1. Table Users:

This table includes information of users: user name, password, email, fullname, date of joining, date of login…The table include 60 columns, we only describe some of typical information.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | UserID | INT(10) | No | Auto increment |
| 2 | User\_Name | VARCHAR(255) | No | Using to login to the system |
| 3 | User\_Passhash | VARCHAR(32) | No | Password was encrypted by MD5 |
| 4 | User\_email | VARCHAR(255) | No | Email to register of user |
| 5 | User\_enable | TINYINT | No | Situation of user of the system |
| 6 | User\_joindate | INT | No | date which user register |
| 7 | User\_logindate | INT | No | Date which user login to the system |

1. Table Tests:

This table stores information of tests: test name, test time, date which test is started, shuffling question, number of user’s attempts…

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | TestID | INT(10) | No | Auto increment |
| 2 | SubjectID | INT(10) | No |  |
| 3 | Test\_Name | VARCHAR(255) | No | Name of test |
| 4 | Test\_Code | VARCHAR(255) | No | Code of test |
| 5 | Test\_Description | VARCHAR(255) | No | Brief description |
| 6 | Test\_Time | INT(10) | No | Time which test enable |
| 7 | Test\_datestart | INT | No | Date which test is started |
| 8 | Test\_dateend | INT | No | Date which test ends |
| 9 | Test\_shuffleq | TINYINT | No | Shuffling questions |
| 10 | Test\_shufflea | TINYINT | No | Shuffling answers |
| 11 | Test\_timeforceout | TINYINT | No | End test when the time limit is reached |
| 12 | Test\_attempts | INT | No | Number of attempts are allowed |
| 13 | Test\_showqfeedback | TINYINT | No | Showing feedback after choose each of answer |
| 14 | Test\_qsperpage | TINYINT | No | Number of questions are showed on each page |
| 15 | Test\_result\_showanswers | TINYINT | No | Showing number of questions are correct |
| 16 | Test\_result\_showpoints | TINYINT | No | Showing point of test after finishing |
| 17 | Test\_result\_showgrade | TINYINT | No | Showing grade of test after finishing |
| 18 | Test\_result\_showgradefeedback | TINYINT | No | Showing grade feedback of test after finishing |
| 19 | Test\_result\_showhtml | TINYINT | No | Showing report about result by HTML format |
| 20 | Test\_result\_showpdf | TINYINT | No | Showing report about result by .pdf format |
| 21 | Test\_result\_rtemplateid | INT(10) | No | templateID about report of result. |
| 22 | Test\_reportgradecondition | TINYINT | No | Condition about grade to show report. |
| 23 | Test\_prevtestid | INT | No | ID of previous test |
| 24 | Test\_nexttestid | INT | No | ID of next test |
| 25 | Test\_contentprotection | TINYINT | No | Allowing to protect by javascrip |
| 26 | Test\_notes | TEXT | No | Test notes for internal use |
| 27 | Test\_other\_repeatuntilcorrect | TINYINT | No | Repeat test until all questions are answered correctly |
| 28 | Test\_createdate | INT | No | Date which test are created |
| 29 | Test\_enable | TINYINT | No | State of test |

1. Table Questions:

This table is considered as question bank. It include information of questions: question time, content of question, point of question…

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | QuestionID | Int(10) | No | Auto increment |
| 2 | SubjectID | Int(10) | No | ID of subject about test |
| 3 | Question\_Time | Int(10) | No | Time which question is finished |
| 4 | Question\_Text | Text | No | Content of question |
| 5 | Question\_Points | Text | No | Point of question |
| 6 | Question\_Solution | Text | No | Solution of question |
| 7 | Question\_Type | Int(10) | No | Type of question |
| 8 | Question\_Type2 | Tinyint(3) | No | Allowing partially correct answers if Question\_Type is “Multiple Answer” |
| 9 | Question\_Shufflea | Tinyint(3) | No | Shuffle answers of question |
| 10 | Question\_Difficult | INT(10) | No | Difficult level of question |
| 11 | Theoryid | INT(10) | No | ID of theory which correspond with question. |

1. Table Answers:

This table stores answers of each question.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | AnswerID | Int(10) | No | Auto increment |
| 2 | QuestionID | Int(10) | No | ID of question of answer |
| 3 | Answer\_Text | Text | No | Content of answer |
| 4 | Answer\_Feedback | Text | No | Feedbacks of answer (if have) |
| 5 | Answer\_Correct | Tinyint(3) | No | Answer is correct |
| 6 | Answer\_Percents | float | No | Percentage correct of answer |
| 7 |  |  |  |  |

1. Table Results:

This table stores result about test of user. We use the table to count.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | ResultID | Int(10) | No | Auto increment |
| 2 | TestID | Int(10) | No | ID of test |
| 3 | UserID | Int(10) | No | ID of user which have report of test result |
| 4 | Result\_DateStart | Int(10) | No | Date which result of test is started |
| 5 | Result\_TimeSpend | Int(10) | No | Time which user spend to test |
| 6 | Result\_TimeExceeded | Tinyint(3) | No | Time which user exceed to test |
| 7 | Result\_Points | Float | No | Point of test of user |
| 8 | Result\_PointMax | Float | No | Max point of test |
| 9 | GscaleID | Int(10) | No | ID of Grading scale |
| 10 | Gscale\_GradeID | Int(10) | No | ID of grade corresponds with grading scale |

1. Table Result\_Answers:

This table stores statistic of questions. It includes: number of correct answers, number of partially correct answers, number of incorrect answers…

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Result\_AnswerID | Int(10) | No | Auto increment |
| 2 | ResultID | Int(10) | No | ID of result |
| 3 | QuestionID | Int(10) | No | ID of question |
| 4 | TestQuestionID | Int(10) | No | ID of question of test |
| 5 | Result\_Answer\_Text | Text | No | Content of answer which is correct |
| 6 | Result\_Answer\_Points | Float | No | Point of answer |
| 7 | Result\_Answer\_Iscorrect | Tinyint(3) | No | Answer is correct |
| 8 | Result\_Answer\_Feedback | TEXT | No | Feedback of answer (if have) |
| 9 | Result\_Answer\_TimeSpent | Int(10) | No | Time to spend to answer question. |
| 10 | Result\_Answer\_TimExceeded | Tinyint(3) | No | Time which is exceeded |

1. Table Theories:

This table stores information of theories. It includes: theory name, theory description, objective, reference questions…

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Theoryid | INT(10) | No | Auto increment |
| 2 | Theory\_description | TEXT | No | Description of theory |
| 3 | Theory\_name | VARCHAR(255) | No | Name of theory |
| 4 | Objective | TEXT | No | Objectives which theory bring out |
| 5 | Theory\_body | TEXT | No | Content of theory |
| 6 | Theory\_file\_path | VARCHAR(255) | No | Path of theory source (video, text…) |
| 7 | Subjectid | INT(10) | No | ID of subject of theory |

1. Table Gscales:

This table stores information of grading scale.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Gscaleid | INT(10) | No | Auto increment |
| 2 | Gscale\_name | VARCHAR(255) | No | Name of grading scale |
| 3 | Gscale\_description | VARCHAR(255) | No | Description of grading scale |

1. Table Gscales\_grades:

This table stores grades of grading scale.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Gscaleid | INT(10) | No | ID of grading scale |
| 2 | Gscale\_gradeid | INT(10) | No | Auto increment |
| 3 | Grade\_name | VARCHAR(255) | No | Name of grade of grading scale |
| 4 | Grade\_description | VARCHAR(255) | No | Description of grade |
| 5 | Grade\_feedback | TEXT | No | Feedback of grade (if have) |
| 6 | Grade\_from | FLOAT | No | Value of grade is minimum |
| 7 | Grade\_to | FLOAT | No | Value of grade is maximum |

1. Table Groups:

This table stores information of authorities which correspond with user’s groups.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Groupid | INT(10) | No | Auto increment |
| 2 | Group\_name | VARCHAR(255) | No | Name of group |
| 3 | Group\_description | VARCHAR(255) | No | Description of group |
| 4 | Access\_tests | TINYINT(3) | No | Authority to test |
| 5 | Access\_testmanager | TINYINT(3) | No | Authority to see test’s manager |
| 6 | Access\_gradingsystems | TINYINT(3) | No | Authority to see grading systems |
| 7 | Access\_emailtemplates | TINYINT(3) | No | Email which is sent has template form |
| 8 | Access\_reporttemplates | TINYINT(3) | No | Report has template form |
| 9 | Access\_reportsmanager | TINYINT(3) | No | Authority to see report manager |
| 10 | Access\_questionbank | TINYINT(3) | No | Authority to see and create questions |
| 11 | Access\_subjects | TINYINT(3) | No | Authority to see and create subjects. |
| 12 | Access\_groups | TINYINT(3) | No | Managing authority about the system |
| 13 | Access\_users | TINYINT(3) | No | Managing authority about users |
| 14 | Access\_visitors | TINYINT(3) | No | Managing authority about visitors |
| 15 | Access\_config | TINYINT(3) | No | Managing configuration of the system |

1. Table etemplates:

This table stores templates of email.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Etemplateid | INT(10) | No | Auto increment |
| 2 | Etemplate\_name | VARCHAR(255) | No | Name of email template |
| 3 | Etemplate\_description | VARCHAR(255) | No | Description of email template |
| 4 | Etemplate\_from | VARCHAR(255) | No | Email to send |
| 5 | Etemplate\_subject | VARCHAR(255) | No | Subject of email |
| 6 | Etemplate\_body | TEXT | No | Content of email |

1. Table rtemplates:

This table stores templates of report.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Rtemplateid | INT(10) | No | Auto increment |
| 2 | Rtemplate\_name | VARCHAR(255) | No | Name of report template |
| 3 | Rtemplate\_description | VARCHAR(255) | No | Description of report template |
| 4 | Rtemplate\_body | TEXT | No | Content of report template |

1. Table groups\_tests:

This table is joined with groups table, tests table by groupid and testid.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Groupid | INT(10) | No |  |
| 2 | Testid | INT(10) | No |  |

1. Table groups\_users:

This table is joined with groups table, users table by groupid and userid.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Groupid | INT(10) | No |  |
| 2 | Userid | INT(10) | No |  |

1. Table tests\_attempts:

This table stores number of attempts to take a test.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Testid | INT(10) | No | ID of test |
| 2 | Userid | INT(10) | No | ID of user which takes the test |
| 3 | Test\_Attempt\_count | INT(10) | No | Number of attempts to take the test |

1. Table tests\_questions:

This table stores questions of tests.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Column name | Data type | Nullable | Description |
| 1 | Test\_questionid | INT(10) | No | Position of questions in a test |
| 2 | Testid | INT(10) | No | ID of test |
| 3 | Test\_sectionid | INT(10) | No | Section of questions in a test |
| 4 | questionid |  | No | ID of question which is taken in question bank |