Student Results

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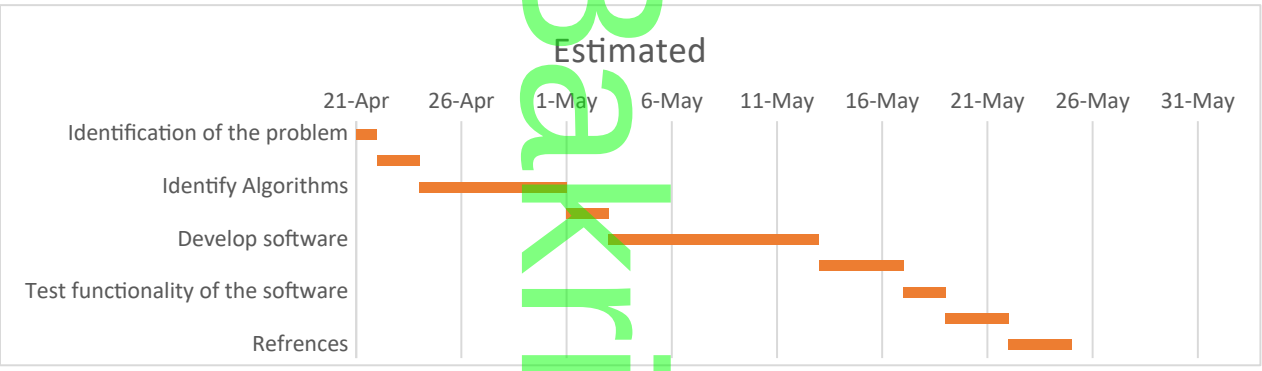

Gantt Chart Assessment Task 2		Actual		
ID	Activity	Start	End	Days
1	Identification of the problem	22-Apr	23-Apr	1
2	Create IPO Table	23-Apr	25-Apr	2
3	Identify Algorithms	25-Apr	9-May	14
4	Create Prototype	9-May	13-May	4
5	Develop software	13-May	2-Jun	20
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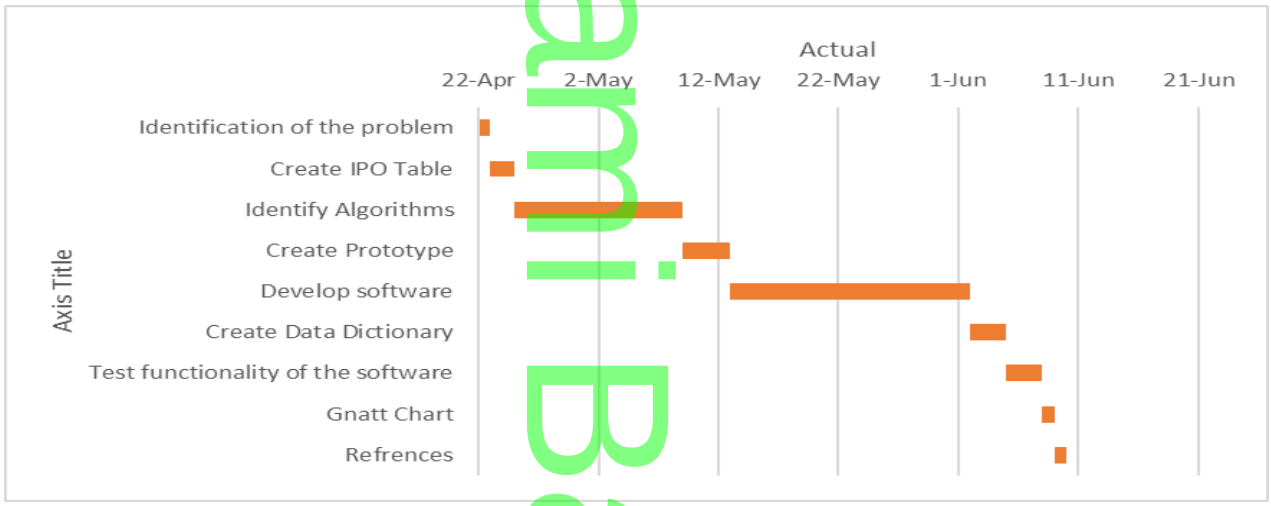
7	Test functionality of the software	5-Jun	8-Jun	3
8	Gnatt Chart	8-Jun	9-Jun	1
9	Refrences	9-Jun	10-Jun	1



Identification of the problem

Greenfield Tutor School requires a piece of software to manage their students results. They are currently using excel to manage their students results. It required that the software could create, modify, delete, and print student records from a database. It must display the info in a table.

This software will mainly use the RAD Approach to fast track development.

IPO Table

Input	Process	Output
Student Data	Create If Student does not exist, create.	New Record
Student ID	Modify Check if student data has been changed. If changed, update data.	Updated Student details
Student ID	Delete Remove student data	Remove Student
Print Students	Generate Report	Generated Student Report

Algorithms

Pseudocode

```
BEGIN CalculateGrades
        Dim MRes as Decimal
        Dim a as integer
        Dim b as decimal
        IF IsNumeric(txtMark1) then
                If txtMark1 >= 0 and txtMark1 <= 100 Then
                a = txtMark1 * 100/100
                txtEG1 = a
                b = a * 0.26
                txtPer1 = b
        Else
                MsgBox("Please enter a value between the range of 0 – 100!")
                End If
        End If
        IF IsNumeric(txtMark2) then
                If txtMark2 >= 0 and txtMark2 <= 100 Then
                a = txtMark2 * 100/100
                txtEG2 = a
                b = a * 0.27
                txtPer2 = b
        Else
                MsgBox("Please enter a value between the range of 0 – 100!")
                End If
        End If
        IF IsNumeric(txtMark3) then
                If txtMark3 >= 0 and txtMark3 <= 100 Then
                a = txtMark3 * 100/100
                txtEG3 = a
                b = a * 0.16
```

```
                txtPer3 = b
        Else
                MsgBox("Please enter a value between the range of 0 – 100!")
                End If
        End If
        IF IsNumeric(txtMark4) then
                If txtMark4 >= 0 and txtMark4 <= 100 Then
                a = txtMark1 * 100/100
                txtEG4 = a
                b = a * 0.31
                txtPer4 = b
        Else
                MsgBox("Please enter a value between the range of 0 – 100!")
                End If
        End If
    MRes = Val(txtPer1.Text) + Val(txtPer2.Text) + Val(txtPer3.Text) + Val(txtPer4.Text)
    txtGrade.Text = MRes
    If Val(txtGrade.Text) <= 75 Then
       txtRemark.Text = "Failed"
    Else
       txtRemark.Text = "Passed"
    End If
END


BEGIN ClearFields
        txtName = ""
        txtSurname = ""
        txtMark1 = ""
        txtMark2 = ""
        txtMark3 = ""
        txtMark4 = ""
        txtEG1 = ""
        txtEG2 = ""
```

txtEG3 = ""

txtEG4 = ""

txtPer1 = ""

txtPer2 = ""

txtPer3 = ""

txtPer4 = ""

txtGrade = ""

txtRemark = ""

END

BEGIN RetrieveRecord

```
Dim database as string = “info from StudentRecord”
      Open
      Fill Record

For each row in datatable
Populate(row(0), row(1), row(2), row(3), row(4), row(5), row(6), row(7),
row(8), row(9), row(10), row(11), row(12), row(13), row(14), row(15), row(16))
Next

Clear datatable rows
Close
```

END

BEGIN AddRecord

Insert info into StudentRecord(name,surname,mark1,eg1,per1,mark2,eg2,per2,mark3,eg3,per3,mark4,eg4,per4,grade,remark)

Add “name” from txtname
Add “surname” from txtsurname
Add “mark1” from txtmark1
Add “eg1” from txteg1
Add “per1” from txtper1
Add “mark2” from txtmark2
Add “eg2” from txteg2
Add “per2” from txtper2
Add “mark3” from txtmark3
Add “eg3” from txteg3
Add “per3” from txtper3
Add “mark4” from txtmark4
Add “eg4” from txteg4
Add “per4” from txtper4
Add “grade” from txtgrade
Add “remark” from txtremark

Open
If response > 0 then
Msgbox(“successfully inserted”)
End if
Close
END

BEGIN UpdateRecord

Dim database as string = update studentrecord (id = id, name = txtname, surname = txtsurname, mark1 = txtmark1, eg1 = txteg1, per1 = txtper1, mark2 = txtmark2, eg2 = txteg2, per2 = txtper2, mark3 = txtmark3, eg3 = txteg3, per3 = txtper3, mark4 = txtmark4, eg4 = txteg4, per4 = txtper4, grade = txtgrade, remark = txtremark

Open

Create row
If update query >0 then
Msgbox(”successfully updated”)
Close

END

BEGIN DeleteRecord

Dim database as string = delete from studentrecord where ID is located

Open

Delete text

If msgbox(“Are you sure you want to permanently delete this?”, “Delete”, Msgbox.OkCancel, msgboxicon.warning) = dialogresult.ok

Then

If query > 0 then

Clearfields

Msgbox(“successfully deleted”)

End If

End If

Close

END

BEGIN Print

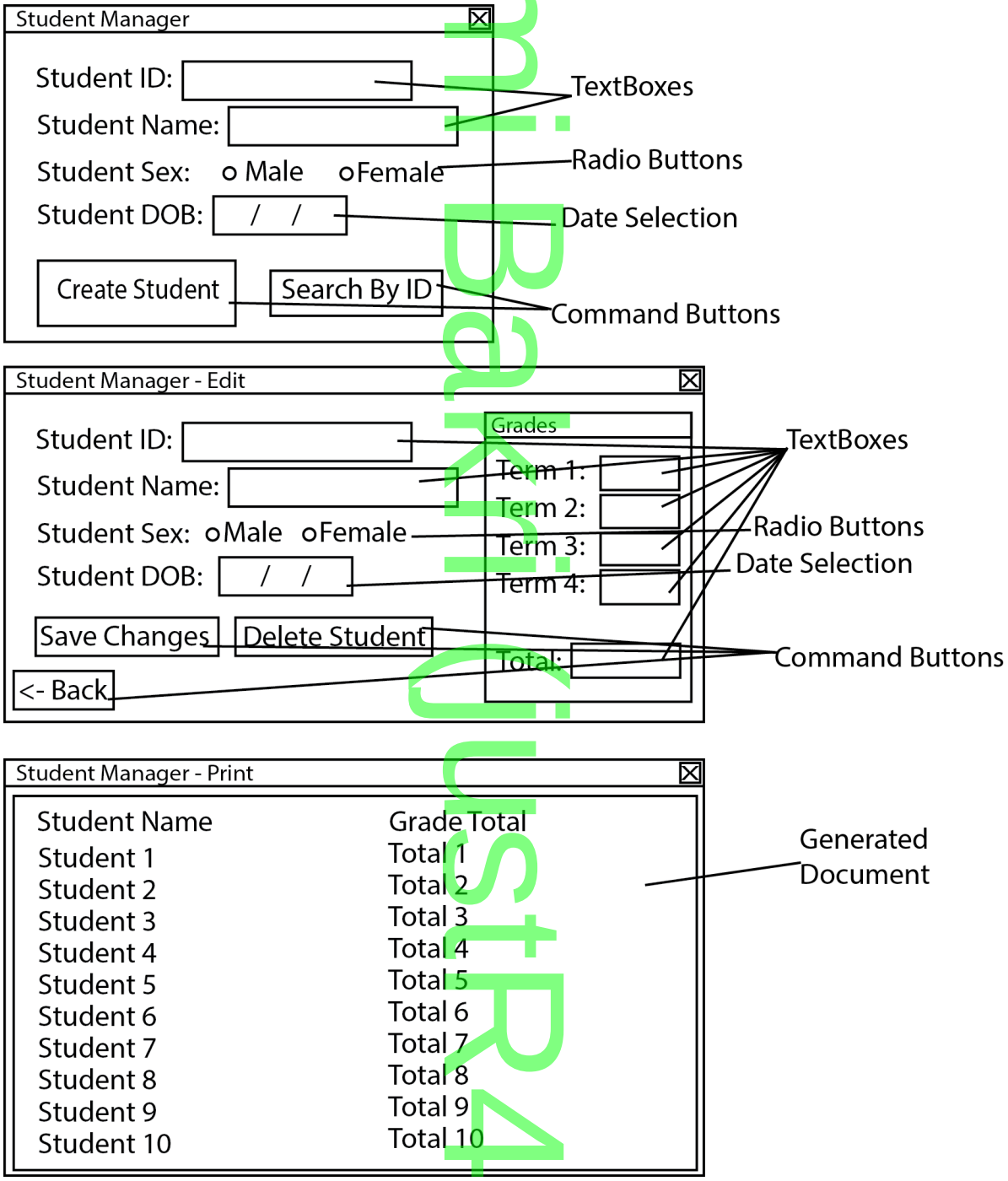
PrintDocument1.print

END

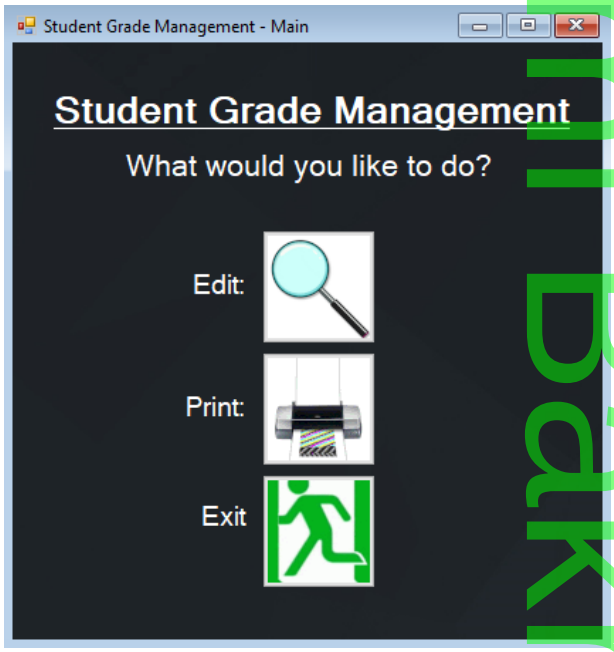
Desk Check

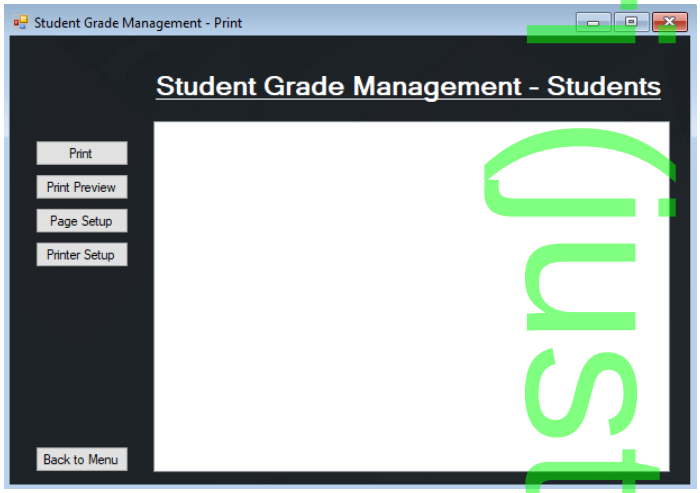
Lines #	Is Validation condition correct	Mark1	Mark2	Mark3	Mark4	Grade	Status
1,2,3,4	False						
5	True	41	52	64	70	55.74	Pass
15	True	23	72	61	10	45.93	Pass
25	false	1000	-50	45	60		Fail
35	false	-1	10	99	76		Fail

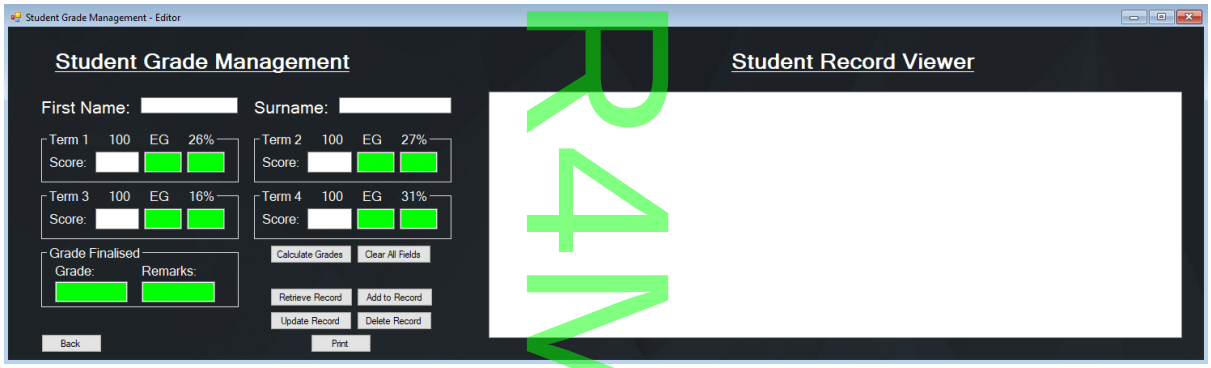
Prototype



Graphical User Interface







Data Dictionary

Data dictionary for project: *Student Grade Management*				
Data item	**Type**	**Size**	**Description**	**Sample**
Name	String	20	Student Name	Rami
Surname	String	20	Student Surname	Bakri
Mark1	String	3	Student Mark Term 1	42
Mark2	String	3	Student Mark Term 2	57
Mark3	String	3	Student Mark Term 3	44
Mark4	String	3	Student Mark Term 4	79
EG1	String	3	Student Equivalent Grade Term 1	56
EG2	String	3	Student Equivalent Grade Term 2	58
EG3	String	3	Student Equivalent Grade Term 3	41
EG4	String	3	Student Equivalent Grade Term 4	99
Per1	String	3	Student Percentage Term 1	21%
Per2	String	3	Student Percentage Term 2	7%
Per3	String	3	Student Percentage Term 3	69%
Per4	String	3	Student Percentage Term 4	98%
Grades	String	3	Student Grades	100%
Remark	String	6	Displays either “Passed” or “Failed”	Failed

Test

Test Student Grade Management				
Data item	**Type**	**Input**	**Output**	**Expected output**
Name	String	abcd		Data Accepted
		A1B2C3		Data Accepted
		25/03/2021	“Error in data”	“Error”
Surname	String	abcd		Data Accepted
		A1B2C3		Data Accepted
		25/03/2021	“Error in data”	“Error”
Mark1	String	ABCD	“Error in Data”	“Error”
		123	“Value entered is not in the set parameters”	“Error”
		99		Data Accepted
Mark2	String	ABCD	“Error in Data”	“Error”
		123	“Value entered is not in the set parameters”	“Error”
		99		Data Accepted
Mark3	String	ABCD	“Error in Data”	“Error”
		123	“Value entered is not in the set parameters”	“Error”
		99		Data Accepted
Mark4	String	ABCD	“Error in Data”	“Error”
		123	“Value entered is not in the set parameters”	“Error”
		99		Data Accepted

References

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