ASIA METROPOLITAN UNIVERSITY

NO 6, JALAN LEMBAH, BANDAR BARU SERI ALAM, 81750, MASAI, JOHOR.

FOUNDATION IN INFORMATION TECHNOLOGY

FFTS 1214

FUNDAMENTAL OF DATABASE

TITLE

DATABASE SYSTEM: STUDENT INFORMATION MANAGEMENT SYSTEM

Prepared by	Yaashiniy A/P M Segaran
Student ID	FIT20220900243
Lecture's Name	Madam Hanisah Salim
Deadline	18 April 2023

Table of content

Introduction 3
Objective 4
Project Overview 5
- **Tables** 5
- **Queries** 7
- **Forms** 10
- **Student Information Report** 13

Interface 14
- **Forms** 14
- **Report** 16

Conclusion 17

Introduction

The education industry had seen significant changes in recent years as a result of fast technological innovation and changing requirements of students, lecturer and admins. One of the most significant issue that educational system face today is the efficient and effective handling of students record and academic information. The Student Management Information System (SMIS) is a program that is designed to address this issue by offering a centralized and automated platform to handle student data.

The goal of this project is to create a customised SMIS for newly opened Nevermore University. This project was to design and develop a user-friendly an efficient SIMS that could effectively manage the academic data of the Nevermore University students. Student registration, parent information, course details, loan amount for the chosen course and calculating GPA will be among the features and capabilities provided by SIMS.

The purpose of this report is to give an overview of the SIMS project including its objectives, features, form, report and execution. It also addresses the difficulties and constraints faced throughout the develop process as well as the system's performance. Finally, this report includes the important information and sensitive case that used to create the form from the tables such as expression builder, data type and formula of calculations.

Objective

1. To design and develop a user friendly and customizable student management information system that can be efficiently manage and store student records, parent information, departments in university, course, loan amount for each students and GPA calculation and other academic data.

2. To provide real time access to student data, allowing teachers and administrators to provide student progress and identify the areas of improvement.

Project Overview

Tables

1. Students table

Fields	Data Type
StudentID (Primary key)	Short text
First Name	Short text
Last Name	Short text
Address	Short text
City	Short text
State	Short text
DOB	Date/Time
Gender	Short text
Nationality	Short text
Phone Number	Short text
CourseID (Foreign key)	Short text
Intake	Short text
Matric Number	Calculated [Expression: [StudentID] & Left([First Name],4)]
Photo	Attachment
Parents First Name	Short text
Course Name	Short text
Loan Amount	Currency

2. Parents Table

Field Name	Data Type
ParentsID (Primary key)	AutoNumber
First Name	Short Text
Last Name	Short Text
Phone Number	Short Text
Relationship to student	Short Text
Student Name	Short Text
Address	Short Text
City	Short Text
State	Short Text
Intake	Short Text
StudentID (Foreign key)	Short Text

3. Courses Table

Field Name	Data Type
CourseID (Primary key)	Short Text
Course Name	Short Text
Department	Short Text

4. Enrolment Table

Field Name	Data Type
EnrolmentID (Primary key)	Short Text
CourseID (Foreign key)	Short Text
Course Name	Short Text
Intake	Short Text
Student Name	Short Text
StudentID	Short Text

5. PTPTN Amount Table

Field Name	Data Type
PTPTN_ID	AutoNumber
StudentID	Short Text
Loan Amount	Currency
Course Name	Short Text
Student Name	Short Text

6. GPA calculation

Field Name	Data Type	Expression Builder
GPA_ID (Primary key)	AutoNumber	-
Course1 (Grade Point)	Short Text	-
Course2 (Grade Point)	Short Text	-
Course3 (Grade Point)	Short Text	-
Course4 (Grade Point)	Short Text	-
Course5 (Grade Point)	Short Text	-
Course6 (Grade Point)	Short Text	-
Credit Hour 1	Number	-
Credit Hour 2	Number	-
Credit Hour 3	Number	-
Credit Hour 4	Number	-
Credit Hour 5	Number	-
Credit Hour 6	Number	-
Quality Points	Calculated	[Course1]*[Credit Hour 1]+[Course2]*[Credit Hour 2]+[Course3]*[Credit Hour

		3]+[Course4]*[Course4]+[Credit Hour 5]*[Course5]+[Credit Hour 6]*[Course6]
Total Credit Hour	Calculated	[Credit Hour 1]+[Credit Hour 2]+[Credit Hour 3]+[Credit Hour 4]+[Credit Hour 5]+[Credit Hour 6]
GPA	Calculated	[Quality Points]/[Total Credit Hour]
StudentID (Foreign key)	Short Text	-
Student Name	Short Text	-

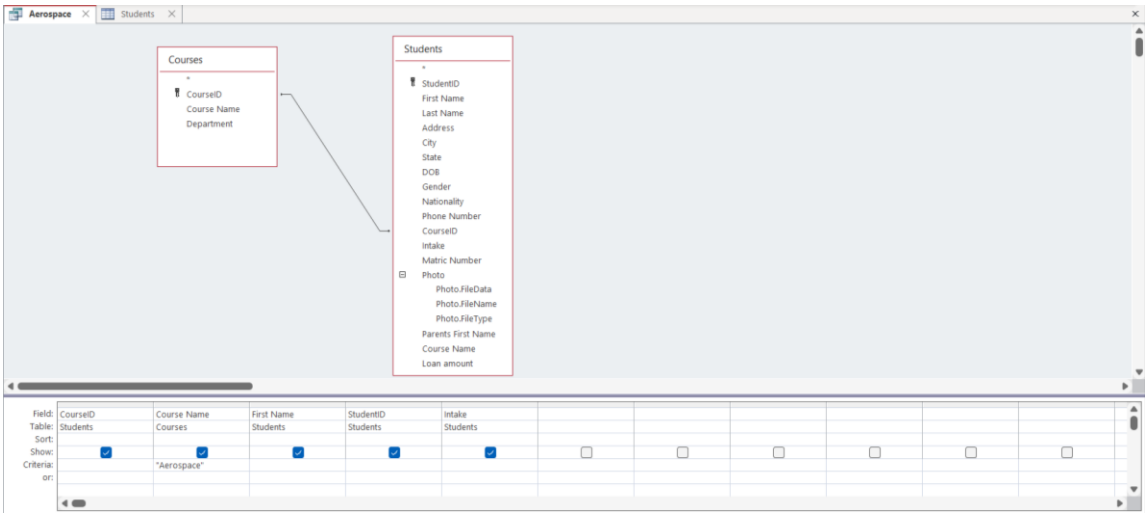
GPA calculation Formula:

Quality points for each course= Credit Hours × Grade Points

GPA = Total Quality Points/ Total Credit Hours

Queries

1. Retrieve list of students from Aerospace course.
   - Added 2 related tables which is Courses and Student Table.
   - Under Course Name field, criteria: “Aerospace”.

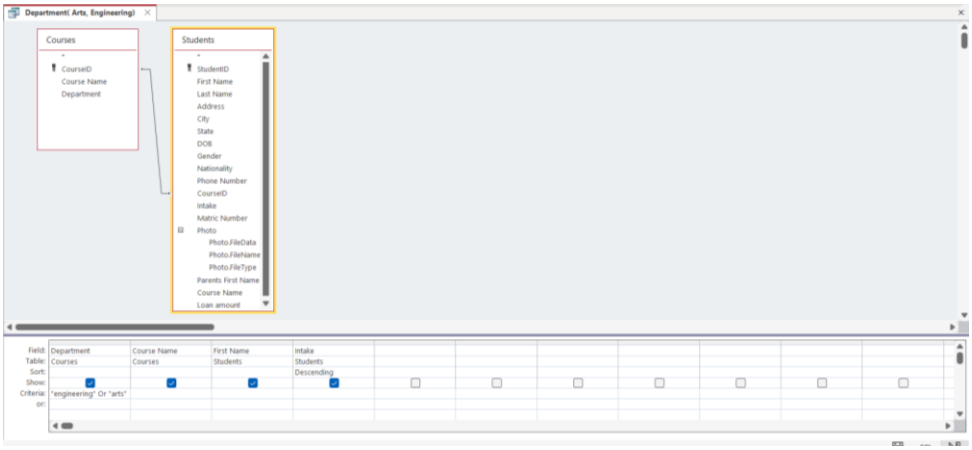


Datasheet view: List of students from Aerospace course.

Aerospace | Students

CourseID	Course Name	First Name	StudentID	Intake
1110	Aerospace	Yashveena	10005	01/2022
1110	Aerospace	Robert	10010	06/2022
1110	Aerospace	Vijaindran	10001	09/2021
1110	Aerospace	Kai Song	10002	09/2021

2. Retrieve list of students from different departments.
   - Added 2 related tables which is Courses and Student Table.
   - Under Department field, criteria: “Engineering” Or “Arts”.



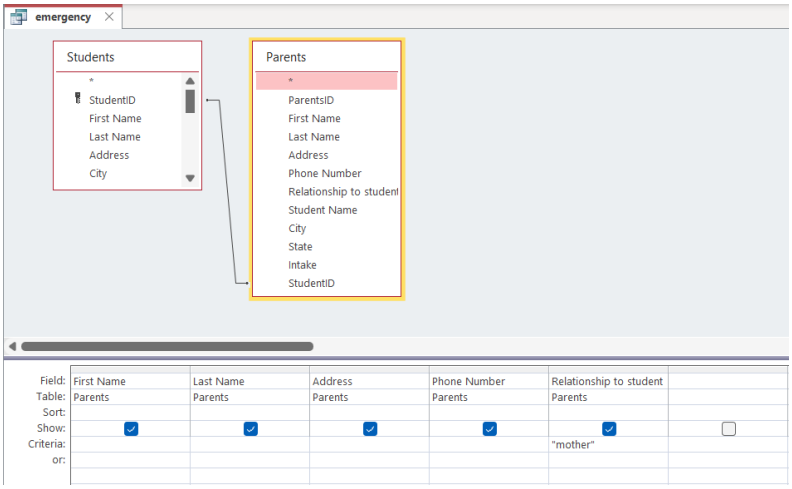
Datasheet view: List of students from Engineering and Arts student department.

Department(Arts, Engineering)

Department	Course Nam	First Name	Intake
Arts	Multimedia	Kai Wen	09/2021
Engineering	Aerospace	Kai Song	09/2021
Engineering	Aerospace	Vijaindran	09/2021
Arts	Art/Design	Kaaviya	06/2022
Engineering	Biotechnology	Navein	06/2022
Engineering	Biotechnology	Maisarah	06/2022
Engineering	Aerospace	Robert	06/2022
Arts	Multimedia	Muhammad Ain	01/2022
Arts	Multimedia	Jia Ying	01/2022
Engineering	Aerospace	Yashveena	01/2022

3. Retrieve phone number of students parents where number of mothers.

- Added 2 related tables which is Students and Parents table.
- “mother” criteria for Relationship to student field.

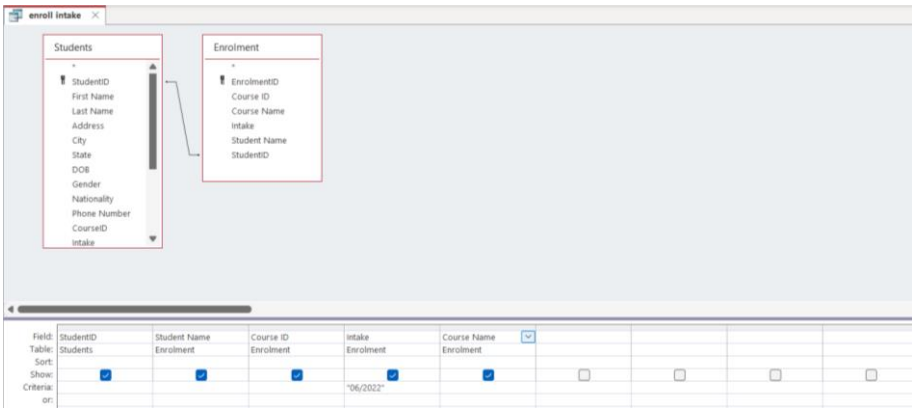


Datasheet view: Student's mother contact number.

PTPTN amount | emergency

StudentID	Student Nam	First Name	Last Name	Address	Phone Numb	Relationship
10006	Jia Ying	Goh	Kuan Sin	No 33, Jalan Jaya Mas	018-8378783	Mother
10009	Kaaviya Manoh	Letchumi	Subramaniam	No 2, Jalan Lembah 8,	016-6601561	Mother
10010	Robert Mendes	Harlow	Angelie	No 0707, Blok A, Edu r	019-7873491	Mother
10011	Maisarah	Marziah	Kamis	No 55, Jalan Perjirana	017-7778967	Mother
10012	Navein	Samantha	Prabhu	No 2, Jalan Kenanga 8,	010-2019876	Mother

4. Retrieve list of students who enrolled in 06/2022 intake.
   - Joined Students and Enrolment table.
   - Under Intake fields, criteria: "06/2022".

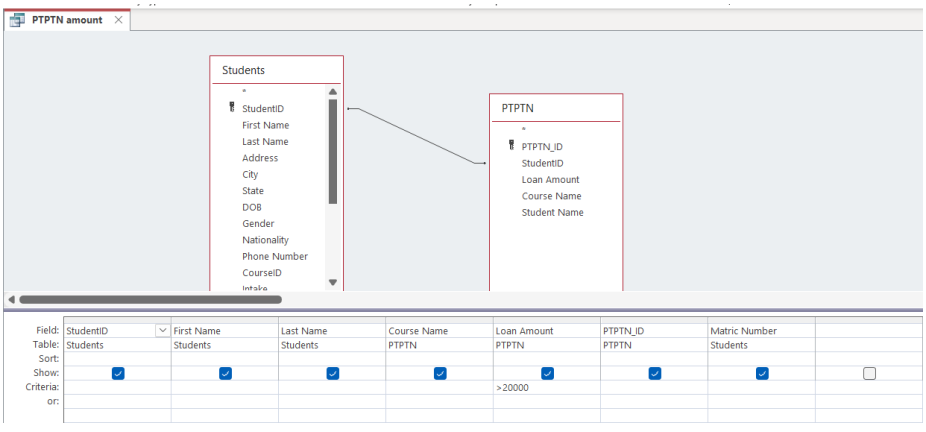


Datasheet view: Students from 06/2022 intake.

enroll intake

StudentID	Student Nam	Course ID	Intake	Course Nam
10007	Muhammad Ain	1112	06/2022	Law
10008	Jia Ying	1112	06/2022	Law
10009	Kaaviya	1115	06/2022	Art/Design
10010	Robert	1110	06/2022	Aerospace
10011	Maisarah	1113	06/2022	Biotechnology
10012	Navein	1113	06/2022	Biotechnology

5. Retrieve list of students PTPTN loan amount more than RM 20,000.
   - Joined Students and PTPTN loan table.
   - Under loan amount field, criteria: ">20000".



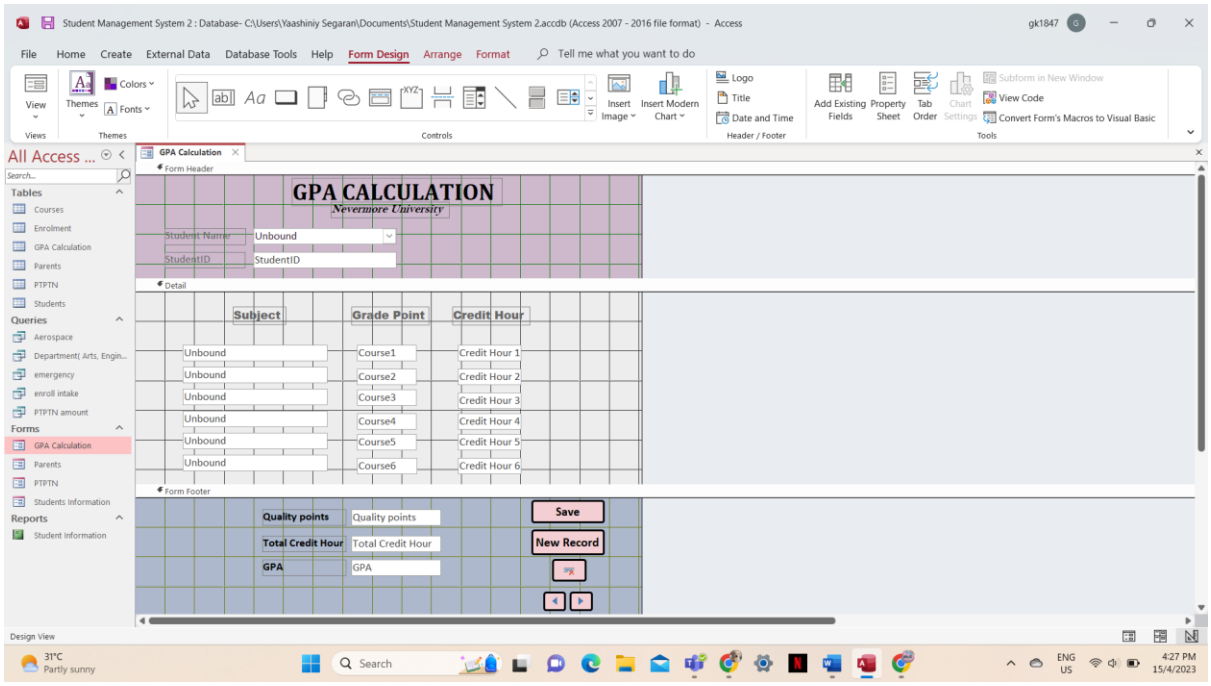
Datasheet view: Students list where loan amount more than RM 20,000.

PTPTN amount

PTPTN_ID	StudentID	First Name	Last Name	Course Nam	Loan Amoun	Matric Numb
1	10001	Vijaindran	Dharmalingam	Multimedia	RM58,400.00	10001Vija
2	10002	Kai Song	Wong	Aerospace	RM88,300.00	10002Kai
3	10003	Kai Wen	Cheng	Aerospace	RM88,300.00	10003Kai
4	10004	Alieya Najwa	Halim	Aerospace	RM88,300.00	10004Alie
5	10005	Yashveena	Sugumaran	Law	RM62,000.00	10005Yash
6	10006	Jia Ying	Lee	Law	RM62,000.00	10006Jia
7	10007	Muhammad Ain	Zalim Abdullah	Multimedia	RM58,400.00	10007Muha
8	10008	Fatin Syamimi	Mustafa	Multimedia	RM58,400.00	10008Fati
9	10009	Kaaviya	Manoharan	Art/Design	RM33,550.00	10009Kaav
10	10010	Robert	Mendes	Aerospace	RM88,300.00	10010Robe
11	10011	Maisarah	Muhammad Ka	Biotechnology	RM88,900.00	10011Mais
12	10012	Navein	Ramesh	Biotechnology	RM88,900.00	10012Nave
(New)						

Forms

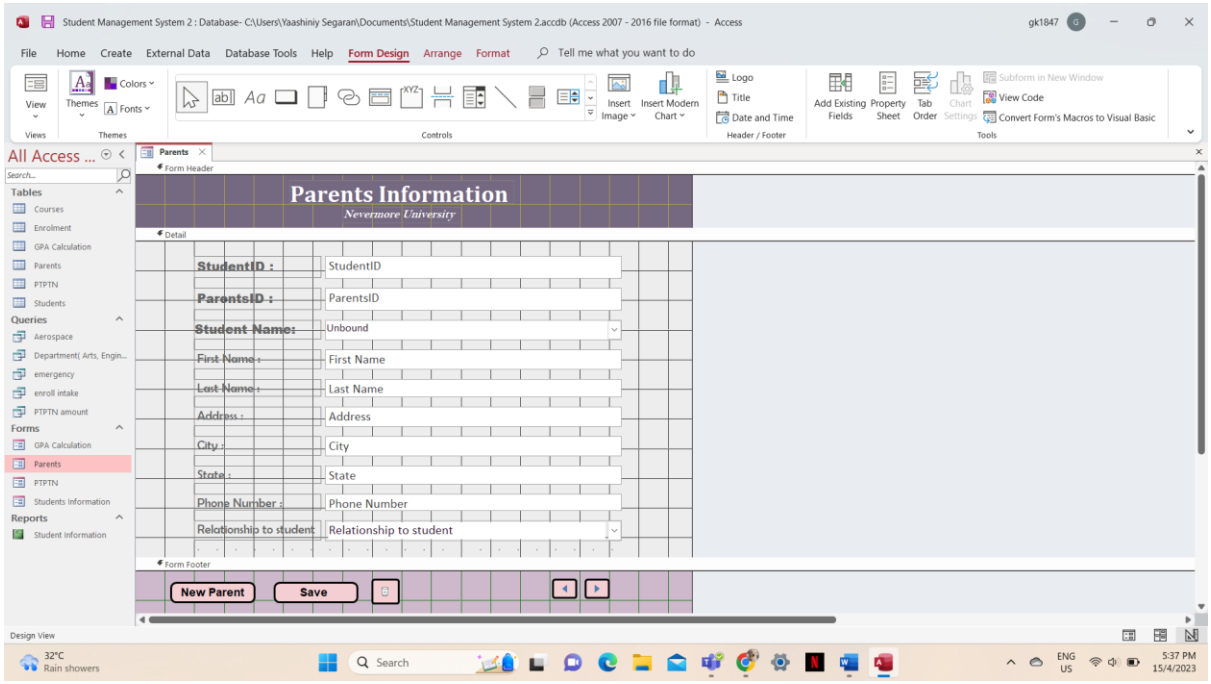
1. GPA calculation form



Can easily calculate the GPA of students for each semester and for overall academic record for students. The information can be useful for academic advisors, professors and students themselves to track academic progress and plan future coursework.

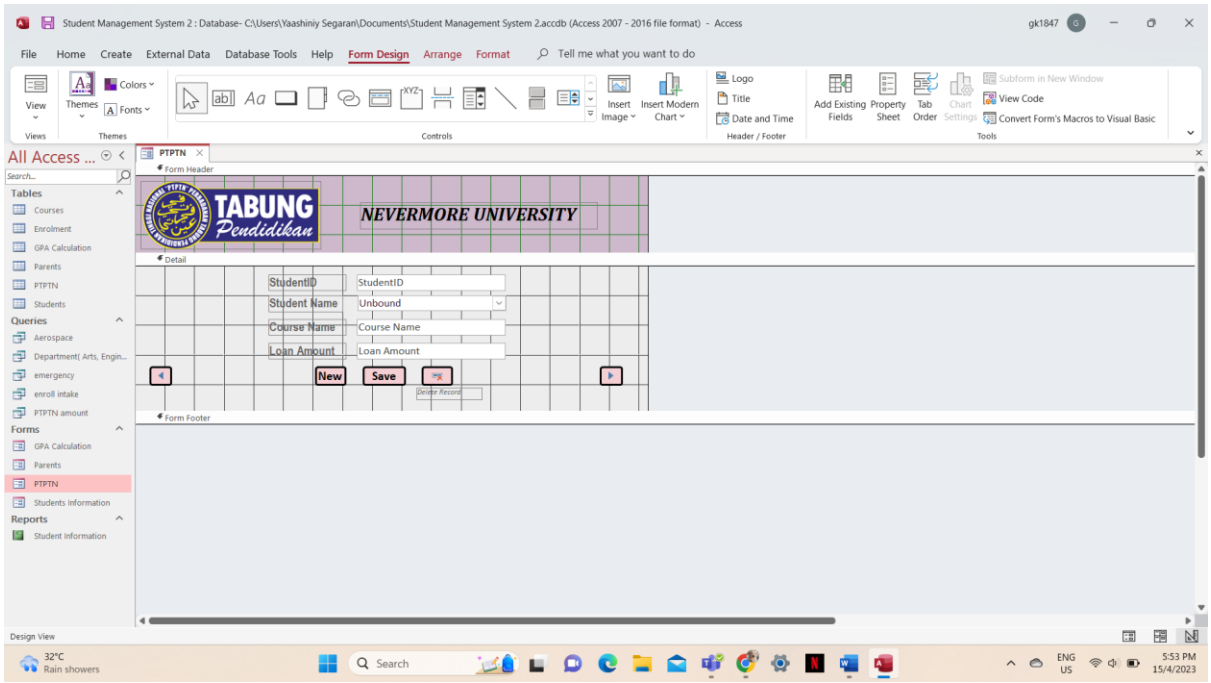
Student name search box, save option, new record button, clear record, go to previous and next form can be designed from Form Design.

2. Parents form



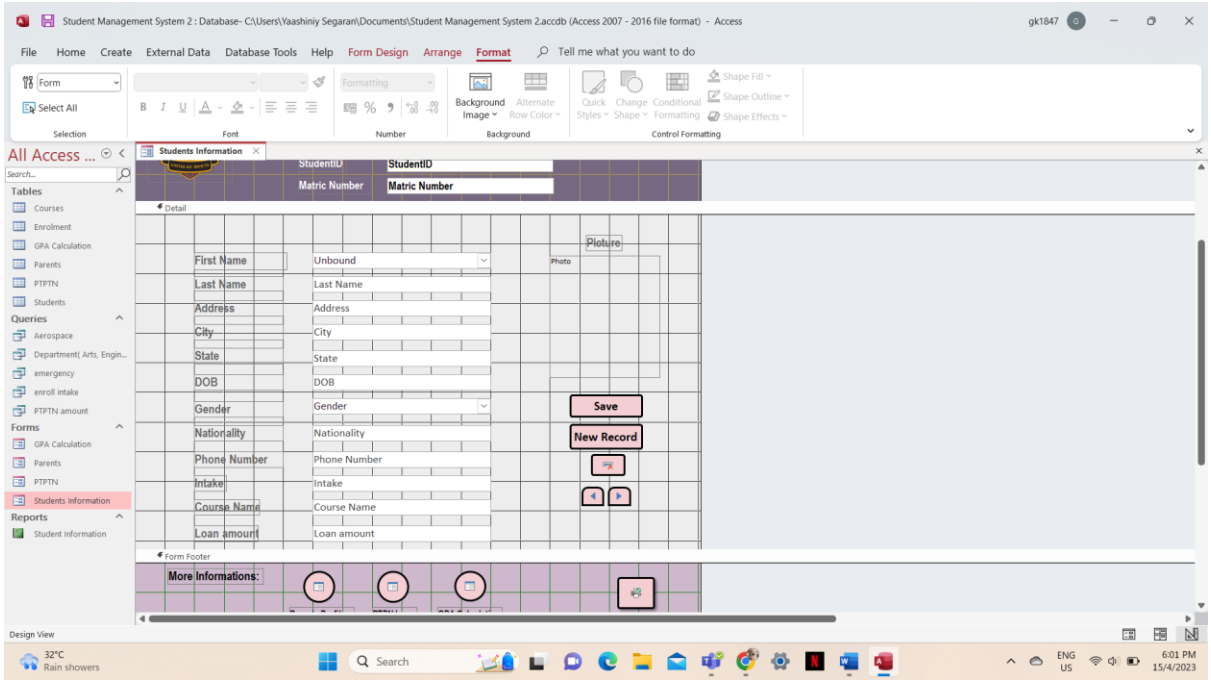
By including all the fields as above picture, we can manage the contact information and relationship between the student and their parent or guardian. The information can be useful for administrators or lecturers to contact parents or guardians in case of emergencies, to provide updates on the student's academic progress or to discuss any issues that may arise. Additionally, the relationship field can help to identify who is authorized to make decisions regarding the student's academic or personal life.

3. PTPTN



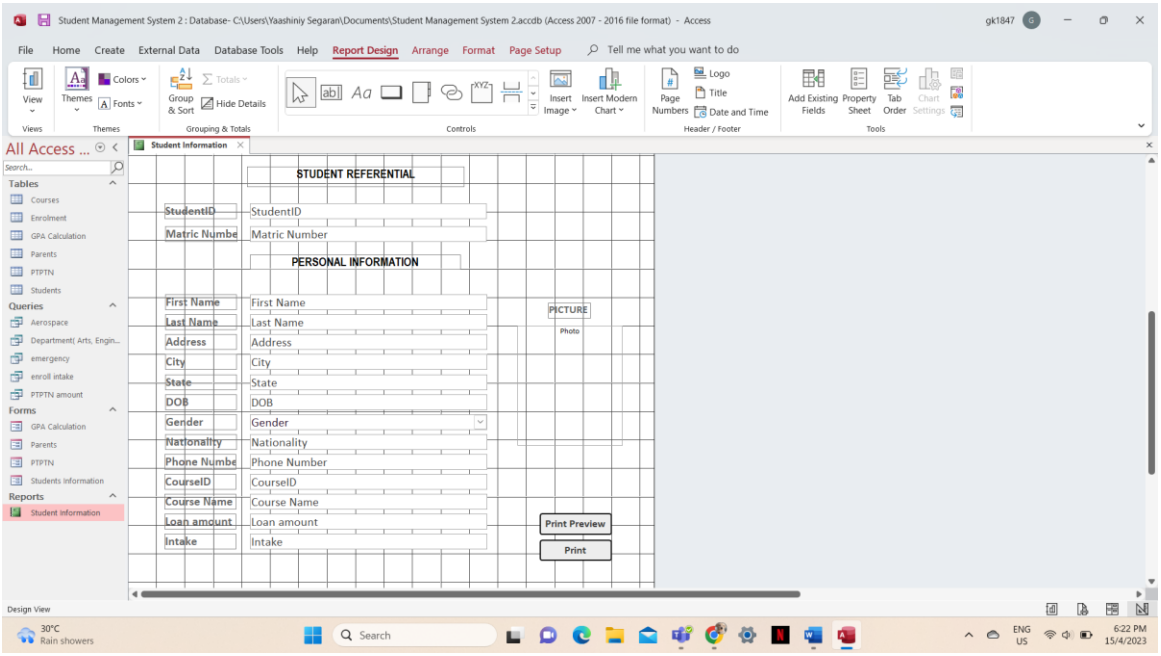
Through this form, we can easily manage the details of the PTPTN loan taken by each student. The information can be useful for advisors, financial aid officers or admins to ensure that the student is aware of their repayment obligations and to provide support and guidance as needed. On the other hand, students can view the amount of loan for their course through the student form too.

4. Student Information form



By including all the fields as above picture, we can easily manage the personal academic details of each students including their contact information, program of study and academic progress. The information can be useful for admins and advisors to track the progress of each students, provide guidance and support as needed and identify students who may be struggling academically. Additionally, the GPA calculation option can help to calculate GPA and help to identify students who may eligible for scholarships or other form of recognition or support. Students or admins can view parents, GPA calculation or PTPTN form by clicking the button below. Lastly, the print option enables students or admins to print the student information report.

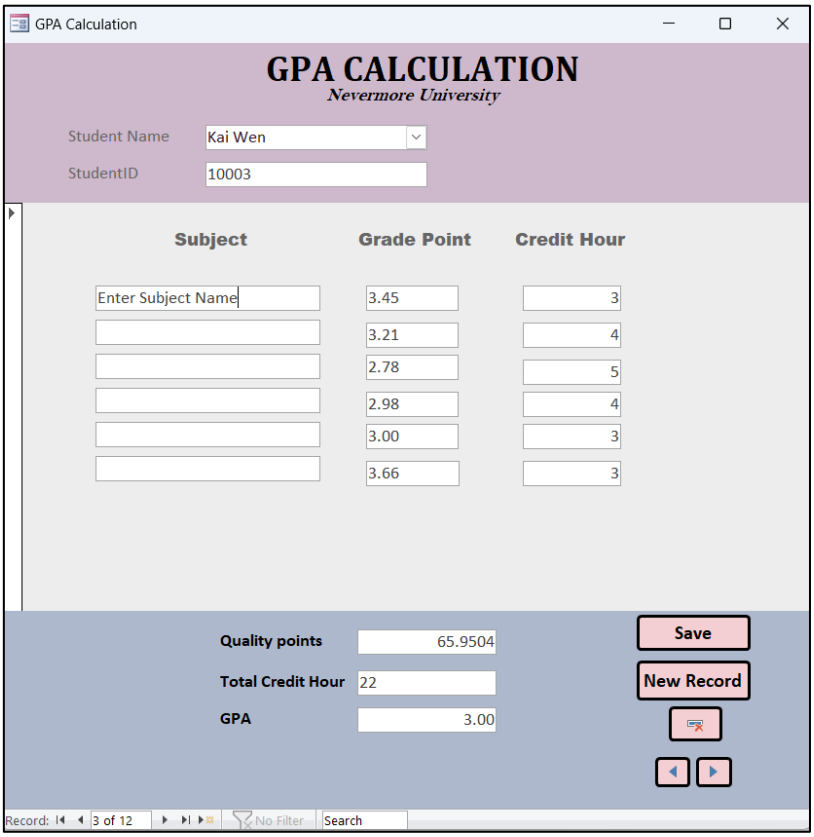
Student Information Report

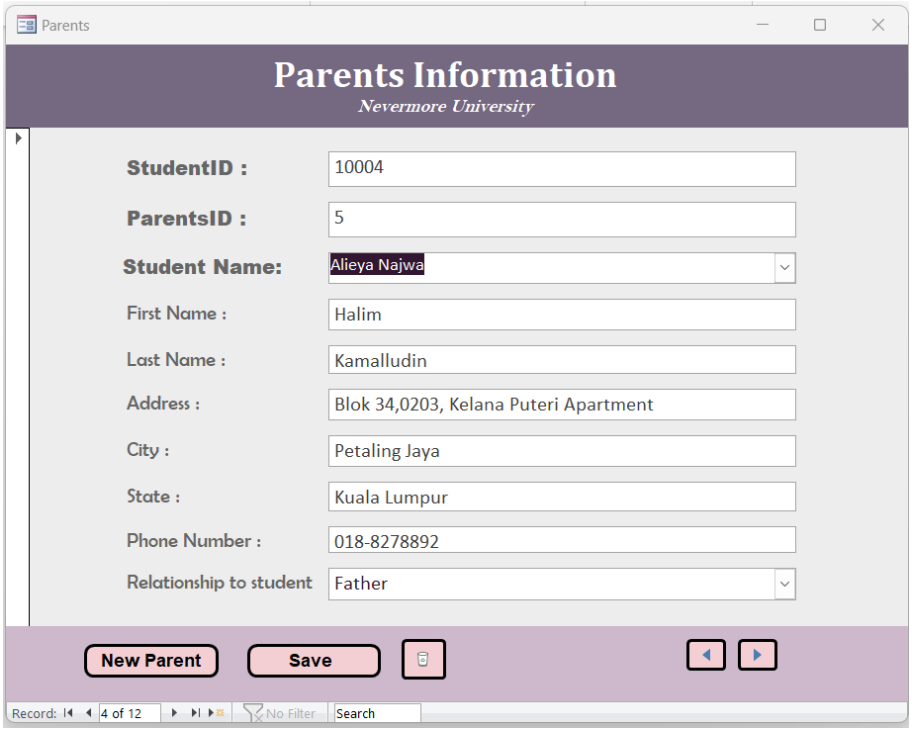


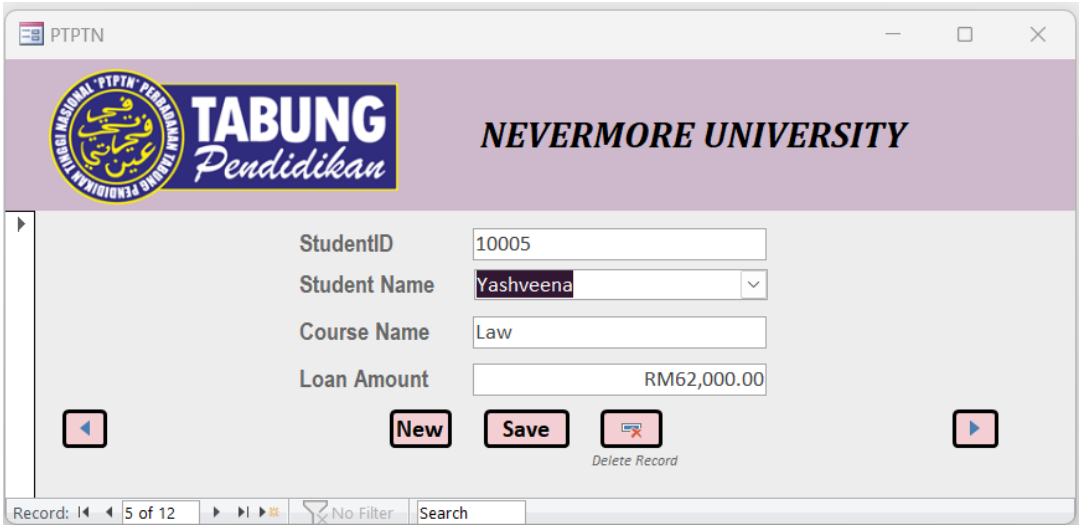
By including all these features in the student information report, you can create a comprehensive and visually appealing document that effectively communicates the data and insights from the underlying student information table. This report can be useful for academic advisors, administrative staff, and other stakeholders who need to have access to accurate and up-to-date student information.

Interface

Forms

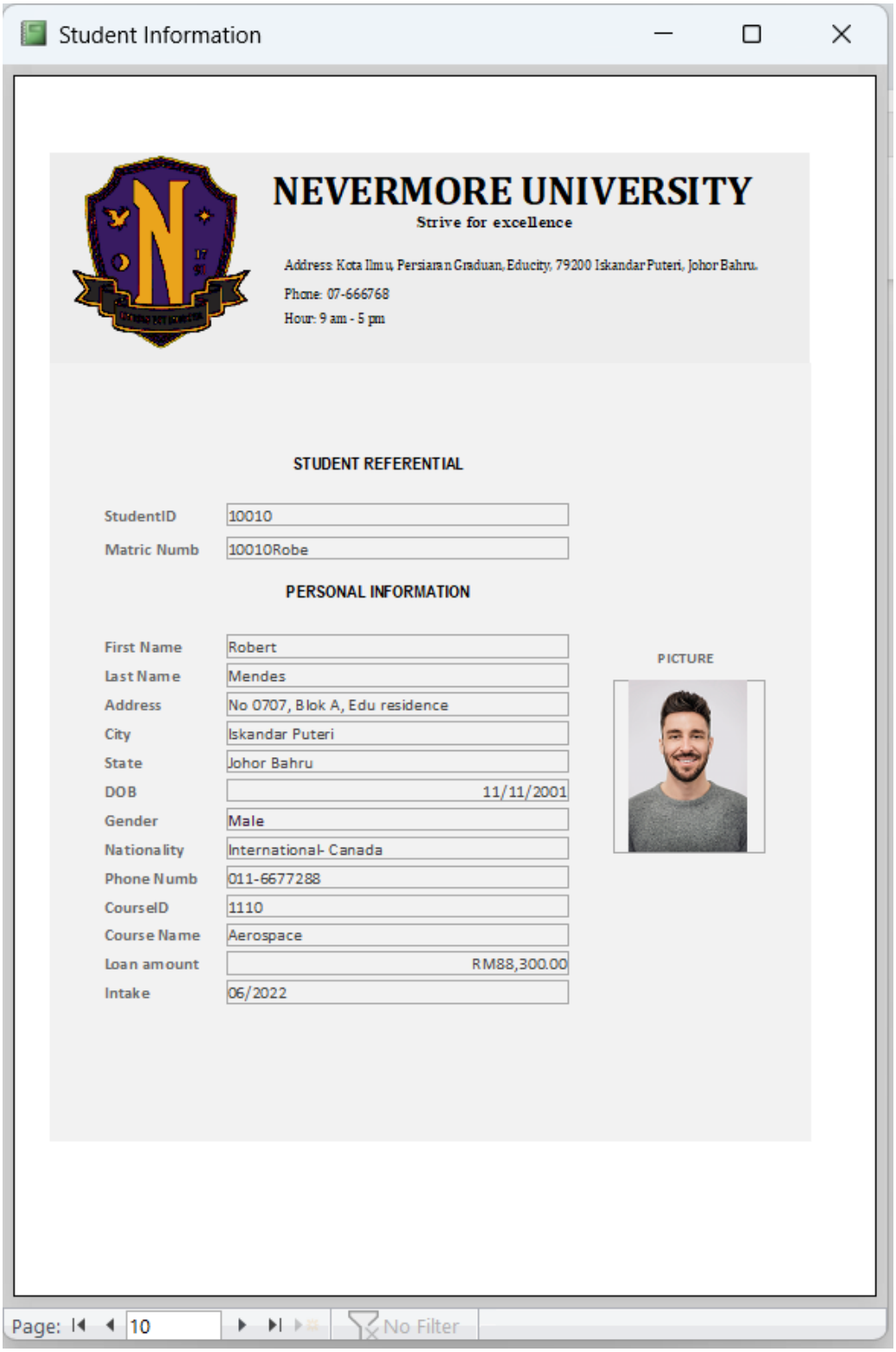





PTPTN
TABUNG Pendidikan
NEVERMORE UNIVERSITY
StudentID
10005
Student Name
Yashveena
Course Name
Law
Loan Amount
RM62,000.00
New
Save
Delete Record
Record: 5 of 12
No Filter
Search

Students Information
STUDENT INFORMATION
Nevermore University
StudentID
10012
Matric Number
10012Nave
Picture
First Name
Navein
Last Name
Ramesh
Address
No 10, Jalan PJ 07/1, Taman Kelana Jay
City
Petaling Jaya
State
Selangor
DOB
6/8/2022
Gender
Male
Nationality
Malaysian
Phone Number
016-6008825
Intake
06/2022
Course Name
Biotechnology
Loan amount
RM88,900.00
Save
New Record
More Informations:
Parents Profile
PTPN Loan
GPA Calculation
Print Report
Record: 12 of 12
No Filter
Search

Report


Student Information
NEVERMORE UNIVERSITY
Strive for excellence
Address: Kota Ilmu, Persiaran Graduan, Educity, 79200 Iskandar Puteri, Johor Bahru.
Phone: 07-666768
Hour: 9 am - 5 pm
STUDENT REFERENTIAL
StudentID 10010
Matric Numb 10010Robe
PERSONAL INFORMATION
First Name Robert
Last Name Mendes
Address No 0707, Blok A, Edu residence
City Iskandar Puteri
State Johor Bahru
DOB 11/11/2001
Gender Male
Nationality International- Canada
Phone Numb 011-6677288
CourseID 1110
Course Name Aerospace
Loan amount RM88,300.00
Intake 06/2022
PICTURE
Page: 10
No Filter

Conclusion

Microsoft Access Student Information Management System (SIMS) is a useful tool for handling student information and easing administrative operations. The system enables for quick access and retrieval of student information by grouping student data into different tables for students, parents, and PTPTN, and defining linkages between these tables.

The system also includes a GPA calculation table, which can determine a student's GPA based on grades and credit hours, making it easier to track academic success. Furthermore, the system enables for the creating of custom reports that may be used to provide wide information about student records, such as student information reports that academic advisors and staff members can use.

Overall, the Microsoft Access student management system is a good tool for handling student information and improving management processes. The solution could help academic institutions enhance their data management behaviours and better serve their students by utilising the powerful features of Microsoft Access.

References

https://youtu.be/GTuyHzEsRps