

SCHOOL MANAGEMENT SYSTEM –FUNCTIONALITY ADDITION

PROJECT MOCK UP AND ENTITY RELATIONSHIP DIAGRAMS

Date	11 February 2019	
Version	1.5	
Date of Authorisation:	11 February 2019	
Project start date	13 March 2019	
Projected finish date	16 March 2019	
Project Manager	Kephas Shweda	
Project Manager Contact Details	Mobile - +264 81 586 2834 Email - ' keshmabofele@gmail.com '	
Project Members (alphabetical)	Dan Ntwari	216051533
	Erich Godenschweig	216094518
	Fikameni Petrus	211009725
	Kephas Shiweda	211035750

Table of contents

Table of Contents

1.	Structure of Entity Diagrams	4
2.	Database Mock Up	5
a.	Student Information Data Table	5
b.	Subject Information Table	6
3.	User Interface Mock Ups	6
a.	ASD Wireframes/Student Semester End Report	6
b.	ASD Wireframes/Teacher Button - Enter Grade Data	7
c.	ASD Wireframes/Teacher Button - View Subject Performance	8
d.	ASD Wireframes/Teacher Students Information View	9
e.	ASD Wireframes/Teacher Button - View Class Data	10

1. Structure of Entity Diagrams

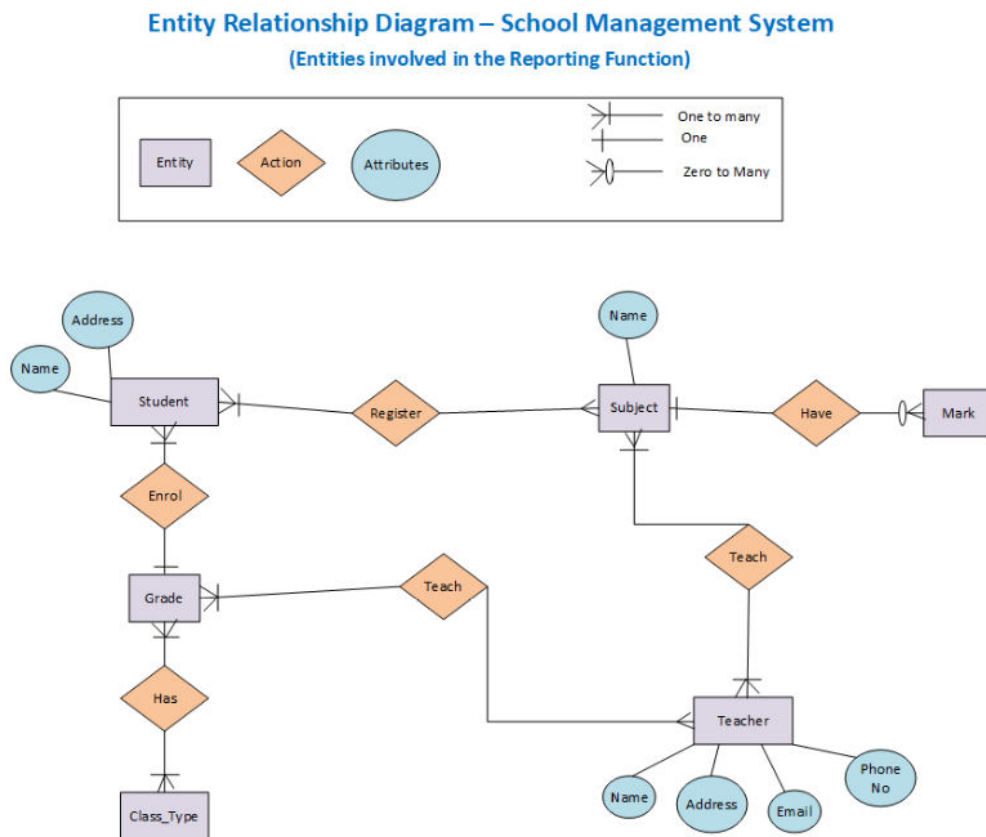


Figure 1 - Entity Relationship Diagram

During the initial inspection of the open source project, we noticed that the database that was used was not normalized and therefore not fit for purpose. We left the original tables and data in place, however we identified the entities, relationships and attributes in Figure 1 - Entity Relationship Diagram to add to the database. These represent the selected tables necessary for completing progress 3.

The purpose of the exercise is to firstly not have modification difficulties when doing the reporting for our progress 3. In addition to this it will help us and everyone else understand the flow and inter-relationships of our entities. Doing this will give us a basis for modelling additional entities which might arise later during the project. Furthermore our work on the entity diagram, supplements the work necessary for the database additions by highlighting relationship, foreign keys and primary keys.

The diagram in Figure 1 - Entity Relationship Diagram showcases a human readable representation of the entity relationship diagram. Whereas the entity relationship in Figure 2 - Entity Relationship Diagram showcases the entity relationship diagram that more closely relates to the database structure.

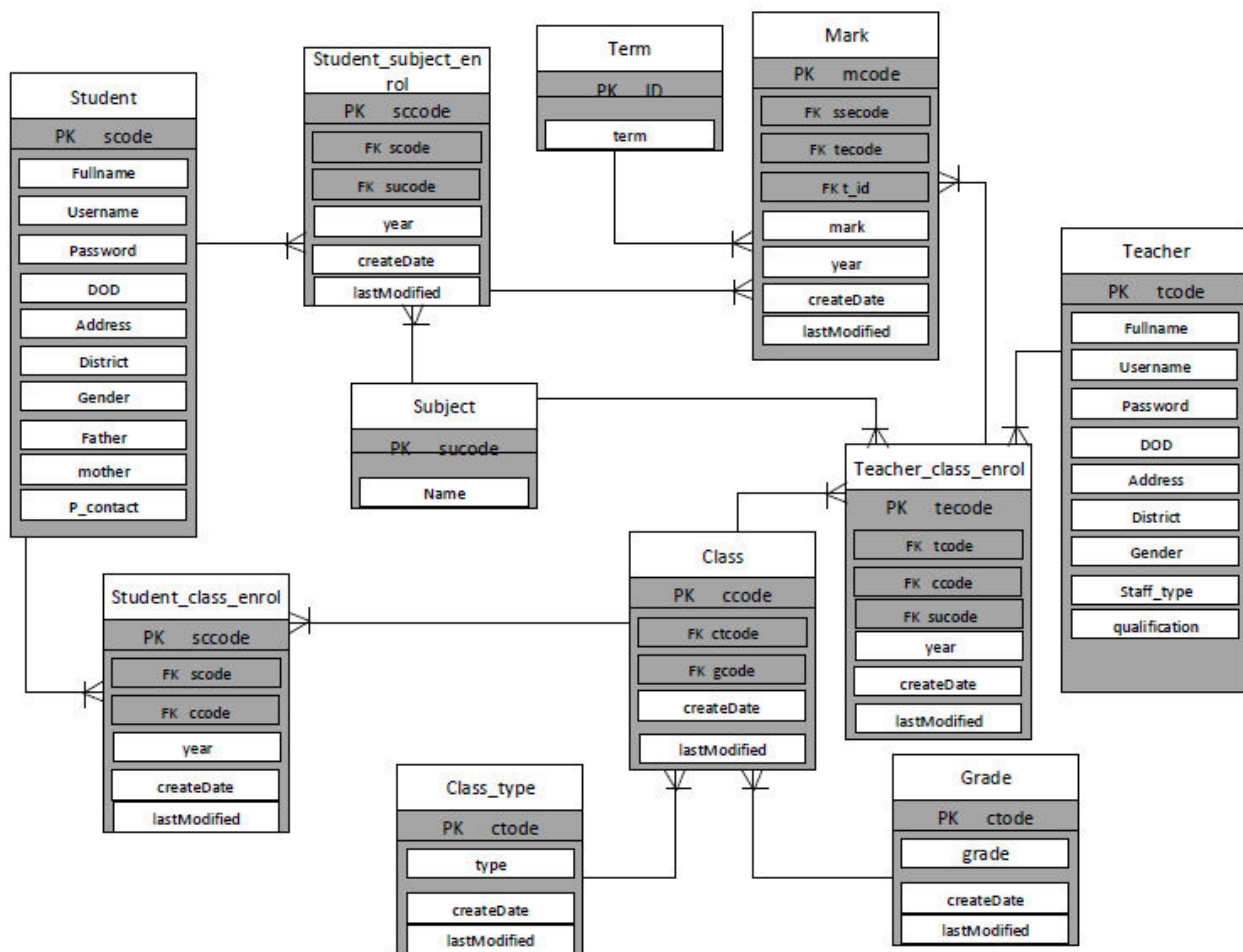


Figure 2 - Entity Relationship Diagram

2. Database Mock Up








































a. Student Information Data Table

The table holds information on the student, information such as student first name, student surname, and the student password as plain text (plan to modify this in the next phase), student grade, gender and the parent's contact details.

	st_id	st_fullname	st_username	st_password	st_grade	roll_no	st_dob	st_address	st_district	st_gender	st_father	st_mother	st_parents_contact
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	Ravi Khadka	ravi2056	ravi	10	2	11/17/2056	lokanthali	Bhaktapur	Male	Abc Xyz	Bcd Xyz	9800000
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	Hari Thapa	hari2055	asdf	10	12	11/17/2055	Kausaltar	Bhaktapur	Male	Ram Thapa	Sita Thapa	9812222200
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	Saugat Gautam	saugat2055	saugat2055	7	12	12 Jan 1999	Jadibuti	Kathmandu	Male	John Gautam	Sita Gautam	9802212222
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	qwe	asdf	asdf	8	11	27 Dec 1998	Banepa	Kavre	Male	aasd	aasdf	9812222
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	Robin Dhakal	robin2053	123456	10	1	20 Jan 1994	Patan	Lalitpur	Male	Rajan Dhakal	Rama Dhakal	9841111
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	9	raj Kumar xyz	raj Kumar	abc def	10	5	13 Jan 2000	Kausaltar	Bhaktapur	Male	Abc xyz	Bcd xyz	98000000
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	8	Your Name	yourname	yourname1	5	1	27 Jan 2000	Lokanthali	Bhaktapur	Male	John Cena	Sita Cena	9811111111
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	10	dsdsdsd	aaaa	abc	2	1	1 Jan 2000	Tinkune	Kathmandu	Male	abbb	acc	123456

b. Subject Information Table

The subject information table enables us to capture data on each subject. Information such as which teacher is offering which subject to which grade.

+ Options			id	subject_name	t_fullname	t_email	grade	time	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1	Math	ram parsad thapa	ram@ram	9	10:00AM - 10:45AM
<input type="checkbox"/>	 Edit	 Copy	 Delete	2	Computer	Ravi Khadka	rrrrr@gmail.com	10	10:00AM - 10:45AM
<input type="checkbox"/>	 Edit	 Copy	 Delete	3	English	Rabin Khadka	rabin@gmail.com	10	10:45AM - 11:30AM
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	Geometry	jashj	jasn@gmail.com	2	89
<input type="checkbox"/>	 Edit	 Copy	 Delete	5	Science	jahsja	hjashj@gmail.com	2	67621
<input type="checkbox"/>	 Edit	 Copy	 Delete	6	Biology	jashj	jasn@gmail.com	2	89
<input type="checkbox"/>	 Edit	 Copy	 Delete	7	Physics	jahsja	hjashj@gmail.com	2	67621
<input type="checkbox"/>	 Edit	 Copy	 Delete	8	Geography	jashj	jasn@gmail.com	2	89
<input type="checkbox"/>	 Edit	 Copy	 Delete	9	History	jahsja	hjashj@gmail.com	2	67621
<input type="checkbox"/>	 Edit	 Copy	 Delete	10	Business Studies	jashj	jasn@gmail.com	2	89
<input type="checkbox"/>	 Edit	 Copy	 Delete	11	Home Economics	jahsja	hjashj@gmail.com	2	67621
<input type="checkbox"/>	 Edit	 Copy	 Delete	12	Art	jashj	jasn@gmail.com	2	89
<input type="checkbox"/>	 Edit	 Copy	 Delete	13	Music	jahsja	hjashj@gmail.com	2	67621

3. User Interface Mock Ups

a. ASD Wireframes/Student || Semester End Report

Figure 3 - Student Report Mock-up represents a report where the student can get their marks per term or at the end of the school year depending on which button they have selected.

Dan C. Ntwari

STUDENT

Dashboard

Welcome, Dan C. Ntwari

Information

Password Change

Teachers

Subject

Results

Semester End Report

Semester Progress Report

	MINIMUM PASS	TERM 1	TERM 2	TERM 3
MATHEMATICS	50%	87	82	90
ENGLISH	50%	80	90	95
SCIENCE	50%	85	86	90
COMPUTER SCIENCE	50%	89	85	99

REMARKS: Well done Dan, good marks, best behaviour and great year. Keep it up!

Figure 3 - Student Report

b. ASD Wireframes/Teacher || Button - Enter Grade Data

Figure 4 -Teacher's Report represents a user interface (UI) mock up where the teacher can generate several reports. The UI allows the teacher to do several tasks. The teacher may draw reports for a specific student, for a class and a report can be drawn for each subject. In addition to this the teacher may enter student marks, as well as view them afterwards.

John Doe

TEACHER

Dashboard

Students

Database

Teacher

Parents

Settings

List

Home / Student Information

Student Information

Select Grade

View Class Data

Enter Marks Data

View Subject Performance

Search Student to edit:

Select Subject to Enter Mark:

Select Semester:

Enter Mark:

Save

Discard

View

Edit

View

Viewing Data for

Student name and surname:

Grade:

Class:

Figure 4 -Teacher's Report

c. ASD Wireframes/Teacher || Button - View Subject Performance

The teacher can track progress by using charts as shown in Figure 5 - Graphing Student Performance.

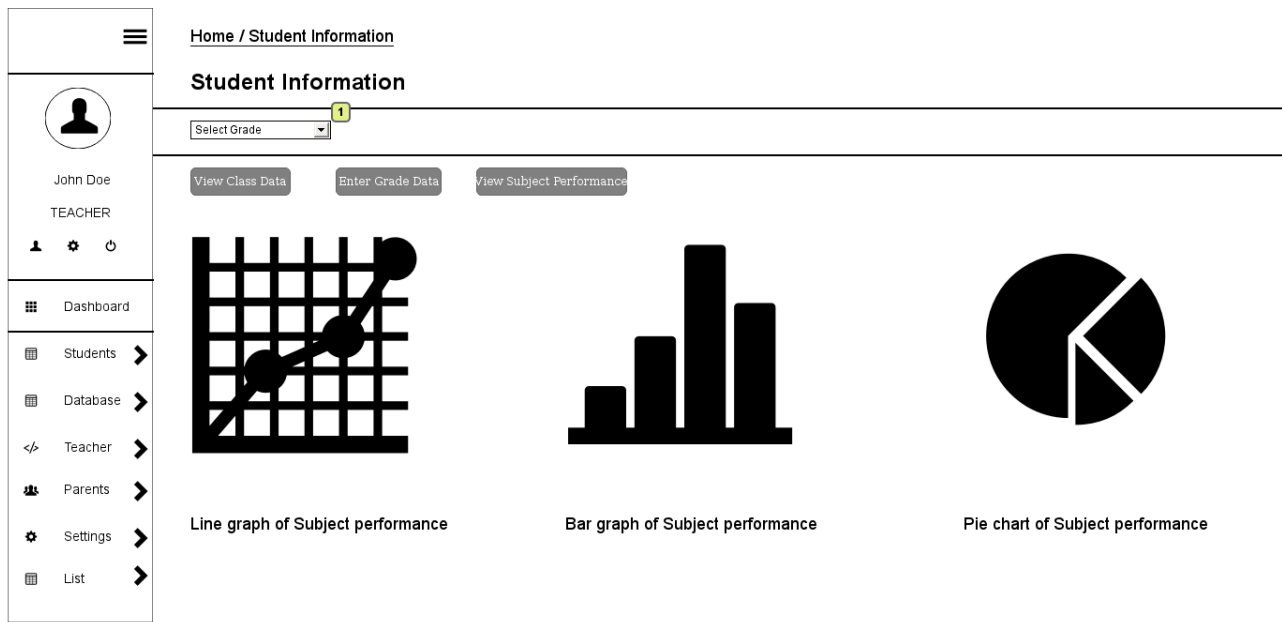


Figure 5 - Graphing Student Performance

d. ASD Wireframes/Teacher || Students Information View

The teacher is able to manipulate student grades by clicking on the highlighted rectangle in Figure 6 - Manipulate Student Grades.

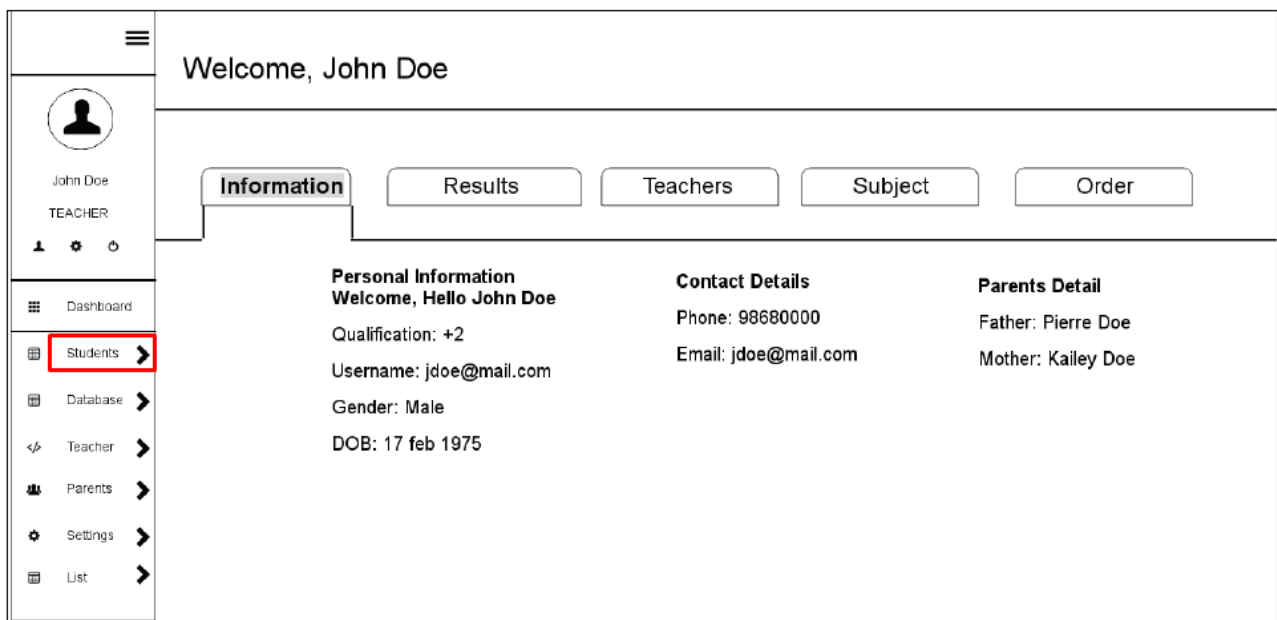


Figure 6 - Manipulate Student Grades

e. ASD Wireframes/Teacher || Button - View Class Data

The teachers is able to pull a report on the students in a grade, gaining information such as their contact details, addresses and gender. Figure 7 - Student Information Report represents the report.

Names	Surname	Gender	Contact	Address
Kephas	Shiweda	Male	+264 81 ...	3rd Street,
Erich	Godenshweig	Male	+264 81 ...	4th street
Fikameni	Petrus	Male	+264 81 ...	5th Stree
Dan C.	Ntwari	Male	+264 81 ...	42nd Street

Figure 7 - Student Information Report