantages of the text editor.

Feasibility Analysis

Technical Feasibility

- Familiarity with application
- Familiarity with technology
- Online live support
- Familiarity With graphic design using
- Familiarity more knowledge about software.

Economic Feasibility

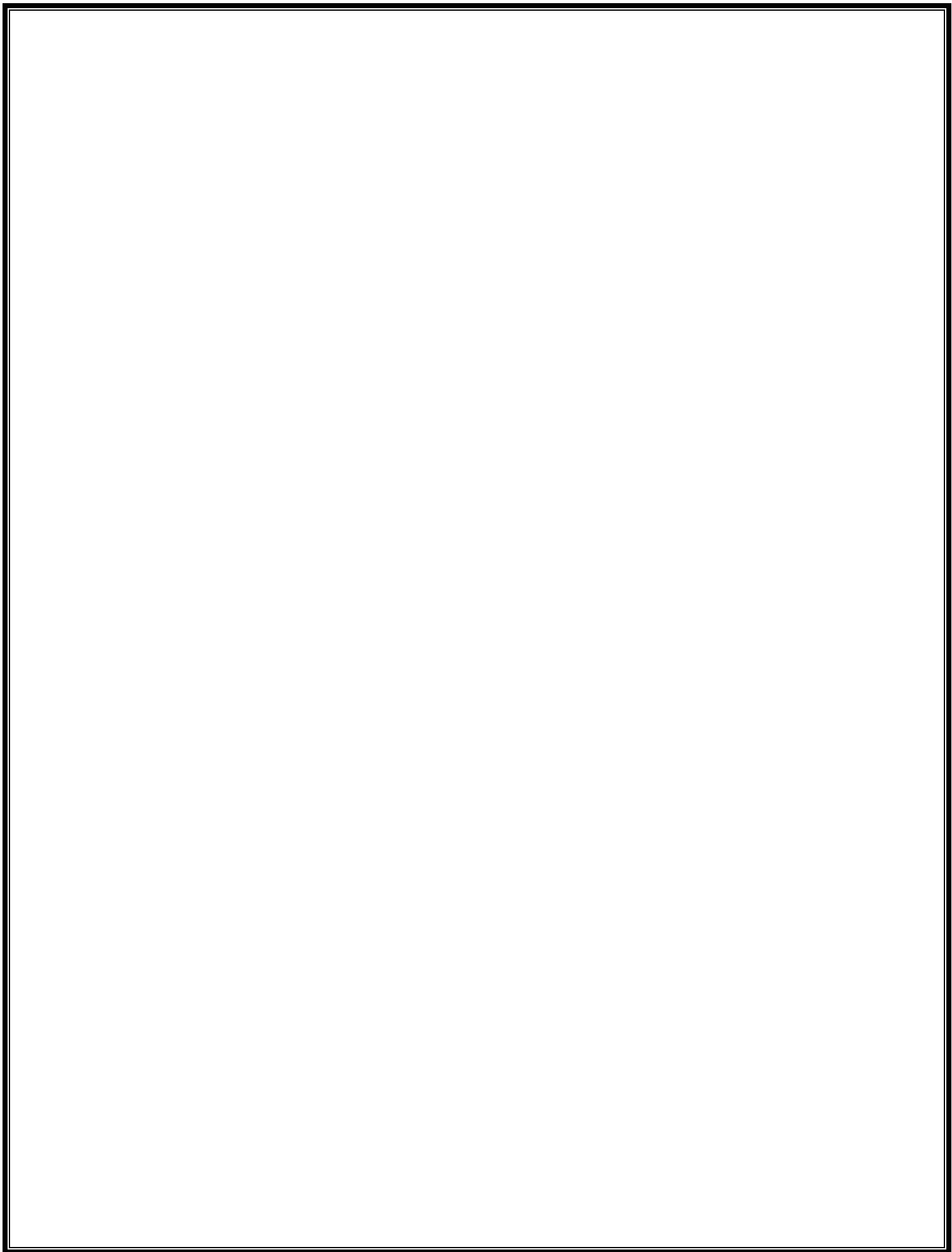
- Costs: the money spent (500,000 LE).
- Earning: the money we get (700,000 LE).
- Profit: the difference between earning and costs (200,000 Lei earning is less than costs, then this system is unprofitable).
- if costs are less than earning, then this system is profitable.

Organization feasibility

- Other employees will have less access
- senior managers will have full access to the system
- Online tutorial for clients
- There is a necessity of providing some Training for employees
- The system design is familiar and easy to use

Schedule Feasibility

- Analysts will take 17 days
- IT specialists will take 16 days
- Programmers will take 14 days
- Designers will take 14 days
- Marketing staff will take 10 days

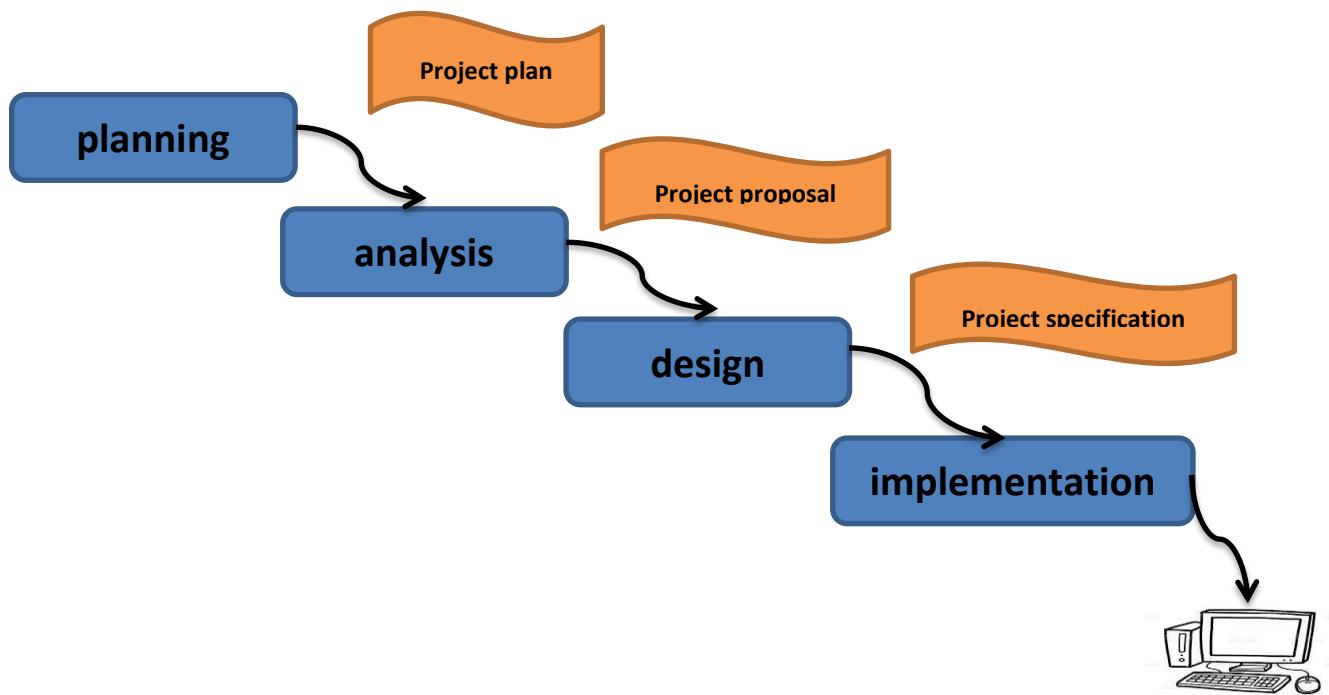


Project Methodology

- Agile Methodology :

Why to use the agile methodology ?

- Customer satisfaction through early and continuous delivery of valuable software.
- Welcoming Changes in requirement even in advanced
- Stage of development.
- It Focus on certain characteristics, implement in a short time and presented to the customer, here the customer (the customer) can see more how his idea
- Was implement and we can see his reaction when seeing
- The product, if there modifications or changes, it can be easily and quickly to do it.



Time Estimation

	Planning	Analysis	Design	Implementation
Standard percentages	15%	20%	35%	30%
Estimated time based on planning time	22 days	25 days	14 days	11 days

Tasks Identification

Name of Task	System request
Start Date	20/10/2021
End Date	22/10/2021
Person assigned to task	Israa elnajjar
Priority	High
Resources Needed	Microsoft word
Estimated Time	3hours
Actual Time	2hours

Name of Task	Feasibility study
Start Date	20/10/2021
End Date	23/10/2021
Person assigned to task	Alaa hathout,Esraa hussein
Priority	High
Resources Needed	Microsoft word
Estimated Time	5hours
Actual Time	3hours

Name of Task	Methodology
Start Date	20/10/2021
End Date	24/10/2021
Person assigned to task	Esraa ahmed
Priority	High
Resources Needed	Microsoft word
Estimated Time	4hours
Actual Time	3hours

Name of Task	Work plan
Start Date	20/10/2021
End Date	23/10/2021
Person assigned to task	Alaa hathout
Priority	High
Resources Needed	Microsoft word
Estimated Time	3hours
Actual Time	3hours

Name of Task	Gant chart
Start Date	23/10/2021
End Date	23/10/2021
Person assigned to task	Esraa ahmed
Priority	Mid
Resources Needed	Microsoft word
Estimated Time	2hours
Actual Time	1hours

Name of Task	Pert chart
Start Date	23/10/2021
End Date	24/10/2021
Person assigned to task	Esraa Ahmed
Priority	mid
Resources Needed	Microsoft word
Estimated Time	2hours
Actual Time	1hours

Name of Task	interview
Start Date	23/10/2021
End Date	23/10/2021
Person assigned to task	Esraa ahmed,alaa hathout
Priority	high
Resources Needed	Papers – zoom application
Estimated Time	5hours
Actual Time	3hours

Name of Task	Interview report
Start Date	23/10/2021
End Date	24/10/2021
Person assigned to task	Esraa ahmed,alaa hathout
Priority	Middle
Resources Needed	Papers - Microsoft word
Estimated Time	3hours
Actual Time	2hours

Name of Task	Questionnaire
Start Date	24/10/2021
End Date	27/10/2021
Person assigned to task	Israa elnajjar
Priority	High
Resources Needed	Google form
Estimated Time	5hours
Actual Time	3hours

Name of Task	Data Flow Diagram – Context
Start Date	27/10/2021
End Date	1/11/2021
Person assigned to task	
Priority	High
Resources Needed	Microsoft word
Estimated Time	6hours
Actual Time	4hours

Name of Task	Data Flow Diagram – Level 1
Start Date	1/11/2021
End Date	7/11/2021
Person assigned to task	
Priority	High
Resources Needed	Microsoft word
Estimated Time	5hours
Actual Time	3hours

Name of Task	Data Flow Diagram
Start Date	27/10/2021
End Date	3/11/2021
Person assigned to task	Aya hathout and Alaa hathout
Priority	High
Resources Needed	Microsoft word- Computer
Estimated Time	6 Hours
Actual Time	4 Hours

Name of Task	Data dictionary for data flows
Start Date	1/12/2021
End Date	7/12/2021
Person assigned to task	Aya hathout and Alaa hathout
Priority	High
Resources Needed	Microsoft word -computer
Estimated Time	4Hours
Actual Time	5hours

Name of Task	Data dictionary for data stores
Start Date	6/12/2021
End Date	10/12/2021
Person assigned to task	Alaa hathout and Aya hathout
Priority	High
Resources Needed	Microsoft word-computer
Estimated Time	5 Hours
Actual Time	2 Hours

Name of Task	Data Storage Design
Start Date	30/12/2021
End Date	31/12/2021
Person assigned to task	Israa elnajjar
Priority	High
Resources Needed	Microsoft word – Computer-Power Point
Estimated Time	6Hours
Actual Time	4Hours

Name of Task	Process identification
Start Date	5/12/2021
End Date	11/12/2021
Person assigned to task	Esraa ahmed
Priority	High
Resources Needed	Microsoft word - computer
Estimated Time	4 Hours
Actual Time	4 Hours

Name of Task	ERD
Start Date	6/12/2021
End Date	8/12/2021
Person assigned to task	Esraa Hussein and Esraa ahmed
Priority	High
Resources Needed	Microsoft word - Computer
Estimated Time	6 hours
Actual Time	5 Hours

Name of Task	Normalization
Start Date	21/12/2021
End Date	26/12/2021
Person assigned to task	Esraa Hussein
Priority	High
Resources Needed	Network - Microsoft word - Computer - Server
Estimated Time	4Hours
Actual Time	2Hours

Name of Task	Architecture Design
Start Date	29/12/2021
End Date	31/12/2021
Person assigned to task	Israa elnajjar
Priority	High
Resources Needed	Microsoft word - Computer
Estimated Time	6 Hours
Actual Time	4 Hours

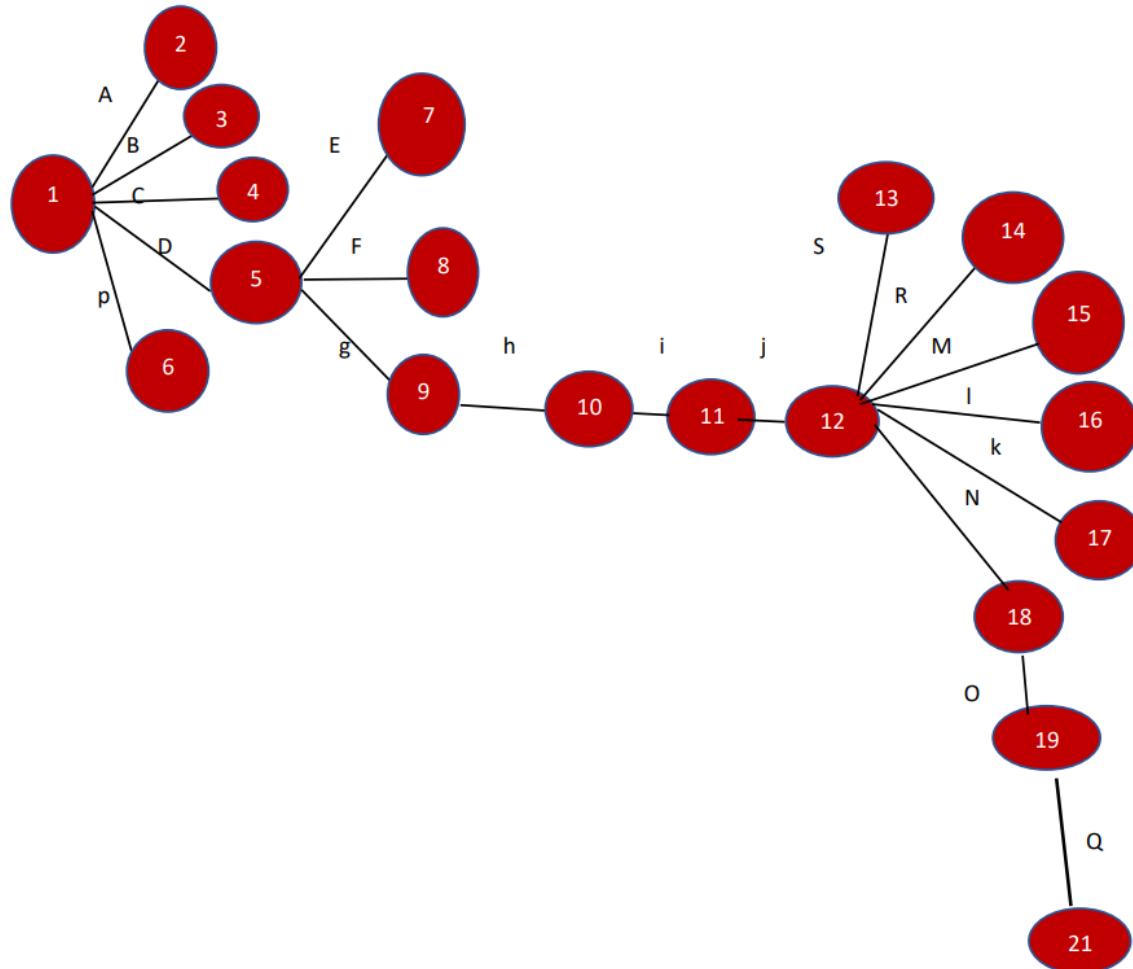
Name of Task	Program Design
Start Date	30/12/2021
End Date	1/1/2022
Person assigned to task	Israa elnajjar
Priority	High
Resources Needed	Microsoft word – Computer power point
Estimated Time	5Hours
Actual Time	5Hours

Name of Task	Interface Design
Start Date	2/1/2022
End Date	5/1/2022
Person assigned to task	Israa elnajjar
Priority	High
Resources Needed	Microsoft word - Computer
Estimated Time	5 Hours
Actual Time	3Hours

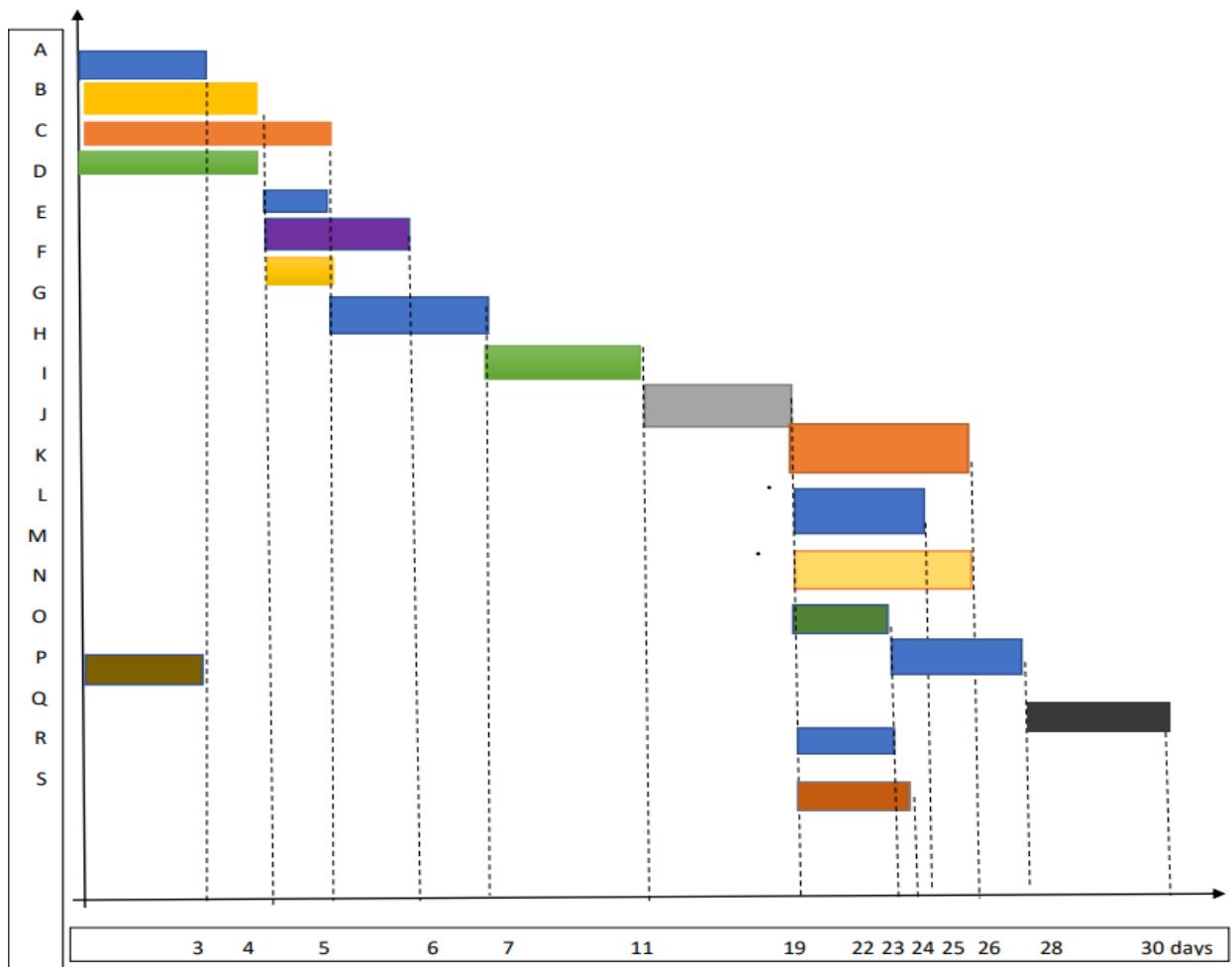
Work Plan

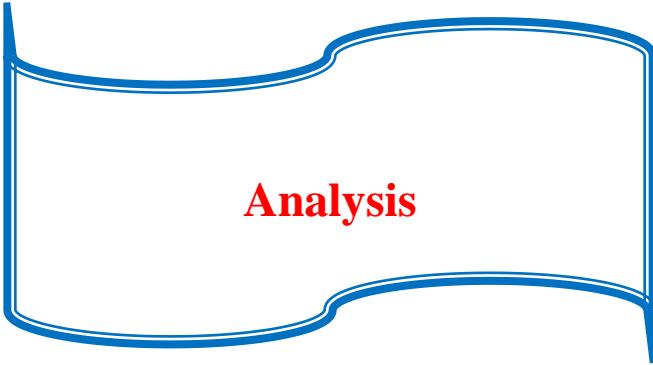
id	Task name	Assigned to	Duration estimate	Start data-estimated	Finish data estimated	Start data (actual)	Finish Data (actual)	Duration (actual)	D	Status
A	System Request		4	20-10-2021	23-10-2021	20-10-2021	22-10-2021	3	-	Closed
B	Feasibility Analysis		4	20-10-2021	23-10-2021	20-10-2021	23-10-2021	4	-	Closed
C	Project Methodology		7	20-10-2021	26-10-2021	20-10-2021	24-10-2021	5	-	Closed
D	Work Plan		3	20-10-2021	22-10-2021	20-10-2021	23-10-2021	4	-	Closed
E	Gantt Chart		2	22-10-2021	23-10-2021	23-10-2021	23-10-2021	1	D	Closed
F	Pert Chart		2	22-10-2021	23-10-2021	23-10-2021	24-10-2021	2	D	Closed
G	Interview		2	22-10-2021	23-10-2021	23-10-2021	23-10-2021	1	D	Closed
H	Interview Report		1	23-10-2021	23-10-2021	23-10-2021	24-10-2021	2	G	Closed
I	Questionnaire		6	23-10-2021	28-10-2021	24-10-2021	27-10-2021	4	H	Closed
J	Data Flow Diagram		5	28-10-2021	1-11-2021	27-10-2021	3-11-2021	8	I	Closed
k	Data dictionary For data flows		8	29-11-2021	6-12-2021	1-12-2021	7-12-2021	7	J	Closed
L	Data dictionary for Data stores		5	29-11-2021	3-12-2021	6-12-2021	10-12-2021	5	J	Closed
M	Process identification		9	30-11-2021	8-12-2021	5-12-2021	11-12-2021	7	J	Closed
N	ERD		4	1-12-2021	4-12-2021	6-12-2021	8-12-2021	3	J	Closed
O	Normalization		4	17-12-2021	20-12-2021	21-12-2021	26-12-2021	6	N,J	Closed
P	Architecture design		2	29-12-2021	30-12-2021	29-12-2021	31-12-2021	3	-	Closed
Q	Data storage design		3	30-12-2021	1-1-2022	30-12-2021	31-12-2021	2	O,N	Closed
R	Program design		4	30-12-2021	2-1-2022	30-12-2021	1-1-2022	3	J	Closed
S	Interface design		3	3-1-2022	5-1-2022	2-1-2022	5-1-2022	4	J	Closed

Pert Chart



Gantt chart





Analysis

Interview

What's your opinion of the current state of your business? Why?

It's not good enough.

Because the number of users is gradually decreasing.

What are the common errors your system has?

1-Tools I don't know how to control inserting, adjusting and cropping images, and inserting graphics and charts that allow writing text inside them

2- I don't have a PDF feature

3- I don't know how to control the size, type and color of the font

4- Unavailability of Microsoft Word on linux, android and apple ios operating systems

5- it can't be edited after saving it

6- It doesn't contain drawing tools

7- There is no more writing languages in it

8-There is no word correction feature in it

9- When we want to write a link, it doesn't color or underlined.

What do you expect from the new system?

1-It will increase the number of users

2-The profit of our company will be increased

3- It will be the most popular

How do you feel about the coming year in your company?

1- The profit of our company will be increase

2- Our company will be the best in the Arab world

How many employees do you wish would have with the new system?

at most 100 employees

What are the things you need to add to your company to do this system?

There is a necessity of providing some trainings for the software fields

What are the critical objectives of your company?

1-Achieve high profit.

2-Become the best company in the Arb word.

3-Access to prestige among the other companies

Do you have anything else to add?

No thank you.

Interview Report

Person Interviewed: Director, HR , Ahmed Helmy.

Interviewer: Alaa Hathout , Esraa Ahmed.

Purpose of Interview:

1. Collect information about the current system such as it's disadvantages
2. Determine the requirements for the future system.
3. Determine the objectives of the company.

Summary of Interview:

It's shown that there are many problems of the current system.

The biggest problems are:

- The inability of editing after saving.
- The need to internet for using this system.
- Loss of words correction feature.
- Loss of many languages.
- so, the status of the company is not good enough.

- The company needs to repair the problems of the current system by doing the future system to increase its profit and become the best company in the Arab world.

Open Items:

- Get current employee roster report from Salma Ali.
- Verify calculations with Salma Ali.
- Schedule interview with Sara Sameha regarding the reasons for data.

Detailed Notes: See attached transcript.

Questionnaire:



استبيان لمشروع تحليل وتصميم النظم (محرر نصوص مطابق لميكروسوفت وورد).

هذا الاستبيان لمشروع تحليل وتصميم النظم مطابقاً لمحرر النصوص الشهير ميكروسوفت وورد.

هل ستحت لك الفرصة واستخدمت أي نوع من أنواع محررات النصوص؟

- نعم
 لا

أى من هذه الطرق تفضلها في الكتابة؟

- الكتابة الورقية
 الكتابة الإلكترونيه
 كلاهما

اقترح إداتا من الأدوات التي تأمل وجودها في محرر النصوص ميكروسوفت وورد.

نص الإجابة القصيرة

ما هي الأخطاء التي تراها في محرر النصوص ميكروسوفت وورد وتريد التعديل عليها؟

نص الإجابة الطويلة

ما هي المدة التي تستغرقها لكتابه نص طويل قليلاً؟



كيف تجد أدوات التعديل في محرر النصوص ميكروسوف特 وورد؟



كيف تجد أدوات التعديل في محرر النصوص ميكروسوفت وورد؟



اختر اداة من الادوات الاتية ترید التعديل عليها في محرر النصوص ميكروسوفت وورد.

ادراج صورہ

ادراج اشکال هندسیہ

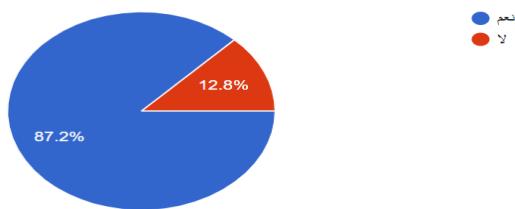
ادراج جدول

ادراج رموز تعبیریه

Response:

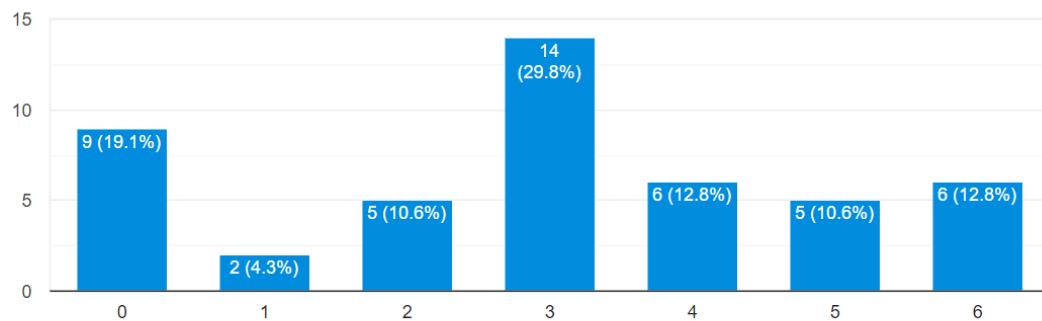
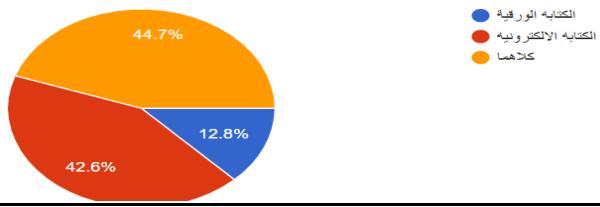
هل ستحت لك الفرصة واستخدمت اي نوع من انواع محررات النصوص؟

رداً 47



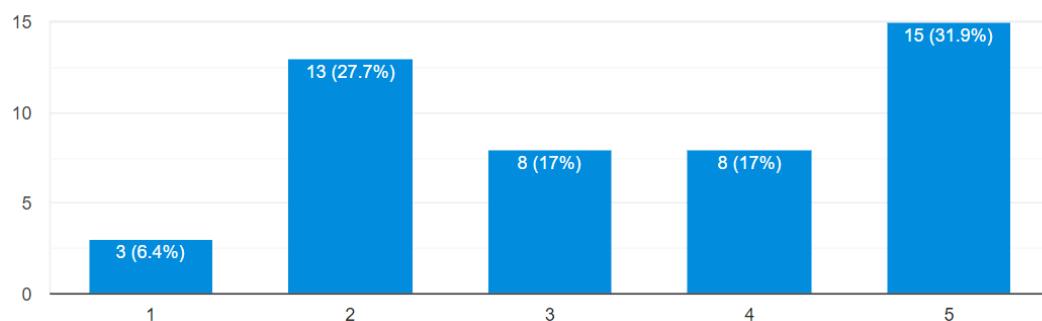
اي من هذه الطرق تفضلها في الكتابه؟

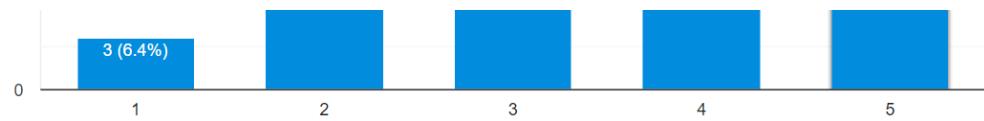
رداً 47



كيف تجد ادوات التعديل في محرر النصوص ميكروسوفت وورد؟

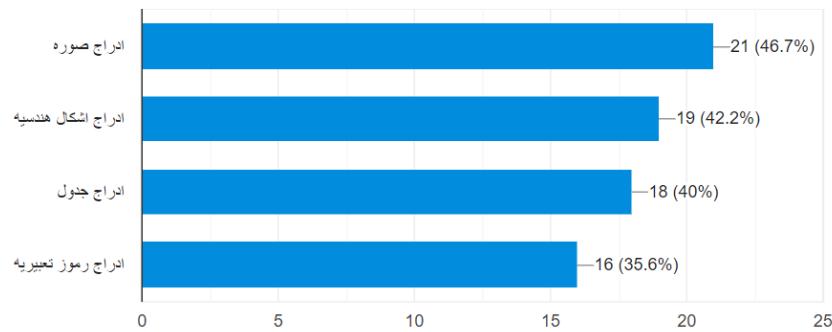
رداً 47



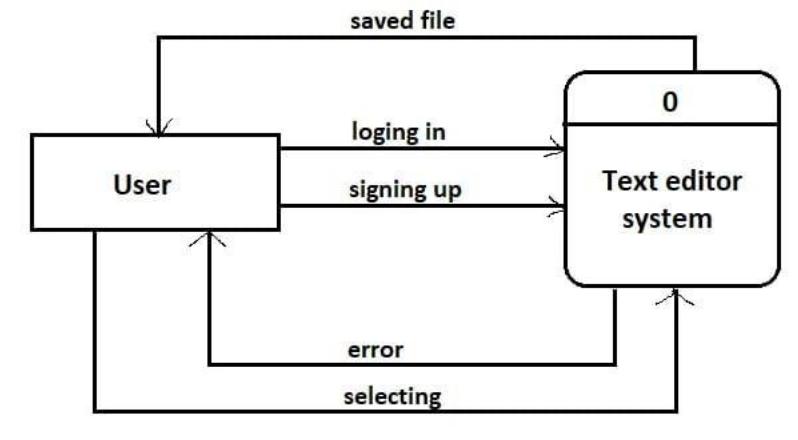


اختر ادوات الاتيه تريده التعديل عليها في محرر النصوص ميكروسوفت وورد.

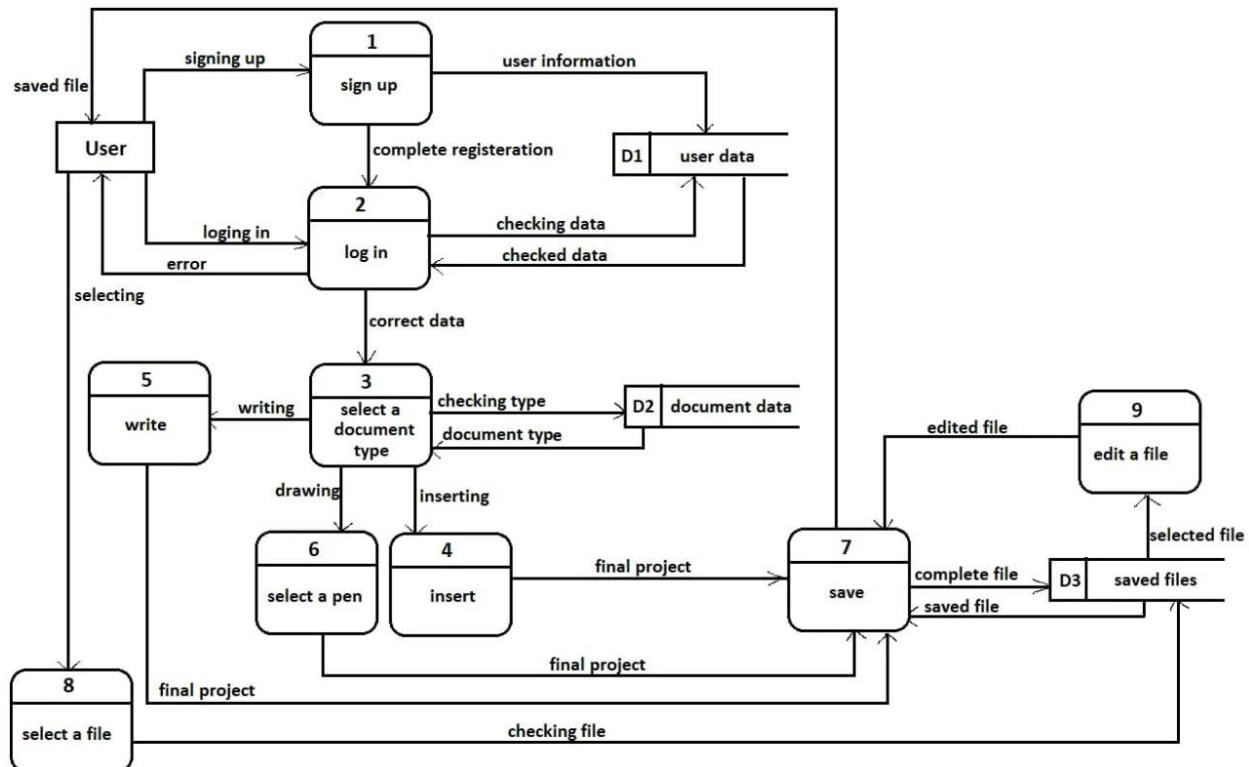
رد 45



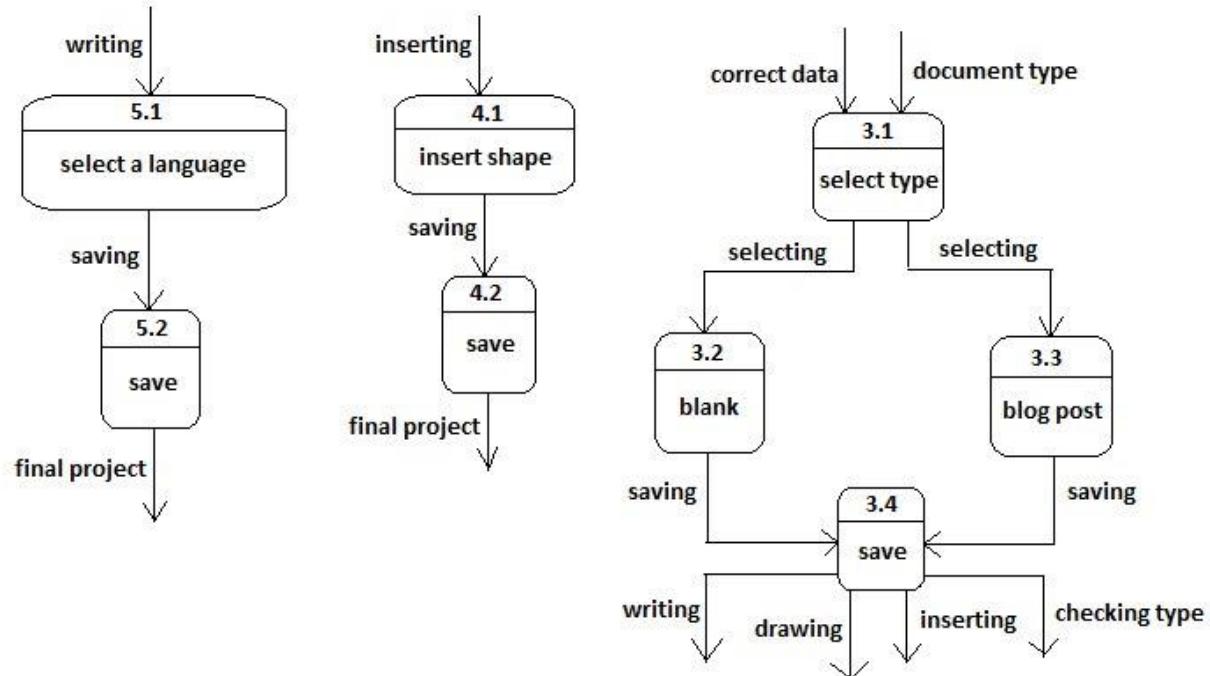
Data Flow Diagram - Context Diagram



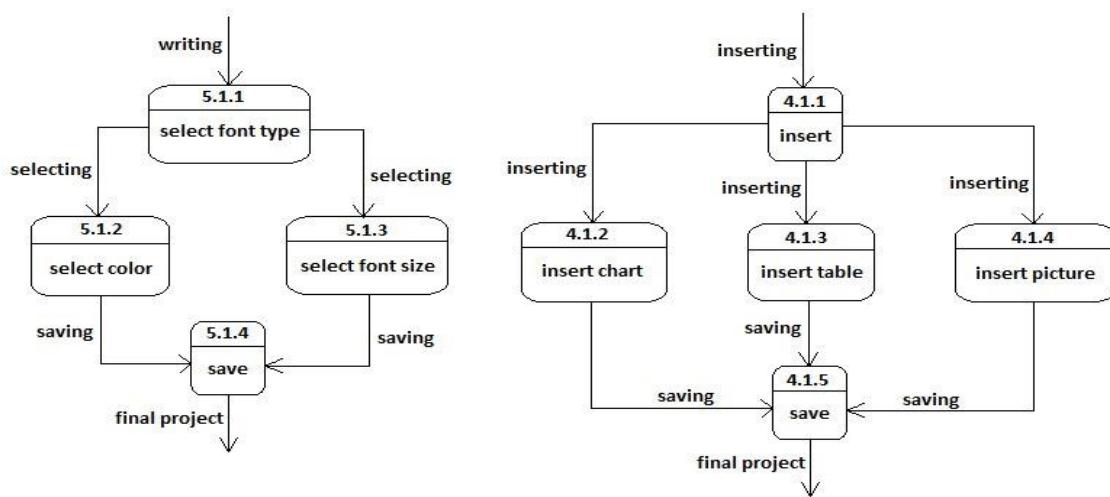
Data Flow Diagram – Level 0



Data Flow Diagram – Level 1



Data Flow Diagram – Level 2



Data Dictionary

DFD: Data Flow

(1) Description form for Data Flow:

Data Flow Description Form				
ID:1 Name (label): signing up Description: shows that the user has no account				
Source: external entity - User	Destination : process 1 - sign up			
Type of Data Flow				
<input type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : user data	Volume/time :1000/minute			
Comments:				

Data Flow Description Form				
ID:2 Name (label): logging in Description: shows that the user has already an account				
Source: external entity - User	Destination : process 2 - log in			
Type of Data Flow				
<input type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : user data	Volume/time :1000/minute			
Comments:				

Data Flow Description Form				
ID:3 Name (label): user information Description: stores the user information in the data store(user data)				
Source: process 1 - sign up	Destination : data store 1 - user data			
Type of Data Flow				
<input type="checkbox"/> File	<input type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input checked="" type="checkbox"/> Internal
Data structure : user data	Volume/time :1000/minute			
Comments: This process only occurs within the system and is not visible to the user				

Data Flow Description Form

ID:4

Name (label): error

Description: shows that the user has entered incorrect data

Source: process 2 - log in

Destination : external entity - User

Type of Data Flow

File

Screen

Report

Form

Internal

Data structure : error message

Volume/time :1000/minute

Comments:

Data Flow Description Form

ID:5

Name (label): complete registration

Description: shows that the user's data has been stored and the user has an account

Source: process 1 - sign up

Destination : process 2 - log in

Type of Data Flow

File

Screen

Report

Form

Internal

Data structure : confirmation message

Volume/time :1000/minute

Comments:

Data Flow Description Form

ID:6

Name (label): checking data

Description: checks whether the user's data is correct or not

Source: process 2 - log in

Destination : data store 1 - user data

Type of Data Flow

File

Screen

Report

Form

Internal

Data structure :

Volume/time :1000/minute

Comments: This process only occurs within the system and is not visible to the user

Data Flow Description Form

ID:7

Name (label): checked data

Description: shows whether the user's data is correct or not

Source: data store 1 - user data

Destination : process 2 - log in

Type of Data Flow

File

Screen

Report

Form

Internal

Data structure : result

Volume/time :1000/minute

Comments:

Data Flow Description Form				
ID:8				
Name (label): correct data				
Description: allows the user to enter the application				
Source: process 2 - log in	Destination : process 3 - select a document type			
Type of Data Flow				
<input checked="" type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : welcome message	Volume/time :1000/minute			
Comments:				

Data Flow Description Form				
ID:9				
Name (label): checking type				
Description: checks whether the document type is found or not				
Source: process 3 - select a document type	Destination : data store 2 - document data			
Type of Data Flow				
<input type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input checked="" type="checkbox"/> Internal
Data structure :	Volume/time :1000/minute			
Comments: This process only occurs within the system and is not visible to the user				

Data Flow Description Form				
ID:10				
Name (label): document type				
Description: Contains the selected document type				
Source: data store 2 - document data	Destination : process 3 - select a document type			
Type of Data Flow				
<input type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : selected type	Volume/time :1000/minute			
Comments:				

Data Flow Description Form				
ID:11				
Name (label): writing				
Description: allows the user to write				
Source: process 3 - select a document type	Destination : process 5 - write			
Type of Data Flow				
<input type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : Writing tool	Volume/time			
Comments:				

<u>Data Flow Description Form</u>				
ID:12				
Name (label): drawing				
Description: allows the user to draw in a free way				
Source: process 3 - select a document type	Destination : process 6 - select a pen			
Type of Data Flow				
<input checked="" type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : Drawing tool	Volume/time			
Comments:				

<u>Data Flow Description Form</u>				
ID:13				
Name (label): inserting				
Description: allows the user to insert shapes , tables , pictures or charts				
Source: process 3 - select a document type	Destination : process 4 - insert			
Type of Data Flow				
<input checked="" type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : Tools	Volume/time :1000/minute			
Comments:				

<u>Data Flow Description Form</u>				
ID:14				
Name (label): final project				
Description: The project after finishing				
Source: process 4 - insert	Destination : process 7 - save			
Type of Data Flow				
<input checked="" type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : Complete project	Volume/time :1000/minute			
Comments:				

<u>Data Flow Description Form</u>				
ID:16				
Name (label): saved file				
Description: shows that the file has been saved				
Source: process 7 - save	Destination : external entity - User			
Type of Data Flow				
<input checked="" type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : Confirmation message	Volume/time :1000/minute			
Comments:				

Data Flow Description Form

ID:17

Name (label): selecting

Description: shows that the user wants to select a saved file

Source: external entity - User

Destination : process 8 - select a file

Type of Data Flow

 File Screen Report Form Internal

Data structure : Waiting message

Volume/time :1000/minute

Comments:

Data Flow Description Form

ID:18

Name (label): checking file

Description: shows the saved files

Source: process 8 - select a file

Destination : data store 3 - saved files

Type of Data Flow

 File Screen Report Form Internal

Data structure : Saved files

Volume/time :1000/minute

Comments:

Data Flow Description Form

ID:19

Name (label): edited file

Description: The project after editing

Source: process 9 - edit a file

Destination : process 7 - save

Type of Data Flow

 File Screen Report Form Internal

Data structure : Edited project

Volume/time :1000/minute

Comments:

Data Flow Description Form

ID:20

Name (label): selected file

Description: The file that the user selected

Source: data store 3 - saved files

Destination : process 9 - edit a file

Type of Data Flow

 File Screen Report Form Internal

Data structure : Selected project

Volume/time :1000/minute

Comments:

<u>Data Flow Description Form</u>				
ID:2001				
Name (label): saving				
Description: Contains the changes				
Source: process 5.1.3 - select font size	Destination : process 5.1.4 - save changes			
Type of Data Flow				
<input checked="" type="checkbox"/> File	<input checked="" type="checkbox"/> Screen	<input type="checkbox"/> Report	<input type="checkbox"/> Form	<input type="checkbox"/> Internal
Data structure : actions	Volume/time :			
Comments:				
1				

Data structure for data flow:

Data structure 1):

user data = user name + password + email

Data structure 2):

user data = user name + password + email

Data structure 4):

error message = message

Data structure 5):

confirmation message = message

Data structure 7):

result = message

Data structure 8):

welcome message = message

Data structure 10):

selected type = document

Data structure 11 :

Writing tool = Tool

Data structure 12 :

Drawing tool = Pen

Data structure 13 :

Tools = Tables + Charts + Shapes + pictures

Data structure 14 :

Complete project = Project

Data structure 16 :

Confirmation message = Message

Data structure 17 :

Waiting message = Message

Data structure 18 :

Saved files = Files

Data structure 19 :

Edited project = Project

Data structure 20 :

Selected project = Project

Data element for data flow:

ID	110
Name	user name
Alias	
Description	Contains user's name
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	120
Name	password
Alias	
Description	Contains password
Length	10
Input Format	x(10)
Output Format	x(10)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	130
Name	email
Alias	
Description	Contains user's email
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	21
Name	user name
Alias	
Description	Contains user's name
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	22	ID	23
Name	password	Name	email
Alias		Alias	
Description	Contains password	Description	Contains user's email
Length	10	Length	30
Input Format	x(10)	Input Format	x(30)
Output Format	x(10)	Output Format	x(30)
Default Value		Default Value	
Continuous / Discrete	Discrete	Continuous / Discrete	Discrete
Type	Alphabetic	Type	Alphabetic
Base / Derived	Base	Base / Derived	Base
Upper Limit		Upper Limit	
Lower Limit		Lower Limit	
Discrete		Discrete	
Comments		Comments	

ID	41
Name	message
Alias	
Description	Contains error message
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	There is incorrect data
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	51
Name	message
Alias	
Description	Contains confirmation message for signing up
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	You have signed up successfully
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	71
Name	message
Alias	
Description	Contains message for logging in
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	81
Name	message
Alias	
Description	Contains welcome message
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	welcome to our application
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	101
Name	document
Alias	
Description	the document that the user has selected to do his project in it
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	111
Name	Tool
Alias	
Description	The tool that the user use to write
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	132
Name	Charts
Alias	
Description	can be considered as diagram or graphs
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	121
Name	Pen
Alias	
Description	The drawing tool that allows the user to draw in a free way
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	131
Name	Tables
Alias	
Description	consists of rows and columns
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	133
Name	Shapes
Alias	
Description	contains shapes like circles , squares , triangles , etc
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	134
Name	pictures
Alias	
Description	The pictures downloaded on the user's device
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	141
Name	Project
Alias	
Description	Project after finishing
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	161
Name	Message
Alias	
Description	tells the user that the file has been saved
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	Your file has been saved successfully
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	171
Name	Message
Alias	
Description	tells the user to wait until his saved files appear
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	Please, wait
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	181
Name	Files
Alias	
Description	Files that have been saved
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	191
Name	Project
Alias	
Description	Project that has been edited
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	201
Name	Project
Alias	
Description	Project that has been selected
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	20011
Name	changes
Alias	
Description	The changes that occurred during writing like changing font color, font size, etc.
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	discrete
Type	
Base / Derived	base
Upper Limit	
Lower Limit	
Discrete	
Comments	

Data element for data store:

ID	D3
Name	saved files
Alias	
Description	contains the saved files
File Type	computer
File Format	database
Record Size	200
Maximum Records	40000
Average Records	20100
Growth per Year	10%
Data Set	File
Data Structure	Stored files
Primary Key	
Secondary Key	
Comments	

ID	D1
Name	user data
Alias	
Description	contains the user's information
File Type	computer
File Format	database
Record Size	100
Maximum Records	10000
Average Records	6000
Growth per Year	6%
Data Set	User
Data Structure	Data
Primary Key	
Secondary Key	
Comments	

ID	D2
Name	document data
Alias	
Description	contains the types of documents
File Type	computer
File Format	database
Record Size	200
Maximum Records	11
Average Records	6
Growth per Year	1%
Data Set	Document
Data Structure	Type
Primary Key	
Secondary Key	
Comments	

ID	D11
Name	User name
Alias	
Description	contains the user name
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	D12
Name	Password
Alias	
Description	contains the password
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	D13
Name	Email
Alias	
Description	contains the user's email
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	D21
Name	Document type
Alias	
Description	contains the document type
Length	30
Input Format	x(30)
Output Format	x(30)
Default Value	
Continuous / Discrete	Discrete
Type	Alphabetic
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

ID	D31
Name	File
Alias	
Description	contains the saved project
Length	
Input Format	
Output Format	
Default Value	
Continuous / Discrete	Discrete
Type	
Base / Derived	Base
Upper Limit	
Lower Limit	
Discrete	
Comments	

Data structure for data store:

Data StructureD1):

Data = {User name} + {Password} + {Email}

Data Structure D2):

Type = {Document type}

Data Structure D3):

Stored files = {File}

Process Specification

Number: 1

Name: login

Description: Login in form and checked information

Input Data Flow:

- Logging in from external entity (user)
- Checked data from data store (d1)
- Complete registration from process (1)

Output Data Flow:

- Error to external entity (user)
- Checking data to data store(d1)

Type of Process



Online



Batch



Manual

Process Logic:



Structured English



Decision Table



Decision Tree

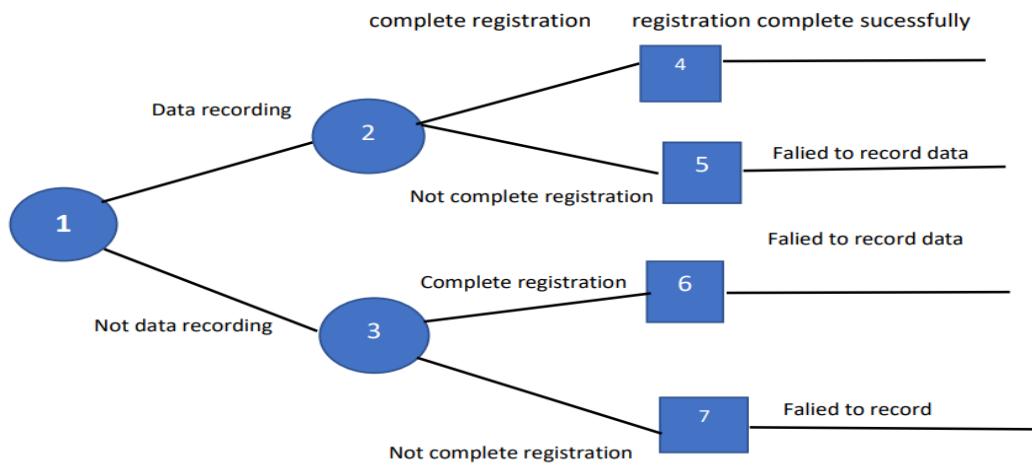
Unresolved Issues: no

Structured English:

```
If (Enter user information) then  
    If (checked information is correct) then  
        Allow to open the program  
    Else  
        It is not allowed to open the program  
    Else if  
        Else  
            If (checked information is corrected) then  
                It is not allowed to open the program  
            Else  
                It is not allowed to open the program  
        End if
```

<u>Process Specification Form</u>	
Number: 2	
Name: sign up	
Description: Client login	
Input Data Flow: Signing up from external entity(use	
Output Data Flow: User information to data store (d1)	
Complete registration to process (2)	
Type of Process	
<input checked="" type="checkbox"/> Online	<input type="checkbox"/> Batch
<input type="checkbox"/> Manual	
Process Logic:	
<input type="checkbox"/> Structured English	<input type="checkbox"/> Decision Table
<input checked="" type="checkbox"/> Decision Tree	
Unresolved Issues: no	

decision tree:



Process Specification Form

Number: 3

Name: Insert file

Description: Use to insert t the file and contain insert shape and picture insert and chart

Input Data Flow: Inserting from process (3)

Output Data Flow: Final project to process(7)

Type of Process

Online Batch Manual

Process Logic:

Structured English Decision Table Decision Tree

Unresolved Issues: no

Process Specification Form

Number:4

Name: Select file

Description: If he wants to adjust it, he will answer it and adjust it and then return to the sword again

Input Data Flow: Selecting from external entity (user)

Output Data Flow: Checking file to data store(d3)

Type of Process



Process Logic:



Unresolved Issues: no

rules																
Conditions	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	
Insert shape	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
Insert picture	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	N	N	N	N	N
Insert chart	Y	Y	N	Y	Y	N	N	Y	Y	N	N	Y	Y	N	N	N
Insert table	Y	N	Y	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	N
Actions																
Add shape and picture and table and chart	X															
Add shape and picture and chart		X														
Add shape and picture and table			X					X								
add shape and picture																
Add shape				X												
Add shape and chart					X											
Add picture and table							X									
Add chape and table						X										
Add shape							X									
Add shape and picture								X								
Add table and picture									X							
Add picture										X						
Add chart and table											X					
Add chart												X				
Add table													X			

rules								
Conditions	1	2	3	4	5	6	7	8
Select font type	Y	Y	Y	Y	N	N	N	N
Selection color	Y	Y	N	N	Y	Y	N	N
Select language	Y	N	Y	N	Y	N	Y	N
Actions								
Add font type				X				
Add color						X		
Add language							X	
Add Font and color		X						
Add Color and language					X			
Add Font and language			X					
Add Font type and color and language	X							

<u>Process Specification Form</u>								
Number:	5							
Name:	write							
Description:	use to write in the document							
Input Data Flow:	Writing from process (3)							
Output Data Flow:	Final project to process(7)							
Type of Process	<input checked="" type="checkbox"/> Online <input type="checkbox"/> Batch <input type="checkbox"/> Manual							
Process Logic:	<input type="checkbox"/> Structured English <input checked="" type="checkbox"/> Decision Table <input type="checkbox"/> Decision Tree							
Unresolved Issues:	no							

		rules							
Conditions		1	2	3	4	5	6	7	8
Determine the direction of writing		Y	Y	Y	Y	N	N	N	N
language		Y	Y	N	N	Y	Y	N	N
Font style		Y	N	Y	N	Y	N	Y	N
action									
Add the direction and language and font style		X							
Add language							X		
Add font style								X	
Add direction of writing (Right -left -mid)					X				
Add language and style						X			
Add Direction and language			X						
Add Direction and style				X					

<u>Process Specification Form</u>	
Number: 6	
Name: Select a pen	
Description: use to write symbol that are not on the keyboard	
Input Data Flow: Drawing from process (3)	
Output Data Flow: Final project to process (7)	
Type of Process	
<input checked="" type="checkbox"/> Online	<input type="checkbox"/> Batch
<input type="checkbox"/> Manual	
Process Logic:	
<input checked="" type="checkbox"/> Structured English	<input type="checkbox"/> Decision Table
	<input type="checkbox"/> Decision Tree
Unresolved Issues: no	

Structure English:

```
If(determine font size) then
    If(determine color) then
        The color and font size of the word change
    Else
        The font size of the word change
    End if
Else
    If (determine color) then
        The color of the word change
    Else
        Not effect
    End if
End if
```

<u>Process Specification Form</u>	
Number: 7	
Name: save	
Description: save data in the file	
Input Data Flow: final project from process (4) final project from process (6) final project from process (5) saved file from data store (d3) edited file from process (9)	
Output Data Flow: Save file to external entity(user) Complete file to data store (d3)	
Type of Process <input checked="" type="checkbox"/> Online <input checked="" type="checkbox"/> Batch <input checked="" type="checkbox"/> Manual	
Process Logic: insert select pan write	
<input checked="" type="checkbox"/> Structured English	<input checked="" type="checkbox"/> Decision Table <input checked="" type="checkbox"/> Decision Tree
Unresolved Issues: no	

Normalization

Normal Tables

User-id	User.name	Email	Password	Folder-id	File name	File type	language
1	Ola Ahmed	ola@gmail.com	123456789	A.pdf	team	pdf	Arabic
1	Ola Ahmed	ola@gmail.com	123456789	B.doc	project	doc	English
1	Ola Ahmed	ola@gmail.com	123456789	C.txt	Task2	txt	French
2	Ali Ahmed	ali@gmail.com	MORE11	C.txt	Our work	txt	French
2	Ali Ahmed	ali@gmail.com	MORE11	B.doc	Or sheet	doc	English
2	Ali Ahmed	ali@gmail.com	MORE11	A.pdf	Section	pdf	Arabic
3	Salma Emad	salma@gmail.com	#00000	C.txt	Project1	txt	French
3	Salma Emad	salma@gmail.com	#00000	A.pdf	Cs task	pdf	Arabic
3	Salma Emad	salma@gmail.com	#00000	C.txt	My data	txt	French
4	Karm Amr	karm@gmail.com	CEEBB88	B.doc	marks	doc	English
4	Karm Amr	karm@gmail.com	CEEBB88	A.pdf	sheets	pdf	Arabic
4	Karm Amr	karm@gmail.com	CEEBB88	C.txt	Data 2	txt	French

Tables after 1NF

User-id	User Name	Email	password
1	Ola Ahmed	ola@gmail.com	1234789
2	Ali Ahmed	ali@gmail.com	MORE11
3	Salma Emad	salma@gmail.com	#00000
4	Karm Amr	karm@gmail.com	CEEBB88

User-id	Folder-id	File name	File type	language
1	A.pdf	team	pdf	Arabic
1	B.doc	project	doc	English
1	C.txt	Task2	txt	French
2	C.txt	Our work	txt	French
2	B.doc	Or sheet	doc	English
2	A.pdf	Section	pdf	Arabic
3	C.txt	Project1	txt	French
3	A.pdf	Cs task	pdf	Arabic
3	C.txt	My data	txt	French
4	B.doc	marks	doc	English
4	A.pdf	sheets	pdf	Arabic
4	C.txt	Data 2	txt	French

Tables after 2NF

<u>User-id</u>	User Name	Email	password
1	Ola Ahmed	ola@gmail.com	1234789
2	Ali Ahmed	ali@gmail.com	MORE11
3	Salma Emad	salma@gmail.com	#00000
4	Karm Amr	karm@gmail.com	CEEBB88

<u>Folder-id</u>	File type	language
A.pdf	pdf	Arabic
B.doc	doc	English
C.txt	txt	French

<u>User-id</u>	<u>Folder-id</u>	File name
1	A.pdf	team
1	B.doc	project
1	C.txt	Task2
2	C.txt	Our work
2	B.doc	Or sheet
2	A.pdf	Section
3	C.txt	Project1
3	A.pdf	Cs task
3	C.txt	My data
4	B.doc	marks
4	A.pdf	sheets
4	C.txt	Data 2

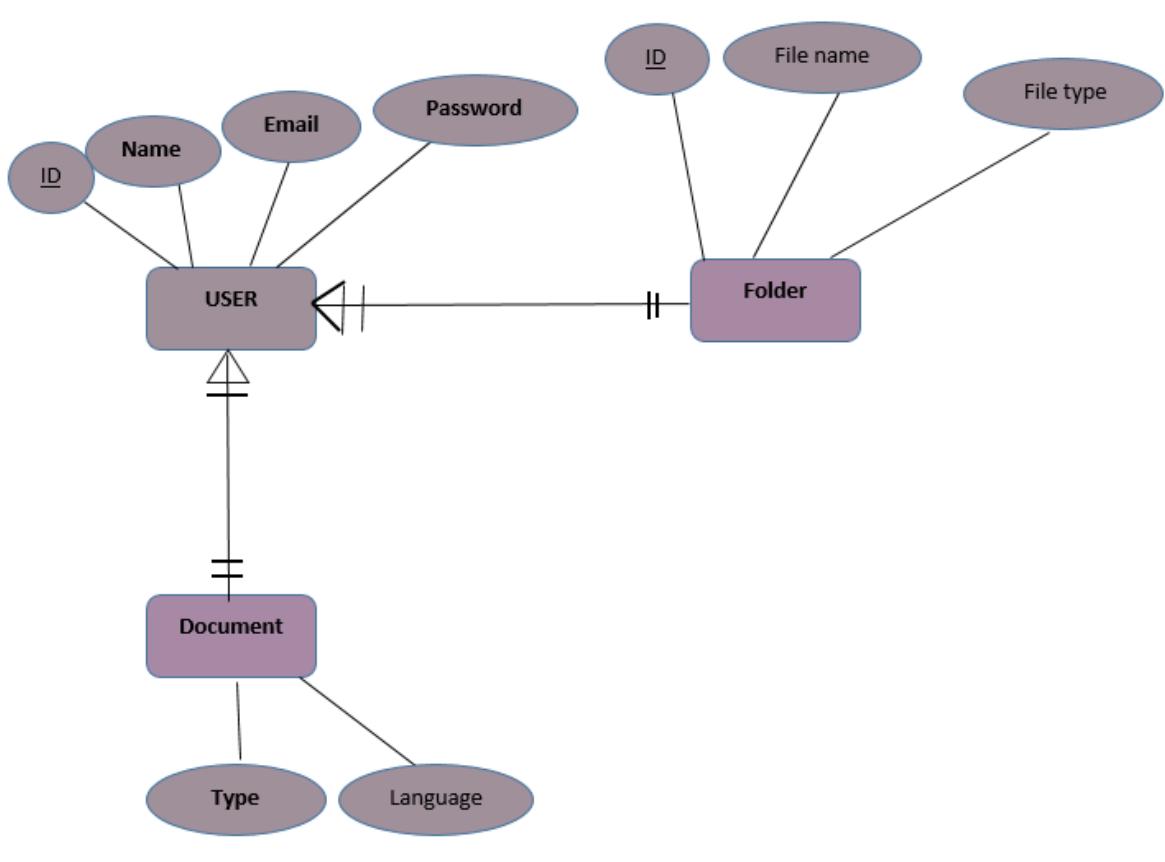
Tables after 3NF

User-id	Folder-id	File name
1	A.pdf	team
1	B.doc	project
1	C.txt	Task2
2	C.txt	Our work
2	B.doc	Or sheet
2	A.pdf	Section
3	C.txt	Project1
3	A.pdf	Cs task
3	C.txt	My data
4	B.doc	marks
4	A.pdf	sheets
4	C.txt	Data 2

User-id	User Name	Email	password
1	Ola Ahmed	ola@gmail.com	1234789
2	Ali Ahmed	ali@gmail.com	MORE11
3	Salma Emad	salma@gmail.com	#00000
4	Karm Amr	karm@gmail.com	CEEBB88

Folder-id	File type	language
A.pdf	pdf	Arabic
B.doc	doc	English
C.txt	txt	French

Entity Relationship Diagram (ERD)



Design (Project Specification)

[A] Architecture Design

1. Operational Requirements

Requirement	
Technical Environment	<ul style="list-style-type: none">The system will work on the desktop of your personal computer(PC).Writers does not need any web environment to work over it.A version of the system will be provided for people using smart phones like : ipads.
System Integration	This system will be able to: <ul style="list-style-type: none">Make a lot of documents used by another systems.Import and export images.Make pdf sheets (easy transformed , easy printed)
Portability	<ul style="list-style-type: none">This system will work with different operating systems like (Linux,windows7,8,9,10).This system need to operate with handheld devices such as tablets and ipads.
Maintainability	New versions of the system will be released every ten months.

2. Performance Requirements

Requirement	
Speed	<ul style="list-style-type: none">Response time of any process in this system must be two seconds or less.Speed of documents download must be increased.
Capacity	<ul style="list-style-type: none">There will be a maximum of 7000 users at peak use time.The system will store the data on 100.000 writers for a total of about 4GB of data.
Availability and reliability	<ul style="list-style-type: none">The system should be available 24/7 with the exception of maintenance.Maintenance should not exceed one 6-hour period each 2 months.The system will have 99% uptime performance.

3. Security Requirements

Requirement	
System value estimates	<ul style="list-style-type: none">The system is not mission critical but the system outage is estimated to cost 70.000 LE per hour in lost revenue.A complete loss of all system data is estimated to cost 2.000000 LE.
Access control	<ul style="list-style-type: none">Only developer will be able to change and modify the items of this system.The users of this system will not be able to change and modify this system.
Encryption and authentication	<ul style="list-style-type: none">The information of the users of the system must be transmitted securely.
Virus control	<ul style="list-style-type: none">All uploaded files will be checked for viruses before being saved in this system.

3. Cultural and political Requirements

Requirement	
Multilingual requirements	<ul style="list-style-type: none">The system will operate in Arabic and English.
Customization requirements	<ul style="list-style-type: none">There is no country-specific information
Making unstated norms explicit	<ul style="list-style-type: none">All date fields will be identified as using the day/month/year format.All size fields of the pictures uploaded on the system will be identified as using pixels.
Legal requirements	<ul style="list-style-type: none">There is no legal requirements to this system.

[2] Data storage Design

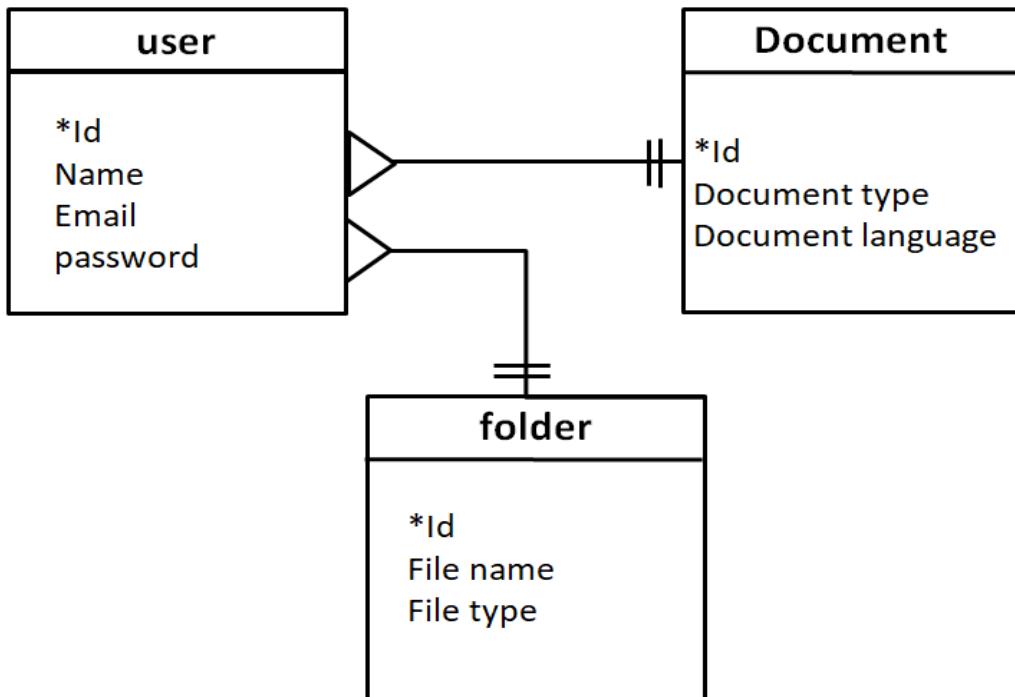
1. Data storage format:

In our system :

The storage format is Database

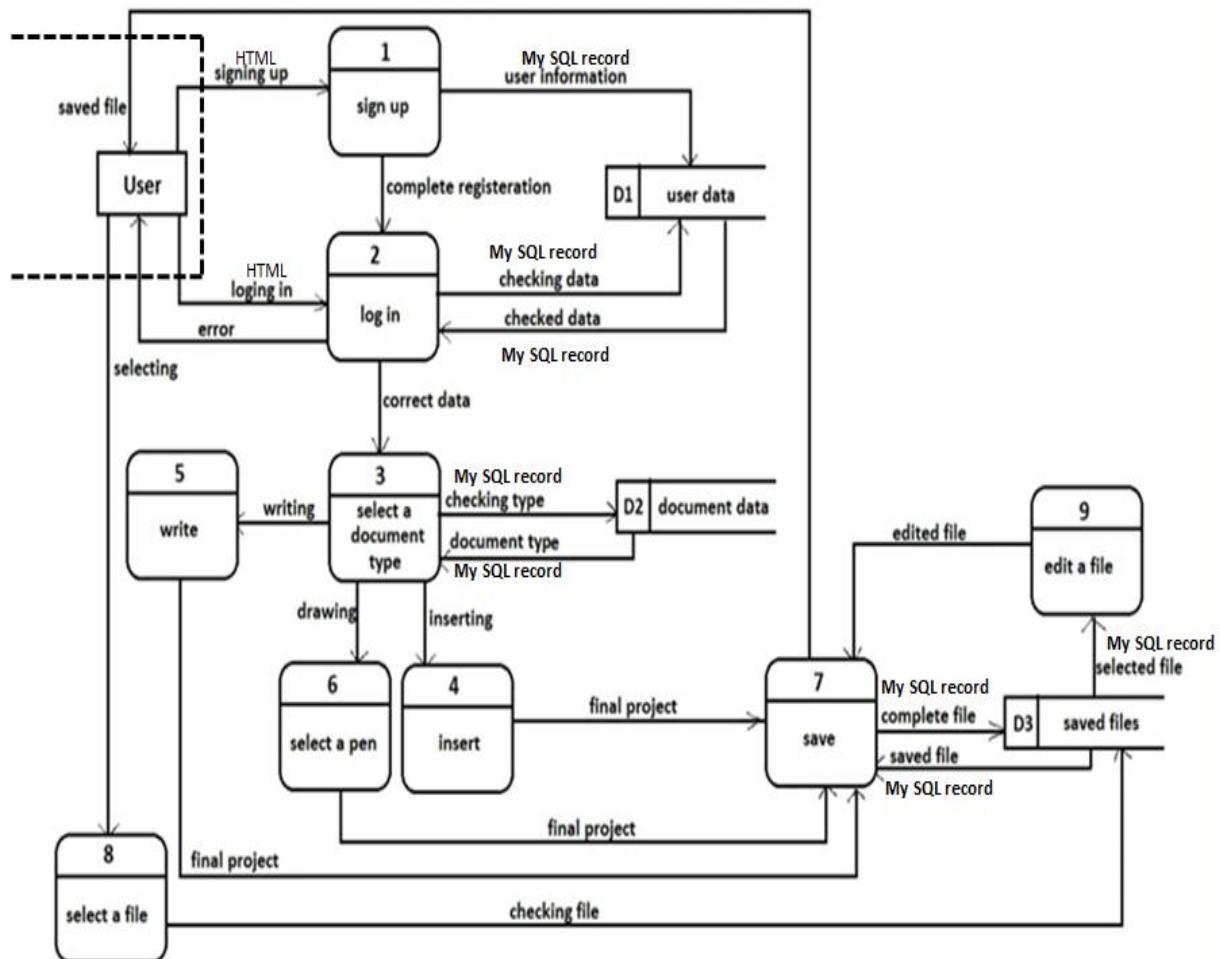
The database management system(DBMS) is MY SQL.

2. Convert logical ERD to physical ERD:



[3] Program design

- Convert logical DFD to physical DFD:



[4] Interface design

1. Scenario Development

The first scenario(join the system):

- The user may sign up to the system so he must enter his information and that information will be stored in the data store d1(1).
- The user will log in to the system and enter his information(user name ,password),this information will be checked and if it is true there is a message send to user that he has logging in the system successfully and if this information are false there is a message send to user that there is an error in the user name or password(2).

The second scenario(select the document type):

- The user will select the document type that he need to write in (3).
- If the user find the document he search ,Now he is ready to write in our system(3).
- The user may choose select a pen or insert chart , table or picture(4).
- The user will change the page(7).

The third scenario(Writing in the system):

- The user want to write in the system by using a textbox(5).
- The user may choose the tool of changing the font type then , choose the tool of changing the font size ,he also choose the tool of changing the color of the writing(5).
- The user will save the writing(7).

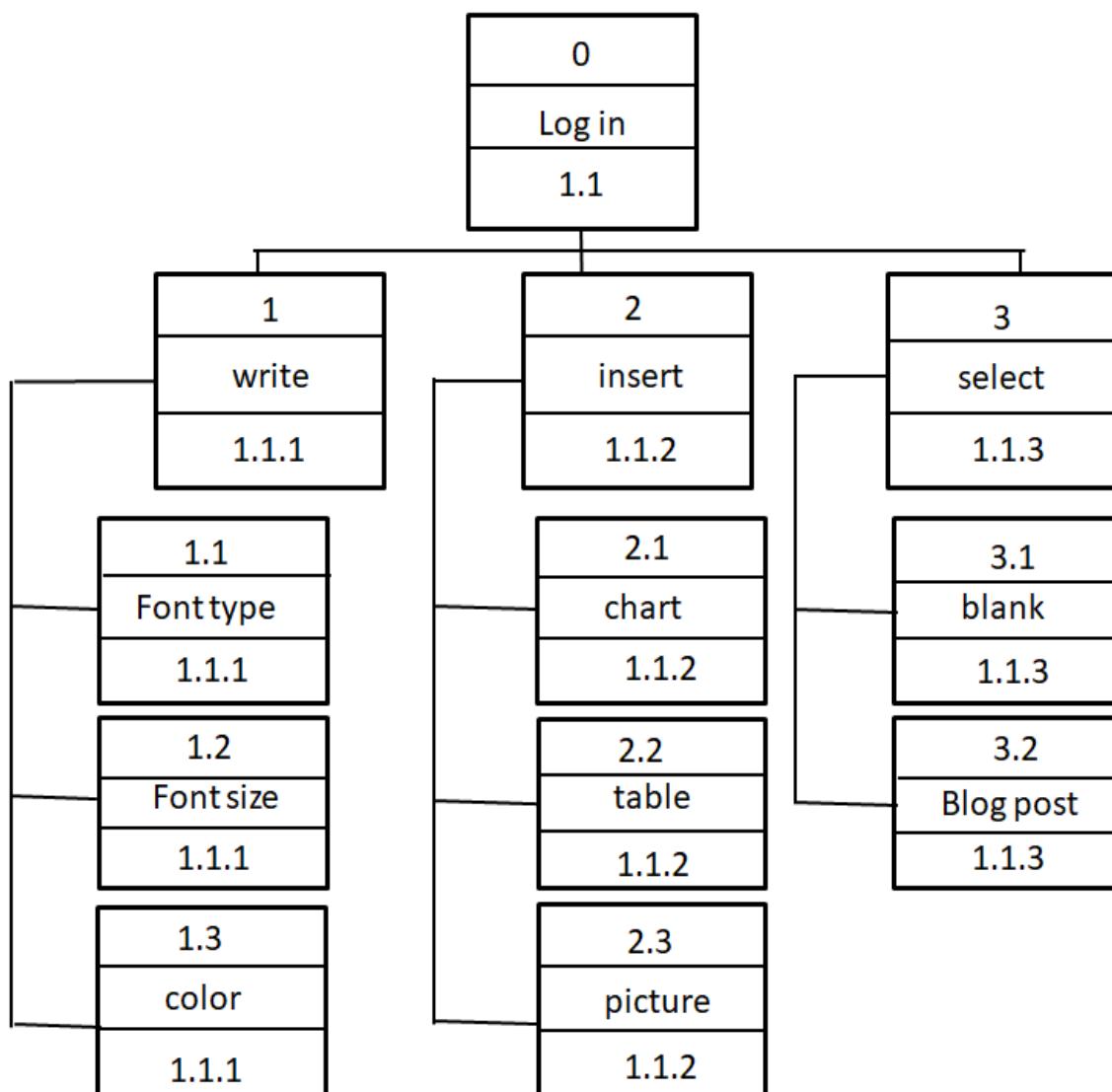
The Fourth scenario(Drawing in the system):

- The user may choose drawing in the system , so he will select the pen tool to draw(6).
- The user will save the drawing(7).

The Fifth scenario(Inserting in the system):

- The user may insert in the system(4.1).
- The user may insert a chart(4.1.1) or insert a table (4.1.2) or insert a picture from his personal computer(4.1.3).
- The user will save the inserting(7).

2. Interface Structure Design



3. Interface Standards Design

(1) Interface Metaphor

Interface metaphor: text editor like micro soft word.

Interface objects:

- Label 1(change font color) to change the color of the label by click on the different buttons.
- Button 1(red) to change the label color to red.
- Button2 (blue) to change the label color to blue.
- Button 3(orange) to change the label color to orange.
- Button4 (yellow) to change the label color to yellow.
- Button5 (green) to change the label color to green.
- Label 2(change font size) to change the size of the label by choosing one of the radio buttons.
- Radiobutton1(small) to change the size of the label to small.
- Radiobutton2(medium) to change the size of the label to medium.
- Radiobutton3(large) to change the size of the label to large.

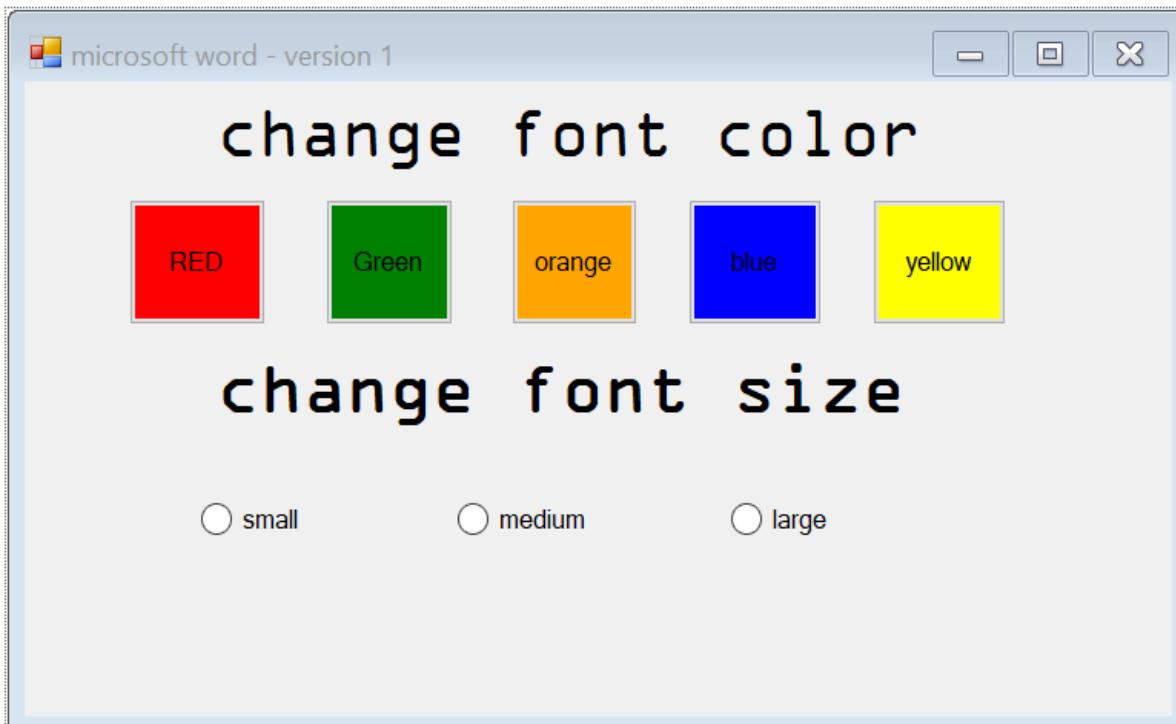
Interface actions:

- Convert the label color by using button (RED).
- Convert the label color by using button (Blue).
- Convert the label color by using button (Orange).
- Convert the label color by using button (Yellow).
- Convert the label color by using button (Green).
- Convert the label size to small by using the radio button(small).
- Convert the label size to medium by using the radio button(medium).
- Convert the label size to large by using the radio button(large).

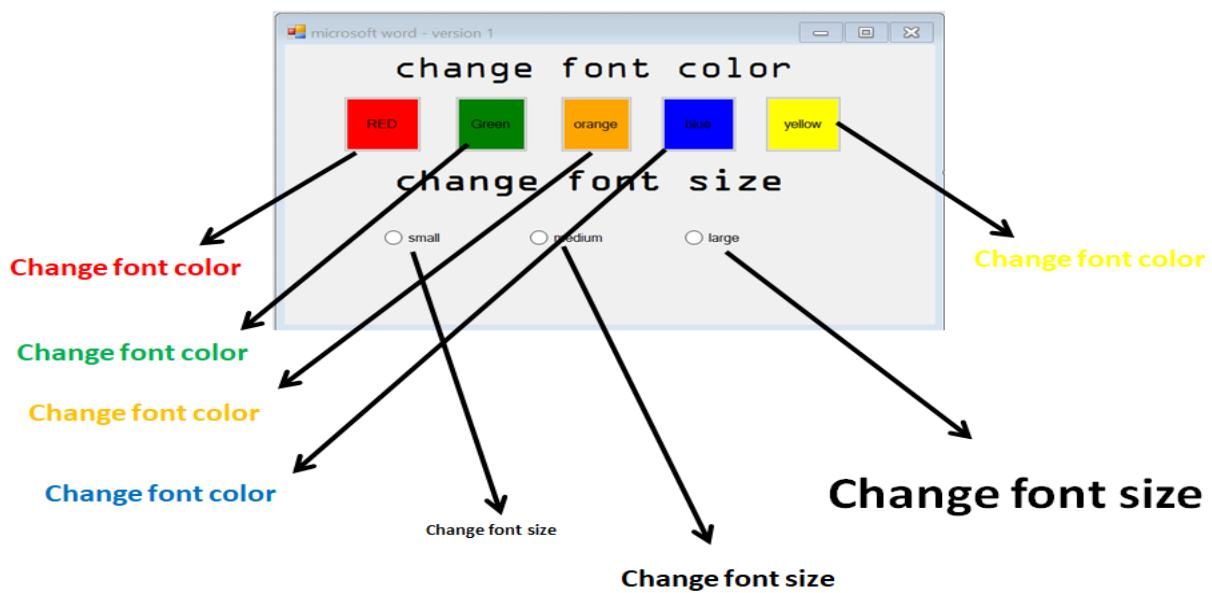
Interface icons:

Will be used in all screens.

(2) Interface Template



4. Interface Design Prototyping(by storyboard):





Implementation
System.