**File 1**

**Scenario 3: Dead Prime Minister High School**

**Introduction:**

This database is about the basic organisation that will support the operation and working of the school.

**Entities in the database:**

* Student data: This entity is used to keep track of the personal information about the students.
* Legal guardian data: This entity keeps the information about the guardian of each student.
* Enrollments: This entity keeps track of enrolling information of each student.
* Disciplinary actions: This entity keeps track of disciplinary actions taken in the school.
* Standardized testing results: This entity holds the data of each student’s test information and results.
* Extracurricular activities: This entity keeps the track of all the extra activities each student is participating in.
* Post high school plans: This entity keeps the track of each student’s future plans after high school.

**Business rules:**

* A student must have at least one legal guardian.
* Legal guardian must have one or more students.
* A student must be enrolled in at least one course.
* Each course must have one or more students.
* A student can have zero, one or more disciplinary actions.
* A disciplinary action must involve at least one student
* A student can have zero, one or more extracurricular activity
* An extracurricular activity must involve one or more students.
* A student can have zero, one or more post high school plans.

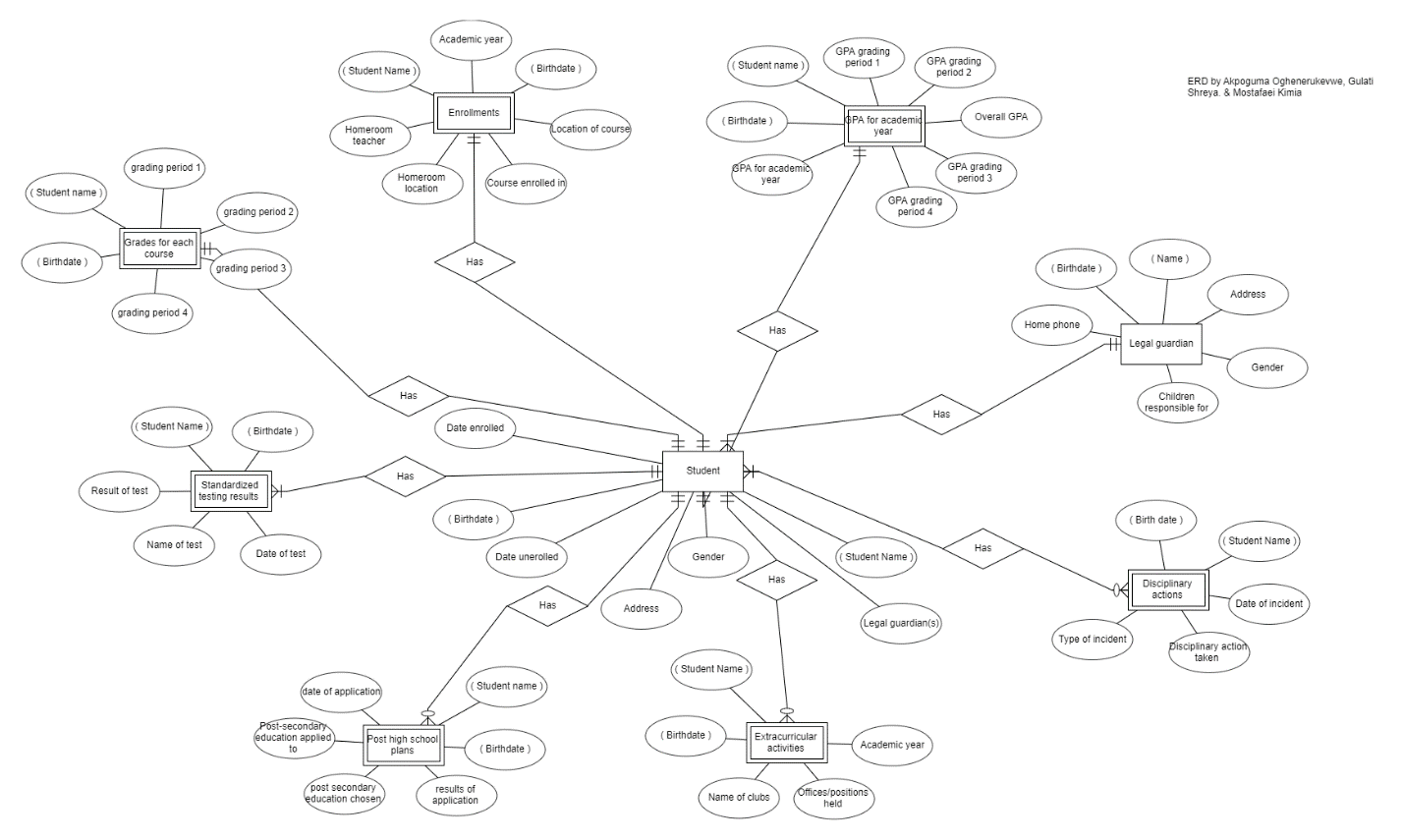
**Unknowns:**

* Can a student have an extracurricular activity only once?
* Can a student not be involved in any disciplinary action?
* Can a student be without any post high school plans?

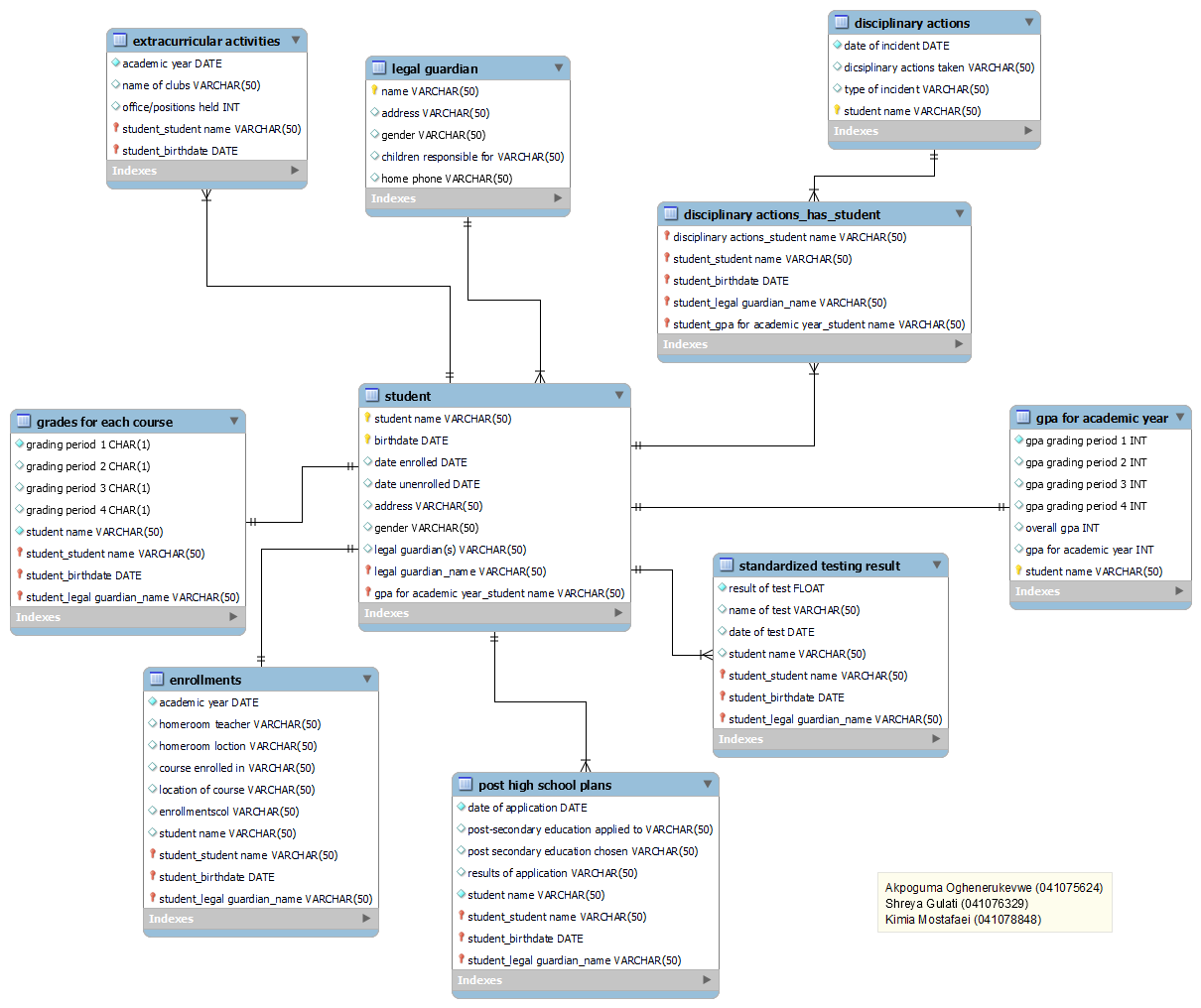
**Assumptions:**

* A student can be in many extracurricular activities in different years.
* The student will not be included in the disciplinary actions table.
* A student may not have applied in any post secondary institutions.

**File 2**

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**File 3**

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**File 4**

-- MySQL Script generated by MySQL Workbench

-- Sun Oct 23 22:37:52 2022

-- Model: New Model Version: 1.0

-- MySQL Workbench Forward Engineering

SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0;

SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0;

SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='ONLY\_FULL\_GROUP\_BY,STRICT\_TRANS\_TABLES,NO\_ZERO\_IN\_DATE,NO\_ZERO\_DATE,ERROR\_FOR\_DIVISION\_BY\_ZERO,NO\_ENGINE\_SUBSTITUTION';

-- -----------------------------------------------------

-- Schema mydb

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-- -----------------------------------------------------

-- Schema mydb

-- -----------------------------------------------------

CREATE SCHEMA IF NOT EXISTS `mydb` DEFAULT CHARACTER SET utf8 ;

USE `mydb` ;

-- -----------------------------------------------------

-- Table `mydb`.`legal guardian`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`legal guardian` (

`name` VARCHAR(50) NOT NULL,

`address` VARCHAR(50) NULL,

`gender` VARCHAR(50) NULL,

`children responsible for` VARCHAR(50) NULL,

`home phone` VARCHAR(50) NULL,

PRIMARY KEY (`name`))

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`gpa for academic year`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`gpa for academic year` (

`gpa grading period 1` INT NOT NULL,

`gpa grading period 2` INT NULL,

`gpa grading period 3` INT NULL,

`gpa grading period 4` INT NULL,

`overall gpa` INT NULL,

`gpa for academic year` INT NULL,

`student name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`student name`))

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`student`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`student` (

`student name` VARCHAR(50) NOT NULL,

`birthdate` DATE NOT NULL,

`date enrolled` DATE NULL,

`date unenrolled` DATE NULL,

`address` VARCHAR(50) NULL,

`gender` VARCHAR(50) NULL,

`legal guardian(s)` VARCHAR(50) NULL,

`legal guardian\_name` VARCHAR(50) NOT NULL,

`gpa for academic year\_student name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`student name`, `birthdate`, `legal guardian\_name`, `gpa for academic year\_student name`),

INDEX `fk\_student\_legal guardian1\_idx` (`legal guardian\_name` ASC) VISIBLE,

INDEX `fk\_student\_gpa for academic year1\_idx` (`gpa for academic year\_student name` ASC) VISIBLE,

CONSTRAINT `fk\_student\_legal guardian1`

FOREIGN KEY (`legal guardian\_name`)

REFERENCES `mydb`.`legal guardian` (`name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION,

CONSTRAINT `fk\_student\_gpa for academic year1`

FOREIGN KEY (`gpa for academic year\_student name`)

REFERENCES `mydb`.`gpa for academic year` (`student name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`disciplinary actions`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`disciplinary actions` (

`date of incident` DATE NOT NULL,

`dicsiplinary actions taken` VARCHAR(50) NULL,

`type of incident` VARCHAR(50) NULL,

`student name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`student name`))

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`extracurricular activities`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`extracurricular activities` (

`academic year` DATE NOT NULL,

`name of clubs` VARCHAR(50) NULL,

`office/positions held` INT NULL,

`student\_student name` VARCHAR(50) NOT NULL,

`student\_birthdate` DATE NOT NULL,

PRIMARY KEY (`student\_student name`, `student\_birthdate`),

CONSTRAINT `fk\_extracurricular activities\_student`

FOREIGN KEY (`student\_student name` , `student\_birthdate`)

REFERENCES `mydb`.`student` (`student name` , `birthdate`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`enrollments`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`enrollments` (

`academic year` DATE NOT NULL,

`homeroom teacher` VARCHAR(50) NULL,

`homeroom loction` VARCHAR(50) NULL,

`course enrolled in` VARCHAR(50) NULL,

`location of course` VARCHAR(50) NULL,

`enrollmentscol` VARCHAR(50) NULL,

`student name` VARCHAR(50) NULL,

`student\_student name` VARCHAR(50) NOT NULL,

`student\_birthdate` DATE NOT NULL,

`student\_legal guardian\_name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`student\_student name`, `student\_birthdate`, `student\_legal guardian\_name`),

CONSTRAINT `fk\_enrollments\_student1`

FOREIGN KEY (`student\_student name` , `student\_birthdate` , `student\_legal guardian\_name`)

REFERENCES `mydb`.`student` (`student name` , `birthdate` , `legal guardian\_name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`grades for each course`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`grades for each course` (

`grading period 1` CHAR(1) NOT NULL,

`grading period 2` CHAR(1) NULL,

`grading period 3` CHAR(1) NULL,

`grading period 4` CHAR(1) NULL,

`student name` VARCHAR(50) NOT NULL,

`student\_student name` VARCHAR(50) NOT NULL,

`student\_birthdate` DATE NOT NULL,

`student\_legal guardian\_name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`student\_student name`, `student\_birthdate`, `student\_legal guardian\_name`),

CONSTRAINT `fk\_grades for each course\_student1`

FOREIGN KEY (`student\_student name` , `student\_birthdate` , `student\_legal guardian\_name`)

REFERENCES `mydb`.`student` (`student name` , `birthdate` , `legal guardian\_name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`standardized testing result`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`standardized testing result` (

`result of test` FLOAT NOT NULL,

`name of test` VARCHAR(50) NULL,

`date of test` DATE NULL,

`student name` VARCHAR(50) NULL,

`student\_student name` VARCHAR(50) NOT NULL,

`student\_birthdate` DATE NOT NULL,

`student\_legal guardian\_name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`student\_student name`, `student\_birthdate`, `student\_legal guardian\_name`),

CONSTRAINT `fk\_standardized testing result\_student1`

FOREIGN KEY (`student\_student name` , `student\_birthdate` , `student\_legal guardian\_name`)

REFERENCES `mydb`.`student` (`student name` , `birthdate` , `legal guardian\_name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`post high school plans`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`post high school plans` (

`date of application` DATE NOT NULL,

`post-secondary education applied to` VARCHAR(50) NULL,

`post secondary education chosen` VARCHAR(50) NULL,

`results of application` VARCHAR(50) NULL,

`student name` VARCHAR(50) NOT NULL,

`student\_student name` VARCHAR(50) NOT NULL,

`student\_birthdate` DATE NOT NULL,

`student\_legal guardian\_name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`student\_student name`, `student\_birthdate`, `student\_legal guardian\_name`),

CONSTRAINT `fk\_post high school plans\_student1`

FOREIGN KEY (`student\_student name` , `student\_birthdate` , `student\_legal guardian\_name`)

REFERENCES `mydb`.`student` (`student name` , `birthdate` , `legal guardian\_name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `mydb`.`disciplinary actions\_has\_student`

-- -----------------------------------------------------

CREATE TABLE IF NOT EXISTS `mydb`.`disciplinary actions\_has\_student` (

`disciplinary actions\_student name` VARCHAR(50) NOT NULL,

`student\_student name` VARCHAR(50) NOT NULL,

`student\_birthdate` DATE NOT NULL,

`student\_legal guardian\_name` VARCHAR(50) NOT NULL,

`student\_gpa for academic year\_student name` VARCHAR(50) NOT NULL,

PRIMARY KEY (`disciplinary actions\_student name`, `student\_student name`, `student\_birthdate`, `student\_legal guardian\_name`, `student\_gpa for academic year\_student name`),

INDEX `fk\_disciplinary actions\_has\_student\_student1\_idx` (`student\_student name` ASC, `student\_birthdate` ASC, `student\_legal guardian\_name` ASC, `student\_gpa for academic year\_student name` ASC) VISIBLE,

INDEX `fk\_disciplinary actions\_has\_student\_disciplinary actions1\_idx` (`disciplinary actions\_student name` ASC) VISIBLE,

CONSTRAINT `fk\_disciplinary actions\_has\_student\_disciplinary actions1`

FOREIGN KEY (`disciplinary actions\_student name`)

REFERENCES `mydb`.`disciplinary actions` (`student name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION,

CONSTRAINT `fk\_disciplinary actions\_has\_student\_student1`

FOREIGN KEY (`student\_student name` , `student\_birthdate` , `student\_legal guardian\_name` , `student\_gpa for academic year\_student name`)

REFERENCES `mydb`.`student` (`student name` , `birthdate` , `legal guardian\_name` , `gpa for academic year\_student name`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

SET SQL\_MODE=@OLD\_SQL\_MODE;

SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS;

SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS;