Student Performance Database Table

create\_table "student\_performance", charset: "utf8mb3", collation: "utf8mb3\_unicode\_ci", force: :cascade do |t|

t.string "school", limit: 2, null: false

t.string "student\_id", unique: true

t.bigint "unit\_id"

t.references :teaching\_period, null: false, foreign\_key: true

t.references :task, null: false, foreign\_key: true

t.references :student, null: false, foreign\_key: { to\_table: :users }

t.datetime :submission\_time

t.datetime :assessment\_time

t.integer :grade

t.integer :contribution\_pts, default: 3

t.integer :quality\_pts, default: -1

t.integer :hours, default: 0

t.integer :extensions, default: 0, null: false

t.string "sex", limit: 1, null: false

t.integer "age", null: false

t.string "address", limit: 1, null: false

t.integer "medu", null: false

t.integer "fedu", null: false

t.integer "traveltime", null: false

t.integer "studytime", null: false

t.integer "failures", null: false

t.boolean "schoolsup", null: false

t.boolean "famsup", null: false

t.boolean "activities", null: false

t.boolean "higher", null: false

t.boolean "internet", null: false

t.boolean "romantic", null: false

t.integer "famrel", null: false

t.integer "freetime", null: false

t.integer "goout", null: false

t.integer "dalc", null: false

t.integer "walc", null: false

t.integer "health", null: false

t.integer "absences", null: false

t.integer "g1", null: false # First period grade

t.integer "g2", null: false # Second period grade

t.integer "g3", null: false # Final period grade

end

This schema includes only the features that are directly related to student performance such as personal characteristics, family background, school factors, and previous academic performance.

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| **Attribute** | **Description** | **Data Type** |
| school | Student's school | Binary |
| sex | Student's sex | Binary |
| age | Student's age | Numeric |
| address | Student's home address type | Binary |
| Medu | Mother's education | Numeric |
| Fedu | Father's education | Numeric |
| traveltime | Home to school travel time | Numeric |
| studytime | Weekly study time | Numeric |
| failures | Number of past class failures | Numeric |
| schoolsup | Extra educational support | Binary |
| famsup | Family educational support | Binary |
| activities | Extra-curricular activities | Binary |
| higher | Wants to take higher education | Binary |
| internet | Internet access at home | Binary |
| romantic | With a romantic relationship | Binary |
| famrel | Quality of family relationships | Numeric |
| freetime | Free time after school | Numeric |
| goout | Going out with friends | Numeric |
| Dalc | Workday alcohol consumption | Numeric |
| Walc | Weekend alcohol consumption | Numeric |
| health | Current health status | Numeric |
| absences | Number of school absences | Numeric |
| G1 | First period grade | Numeric |
| G2 | Second period grade | Numeric |
| G3 | Final grade | Numeric |

Attribute description and Data Types