

4.3 Database Design

User

Primary Key: user_id

Field Names	Data type	Data Size	Description
user_id	Text	10	User's Username
user_password	Text	8	User's password
fname	Text	30	User First Name
lname	Text	30	User Last Name
personal_email	Text	50	User Email address
dob	Date	10	Date of birth
id_number	Text	12	User NIC number
no	Text	10	Number of the Address
street	Text	100	Street of the Address
city	Text	30	City of the Address
gender	Text	10	User's Gender
Record Size	300		

Table 1 User

Admin

Primary Key: user_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Admin's Username
description	Text	30	Type of Admin
Record Size	40		

Table 2 Admin

Student

Primary Key: user_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Student's Username
guardian_fname	Text	30	Student guardian first name
guardian_lname	Text	30	Student guardian last name
final_qualification	Text	20	Student final qualification
Record Size	90		

Table 3 Student

Teacher

Primary Keys: user_id, teacher_specialization

Foreign Key: user_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Teacher's Username
teacher_specialization	Number	10	Teacher's Specialization
Record Size	20		

Table 4 Teacher

Student_Course

Primary Keys: user_id, course_id

Foreign Keys: user_id, course_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Student's Username
course_id	Text	10	Course Id
register_date	Date	10	Registration date
Record Size	30		

Table 5 Student_Course

Course

Primary Key: course_id

Foreign Key: user_id

Field Names	Data type	Data Size	Description
course_id	Text	10	Course number
course_type	Text	20	Course Type
course_description	Text	150	Course Description
couse_name	Text	50	Course Name
course_duration	Number	05	Course duration
course_fee	Number	15	Course fee
user_id	Text	10	Teacher's Username
Record Size	260		

Table 6 Course

Payment

Primary key: payment_id

Field Names	Data type	Data Size	Description
payment_id	Number	5	Payment Id
payment_amount	Number	10	Payment Amount
payment_description	Text	30	Payment Description
Record Size	45		

Table 7 Payment

Student_Course_Payment

Primary Keys: user_id, course_id, payment_id

Foreign Keys: user_id, course_id, payment_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Student's Username
course_id	Text	10	Course Id
payment_id	Number	5	Payment Id
payment_date	Date	10	Payment Date
Record Size	35		

Table 8 Student_Course_Payment

Student_Batch

Primary Keys: user_id, batch_id

Foreign Keys: user_id, batch_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Student's Username
batch_id	Text	20	Batch Id
Record Size	30		

Table 9 Student_Batch

Batch

Primary Key: batch_id

Foreign Keys: course_id, user_id

Field Names	Data type	Data Size	Description
batch_id	Text	20	Batch Id
batch_description	Text	100	Batch description
course_id	Text	10	Course Id
batch_strat_date	Date	10	Batch Start Date
batch_end_date	Date	10	Batch End Date
user_id	Text	10	Teacher's Username
Record Size	160		

Table 10 Batch

Student_ExamSchedule

Primary Keys: user_id, exam_schedule_id

Foreign Keys: user_id, exam_schedule_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Student's Username
exam_shedule_id	Text	20	Exam schedule Id
grade	Text	10	Student Exam grade
Record Size	40		

Table 11 Student_ExamSchedule

Exam

Primary Key: exam_id

Foreign Key: course_id

Field Names	Data type	Data Size	Description
exam_id	Text	20	Exam Id
exam_name	Text	50	Exam name
exam_type	Text	10	Exam Type
exam_fee	Number	10	Exam Fee
course_id	Text	10	Course Id
Record Size	100		

Table 12 Exam

RepeatExamPayment

Primary Key: repeat_payment_id

Field Names	Data type	Data Size	Description
repeat_payment_id	Number	5	Repeat Payment Id
p_amount	Number	10	Payment Amount
p_description	Text	10	Payment Details
Record Size	25		

Table 13 RepeatExamPayment

Student_ExamSchedule_RepeatExamPayment

Primary Keys: repeat_payment_id, user_id, exam_shedule_id

Foreign Keys: repeat_payment_id, user_id, exam_shedule_id

Field Names	Data type	Data Size	Description
repeat_payment_id	Number	5	Repeat Payment Id
user_id	Text	10	Student's Username
exam_shedule_id	Text	20	Exam Schedule Id
p_date	Date	10	Payment Date
Record Size	45		

Table 14 Student_ExamSchedule_RepeatExamPayment

Exam_Schedule

Primary Key: exam_shedule_id

Foreign Keys: batch_id, exam_id

Field Names	Data type	Data Size	Description
exam_shedule_id	Text	20	Exam schedule Id
exam_name	Text	30	Exam name
exam_type	Text	30	Exam type
exam_start_time	Time	5	Exam start date
exam_end_time	Time	5	Exam end date
exam_date	Date	10	Exam date
exam_status	Text	20	Exam Status
batch_id	Text	20	Batch Id
exam_id	Text	20	Exam Id
Record Size	160		

Table 15 Exam_Schedule

Course_Schedule

Primary Key: course_schedule_id

Foreign Key: batch_id

Field Names	Data type	Data Size	Description
course_shedule_id	Text	20	Course schedule Id
schedule_name	Text	30	Schedule name
start_time	Time	5	Course start time
end_time	Time	5	Course end time
week_date	Date	10	Course Dates
schedule_status	Text	20	Course Schedule Status
batch_id	Text	20	Batch Id
Record Size	110		

Table 16 Course_Schedule

Student_CourseSchedule

Primary Keys: course_schedule_id, user_id

Foreign Keys: course_schedule_id, user_id

Field Names	Data type	Data Size	Description
course_shedule_id	Text	20	Course schedule Id
user_id	Text	10	Student's Username
time	Time	5	Student attend time
attend_date	Date	10	Student attend date
status	Text	10	Student attendance status
Record Size	55		

Table 17 Student_CourseSchedule

Feedback

Primary Key: feedback_id

Foreign Key: user_id

Field Names	Data type	Data Size	Description
feedback_id	Number	5	Feedback Id
feedback_rating	Text	5	Feedback rating
feedback_comment	Text	150	Feedback comment
feedback_date	Date	10	Feedback timestamp
user_id	Text	10	Student's/ Teacher's Username
Record Size	180		

Table 18 Feedback

Message

Primary Key: message_id

Foreign Key: user_id

Field Names	Data type	Data Size	Description
message_id	Number	10	Message Id
content	Text	150	Message content
message_date	Date	10	Message timestamp
user_id	Text	10	Admin's Username
Record Size	180		

Table 19 Message

CourseWork

Primary Key: coursework_id

Foreign Keys: batch_id, user_id

Field Names	Data type	Data Size	Description
coursework_id	Number	5	Coursework Id
coursework_content	Text	200	Coursework content
coursework_file	Text	50	Coursework file
date	Date	10	Coursework date
deadline	Date	10	Coursework deadline
batch_id	Text	20	Batch Id
user_id	Text	10	Teacher's Username
Record Size	305		

Table 20 CourseWork

Student_CourseWork

Primary Keys: user_id, coursework_id

Foreign Keys: user_id, coursework_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Student's Username
coursework_id	Number	5	Coursework number
uploaded_file	Text	50	Student Coursework uploaded file
uploaded_content	Text	200	Student Coursework uploaded content
coursework_grade	Text	5	Coursework Grade
coursework_feedback	Text	150	Coursework feedback
uploaded_date	Date	10	Student Coursework uploaded date
Record Size	430		

Table 21 Student_CourseWork

User Mobile

Primary Keys: user_id, mobile

Foreign Key: user_id

Field Names	Data type	Data Size	Description
user_id	Text	10	User's Username
mobile	Number	10	User's Mobile Number
Record Size	20		

Table 22 User Mobile

Student Guardian Mobile

Primary Keys: user_id, guardian_mobile

Foreign Key: user_id

Field Names	Data type	Data Size	Description
user_id	Text	10	Student's Username
guardian_mobile	Number	10	Student's Guardian Mobile Number
Record Size	20		

Table 23 Student Guardian Mobile

ExamSchedule Location

Primary Keys: exam_shedule_id, exam_location

Foreign Key: exam_shedule_id

Field Names	Data type	Data Size	Description
exam_shedule_id	Text	10	Exam schedule Id
exam_location	Text	20	Exam Location
Record Size	30		

Table 24 ExamSchedule Location