


Vine Secondary School


Data warehouse


Documentation

2024-10-06

Legend

 Primary key

 Primary key relation

 Foreign key relation

 Nullable


Big Query Warehouse Dictionary

Database (BigQuery Dataset):

- **Dataset name:** school_data

Table: students

Columns

	Name	Data type	N	Description
	student_id	int		Unique identifier for each student
	parent_id	int		Id of the parent associated with the student
	class_id	int		Id of the class the student is enrolled in
	first_name	string		The first name of the student
	last_name	string		The last name of the student
	gender	string		The sex of the student. Male Female
	date_of_birth	date		The date of birth of the student
	date_enrolled	date		The date the student was enrolled
	Is_repeating	Boolean		Indicator for whether the student is repeating the academic year. TRUE = student is repeating FALSE = student is not repeating
	age	int		The age of the student
	address	string		The address of the student
	city	string		The city where the student resides in

Links to

	Table	Join	Description
	parents	students.parent_id = parents.parent_id	Links to the parent who is responsible for a child

➤	class	students.class_id = class.class_id	Links to the class in which the student is enrolled
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Linked from

	Table	Join	Description
↵	attendance	attendance.student_id = students.student_id	Tracks attendance per student
↵	grades	grades.student_id = students.student_id	Student's grades for various subjects
↵	extracurricular activities	extracurricular.student_id = students.student_id	Student's extracurricular activities

Unique keys

	Columns	Name
🔑	PK_students	Table Primary Key / ID: student_id

Table: class

Columns

	Name	Data type	N	Description
🔑	class_id	int		Unique Identifier for each class
	class_level	string		Represents the school levels for each class. Junior Secondary School: JS 1 JS 2 JS 3 Senior Secondary School: SS 1 SS 2 SS 3
	class_arm	string		Subdivision for each class: A and B

Links to

	Table	Join	Description
➤	class_subject_allocation	class.class_id = class_subject_allocation.class_id	Links to subject and teacher allocation for the class

Linked from

	Table	Join	Description
➤	students	students.class_id = class.class_id	Many students are associated with each class

Unique keys

	Columns	Description
🔑	PK_class	Table Primary Key / ID: class_id

Table: parents

Columns

	Name	Data type	N	Description
🔑	parent_id	int		Unique Identifier for each parent
	first_name	string		Parent's first name
	last_name	string		Parent's last name
	occupation	string		Occupation of the parent
	education_level	string		Parent's highest education level
	income_bracket	string	N	Parent's income bracket (Low, Medium, High)
	parent_contact	int		Parent's contact number

Links to

	Table	Join	Description
➤	students	parents.parent_id = students.parent_id	Links a student to a parent

Table: subjects

Columns

	Name	Data type	N	Description
🔑	subject_id	int		Unique identifier for each subject
	subject_name	string		Name of the subject
	department	string		Department the subject belongs to
	level	string		Indicates whether the subject is for Junior or Senior levels

Links to

	Table	Join	Description
➤	Class_subject_allocation	subjects.subject_id = class_subject allocation.subject_id	Links each subject to its allocation per class and teacher

Linked from

	Table	Join	Description
➤	grades	grades.subject_id = subjects.subject_id	Links the subject to grades for students
➤	class_subject_allocation	class_subject_allocation.subject_i d = subjects.subject_id	Links the subject to its allocations

Unique keys

	Columns	Name / Description
🔑	subject_id	Table Primary Key / ID: subject_id

Table: teachers

Columns

	Name	Data type	N	Description
🔑	teacher_id	int		Unique identifier for each teacher
	first_name	string		First name of the teacher
	last_name	string		Last name of the teacher
	gender	string		Gender of the teacher
	date_of_birth	date		Date of birth of the teacher
	qualification	string		Highest qualification held by the teacher
	years_of_experience	int		Number of years the teacher has been teaching
	subject_expertise	string		Subject that the teacher specializes in
	department	string		Department the teacher belongs to
	contact_number	int		Contact number of the teacher
	hire_date	date		Date when the teacher was hired
	salary	int		Monthly salary of the teacher

Links to

	Table	Join	Description
➤	class-subject allocation	teachers.teacher_id = class-subject allocation.teacher_id	Links the teacher to class-subject allocations

Linked from

	Table	Join	Description
➤	class-subject allocation	class-subject allocation.teacher_id = teachers.teacher_id	Links the teacher to the subjects and classes they teach

Unique keys

Columns	Description
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	teacher_id	Table Primary Key / ID
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Table: class_subject_allocation


Columns

	Name	Data type	N	Description
	allocation_id	int		Unique identifier for each allocation
	class_id	int		Links to the class being allocated a subject
	subject_id	int		Links to the subject being taught
	teacher_id	int		Links to the teacher assigned to the class-subject
	academic_year	int		The academic year the allocation applies to
	period_per_week	int		Number of periods per week for the subject
	minutes_per_week	int		Total minutes per week spent on the subject
	created_at	date		Date when the allocation was created

Links to

	Table	Join	Description
	classes	class-subject allocation.class_id = classes.class_id	Links the allocation to a specific class
	subjects	class-subject allocation.subject_id = subjects.subject_id	Links the allocation to a specific subject
	teachers	class-subject allocation.teacher_id = teachers.teacher_id	Links the allocation to a specific teacher

Linked from

	Table	Join	Description
	grades	grades.class_id = class-subject allocation.class_id	Links the class-subject allocation to students' grades

Unique keys





Columns		Description
	allocation_id	Table Primary Key / ID

Table: grades


Columns

	Name	Data type	N	Description
	grade_id	int		Unique identifier for each grade record
	student_id	int		Links to the student receiving the grade
	subject_id	int		Links to the subject being graded
	first_test	int		Marks for the first test (out of 15)
	second_test	int		Marks for the second test (out of 15)
	exam	int		Marks for the final exam (out of 70)
	total_score	int		Total score (sum of first_test, second_test, and exam)
	grade	string		Letter grade based on total score 85 -100 = A 70 – 84 = B 55 – 69 = C 45 – 54 = D 35 – 44 = E Below 35 = F
	academic_year	int		Academic year when the grade was given
	term	string		First term
	created_at	date		Date when the grade was recorded

Links to

	Table	Join	Description
	students	grades.student_id = students.student_id	Links the grade to the specific student
	subjects	grades.subject_id = subjects.subject_id	Links the grade to the specific subject

Linked from


Table		Join	Title / Name / Description
	class-subject allocation	grades.subject_id = class-subject allocation.subject_id and grades.student_id = students.student_id	Links the subject allocation with the student's grades

Unique keys

Columns		Description
	grade_id	Table Primary Key / ID

Table: extracurricular_activities

Columns

	Name	Data type	N	Description
	activity_id	int		Unique identifier for each extracurricular activity record
	student_id	int		Links to the student participating in the activity
	activity_name	string		Name of the extracurricular activity (e.g., Drama, Football)
	activity_date	date	N	Date the activity took place
	hours_spent	int	N	Hours spent by the student on the activity on that day

Links to

	Table	Join	Description
➤	students	extracurricular_activities.student_id = students.student_id	Links the activity to the student who participated

Unique keys

	Columns	Description
🔑	activity_id	Table Primary Key / ID

Table: attendance

Columns

	Name	Data type	N	Description
🔑	attendance_id	int		Unique identifier for each attendance record
	student_id	int		Links to the student for whom the attendance is recorded
	attendance_date	date		The date when the attendance was recorded
	status	string		Attendance status (Present, Absent)

Linked from

	Table	Join	Description
➤	students	attendance.student_id = students.student_id	Links the attendance record to the respective student

Unique keys

Columns	Description
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	attendance_id	Table Primary Key / ID
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Table: student_survey

Columns

	Name	Data type	N	Description
	study_hours_per_week	int	N	Hours spent studying per week
	resource_access	string	N	Whether the student has access to study resources (Yes/No)
	computer_access	string	N	Whether the student has access to a computer (Yes/No)
	computer_literacy	string	N	The student's level of computer literacy (Low/Medium/High)
	stress_level	string	N	The student's stress level (Low/Medium/High)
	exam_anxiety	string	N	The student's level of exam anxiety (Low/Medium/High)
	internet_access	string	N	Whether the student has internet access (Yes/No)
	parental_support	string	N	The level of parental support (Low/Medium/High)
	learning_environment	string	N	The quality of the learning environment (Poor/Average/Good)
	extracurricular_balance	string	N	How well the student balances extracurricular activities (Struggling/Average/Good)
	teacher_engagement	string	N	The level of teacher engagement (Low/Medium/High)
	motivational_level	string	N	The student's motivation level (Low/Medium/High)
	peer_influence	string	N	The type of peer influence the student experiences (Negative/Neutral/Positive)
	study_group_participation	string	N	Whether the student participates in a study group (Yes/No)