1. [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html" \t "mysql_doc) ENGINE from information\_schema.TABLES where table\_schema = "university";

# Database information\_schema

## Structure for view TABLES

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| TABLE\_TYPE | enum('BASE TABLE', 'VIEW', 'SYSTEM VIEW') | No |  |
| ENGINE | varchar(64) | Yes | NULL |
| VERSION | int | Yes | NULL |
| ROW\_FORMAT | enum('Fixed', 'Dynamic', 'Compressed', 'Redundant', 'Compact', 'Paged') | Yes | NULL |
| TABLE\_ROWS | bigint | Yes | NULL |
| AVG\_ROW\_LENGTH | bigint | Yes | NULL |
| DATA\_LENGTH | bigint | Yes | NULL |
| MAX\_DATA\_LENGTH | bigint | Yes | NULL |
| INDEX\_LENGTH | bigint | Yes | NULL |
| DATA\_FREE | bigint | Yes | NULL |
| AUTO\_INCREMENT | bigint | Yes | NULL |
| CREATE\_TIME | timestamp | No |  |
| UPDATE\_TIME | datetime | Yes | NULL |
| CHECK\_TIME | datetime | Yes | NULL |
| TABLE\_COLLATION | varchar(64) | Yes | NULL |
| CHECKSUM | bigint | Yes | NULL |
| CREATE\_OPTIONS | varchar(256) | Yes | NULL |
| TABLE\_COMMENT | text | Yes | NULL |

## Dumping data for table TABLES

|  |
| --- |
| InnoDB |
| InnoDB |
| InnoDB |
| InnoDB |
| InnoDB |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [TABLE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) instructor ENGINE = 'myisam';

# Database information\_schema

## Structure for view TABLES

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| TABLE\_TYPE | enum('BASE TABLE', 'VIEW', 'SYSTEM VIEW') | No |  |
| ENGINE | varchar(64) | Yes | NULL |
| VERSION | int | Yes | NULL |
| ROW\_FORMAT | enum('Fixed', 'Dynamic', 'Compressed', 'Redundant', 'Compact', 'Paged') | Yes | NULL |
| TABLE\_ROWS | bigint | Yes | NULL |
| AVG\_ROW\_LENGTH | bigint | Yes | NULL |
| DATA\_LENGTH | bigint | Yes | NULL |
| MAX\_DATA\_LENGTH | bigint | Yes | NULL |
| INDEX\_LENGTH | bigint | Yes | NULL |
| DATA\_FREE | bigint | Yes | NULL |
| AUTO\_INCREMENT | bigint | Yes | NULL |
| CREATE\_TIME | timestamp | No |  |
| UPDATE\_TIME | datetime | Yes | NULL |
| CHECK\_TIME | datetime | Yes | NULL |
| TABLE\_COLLATION | varchar(64) | Yes | NULL |
| CHECKSUM | bigint | Yes | NULL |
| CREATE\_OPTIONS | varchar(256) | Yes | NULL |
| TABLE\_COMMENT | text | Yes | NULL |

## Dumping data for table TABLES

|  |
| --- |
| MyISAM |

1. [alter](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [table](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) instructor MODIFY salary BIGINT;

# Database INFORMATION\_SCHEMA

## Table structure for table COLUMNS

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_NAME | varchar(64) | Yes | NULL |
| ORDINAL\_POSITION | int | No |  |
| COLUMN\_DEFAULT | text | Yes | NULL |
| IS\_NULLABLE | varchar(3) | No |  |
| DATA\_TYPE | longtext | Yes | NULL |
| CHARACTER\_MAXIMUM\_LENGTH | bigint | Yes | NULL |
| CHARACTER\_OCTET\_LENGTH | bigint | Yes | NULL |
| NUMERIC\_PRECISION | bigint | Yes | NULL |
| NUMERIC\_SCALE | bigint | Yes | NULL |
| DATETIME\_PRECISION | int | Yes | NULL |
| CHARACTER\_SET\_NAME | varchar(64) | Yes | NULL |
| COLLATION\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_TYPE | mediumtext | No |  |
| COLUMN\_KEY | enum('', 'PRI', 'UNI', 'MUL') | No |  |
| EXTRA | varchar(256) | Yes | NULL |
| PRIVILEGES | varchar(154) | Yes | NULL |
| COLUMN\_COMMENT | text | No |  |
| GENERATION\_EXPRESSION | longtext | No |  |
| SRS\_ID | int | Yes | NULL |

## Dumping data for table COLUMNS

|  |  |  |
| --- | --- | --- |
| salary | bigint | NULL |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [TABLE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) teaches ADD FOREIGN KEY (instructor\_id) REFERENCES instructor (instructor\_id), ADD FOREIGN KEY (course\_id) REFERENCES course (course\_id);

# Database INFORMATION\_SCHEMA

## Table structure for table KEY\_COLUMN\_USAGE

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| CONSTRAINT\_CATALOG | varchar(64) | Yes | NULL |
| CONSTRAINT\_SCHEMA | varchar(64) | Yes | NULL |
| CONSTRAINT\_NAME | varchar(64) | Yes | NULL |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_NAME | varchar(64) | Yes | NULL |
| ORDINAL\_POSITION | int | No | 0 |
| POSITION\_IN\_UNIQUE\_CONSTRAINT | int | Yes | NULL |
| REFERENCED\_TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| REFERENCED\_TABLE\_NAME | varchar(64) | Yes | NULL |
| REFERENCED\_COLUMN\_NAME | varchar(64) | Yes | NULL |

## Dumping data for table KEY\_COLUMN\_USAGE

|  |  |  |  |
| --- | --- | --- | --- |
| course\_id | teaches\_ibfk\_1 | course | course\_id |
| course\_id | teaches\_ibfk\_2 | course | course\_id |
| instructor\_id | teaches\_ibfk\_3 | instructor | instructor\_id |
| course\_id | teaches\_ibfk\_4 | course | course\_id |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [TABLE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) takes ADD FOREIGN KEY (student\_id) REFERENCES student (student\_id), ADD FOREIGN KEY (course\_id) REFERENCES course (course\_id);

# Database INFORMATION\_SCHEMA

## Table structure for table KEY\_COLUMN\_USAGE

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| CONSTRAINT\_CATALOG | varchar(64) | Yes | NULL |
| CONSTRAINT\_SCHEMA | varchar(64) | Yes | NULL |
| CONSTRAINT\_NAME | varchar(64) | Yes | NULL |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_NAME | varchar(64) | Yes | NULL |
| ORDINAL\_POSITION | int | No | 0 |
| POSITION\_IN\_UNIQUE\_CONSTRAINT | int | Yes | NULL |
| REFERENCED\_TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| REFERENCED\_TABLE\_NAME | varchar(64) | Yes | NULL |
| REFERENCED\_COLUMN\_NAME | varchar(64) | Yes | NULL |

## Dumping data for table KEY\_COLUMN\_USAGE

|  |  |  |  |
| --- | --- | --- | --- |
| student\_id | PRIMARY | NULL | NULL |
| course\_id | PRIMARY | NULL | NULL |
| student\_id | takes\_ibfk\_1 | student | student\_id |
| course\_id | takes\_ibfk\_2 | course | course\_id |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [table](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) student add birthdate DATE;

# Database INFORMATION\_SCHEMA

## Table structure for table COLUMNS

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_NAME | varchar(64) | Yes | NULL |
| ORDINAL\_POSITION | int | No |  |
| COLUMN\_DEFAULT | text | Yes | NULL |
| IS\_NULLABLE | varchar(3) | No |  |
| DATA\_TYPE | longtext | Yes | NULL |
| CHARACTER\_MAXIMUM\_LENGTH | bigint | Yes | NULL |
| CHARACTER\_OCTET\_LENGTH | bigint | Yes | NULL |
| NUMERIC\_PRECISION | bigint | Yes | NULL |
| NUMERIC\_SCALE | bigint | Yes | NULL |
| DATETIME\_PRECISION | int | Yes | NULL |
| CHARACTER\_SET\_NAME | varchar(64) | Yes | NULL |
| COLLATION\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_TYPE | mediumtext | No |  |
| COLUMN\_KEY | enum('', 'PRI', 'UNI', 'MUL') | No |  |
| EXTRA | varchar(256) | Yes | NULL |
| PRIVILEGES | varchar(154) | Yes | NULL |
| COLUMN\_COMMENT | text | No |  |
| GENERATION\_EXPRESSION | longtext | No |  |
| SRS\_ID | int | Yes | NULL |

## Dumping data for table COLUMNS

|  |  |  |
| --- | --- | --- |
| birthdate | date | NULL |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [TABLE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) student ADD UNIQUE (student\_name);

# Database INFORMATION\_SCHEMA

## Table structure for table KEY\_COLUMN\_USAGE

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| CONSTRAINT\_CATALOG | varchar(64) | Yes | NULL |
| CONSTRAINT\_SCHEMA | varchar(64) | Yes | NULL |
| CONSTRAINT\_NAME | varchar(64) | Yes | NULL |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_NAME | varchar(64) | Yes | NULL |
| ORDINAL\_POSITION | int | No | 0 |
| POSITION\_IN\_UNIQUE\_CONSTRAINT | int | Yes | NULL |
| REFERENCED\_TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| REFERENCED\_TABLE\_NAME | varchar(64) | Yes | NULL |
| REFERENCED\_COLUMN\_NAME | varchar(64) | Yes | NULL |

## Dumping data for table KEY\_COLUMN\_USAGE

|  |  |  |  |
| --- | --- | --- | --- |
| student\_id | PRIMARY | NULL | NULL |
| student\_name | student\_name | NULL | NULL |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [table](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) student add fine int(30);

# Database INFORMATION\_SCHEMA

## Table structure for table COLUMNS

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_NAME | varchar(64) | Yes | NULL |
| ORDINAL\_POSITION | int | No |  |
| COLUMN\_DEFAULT | text | Yes | NULL |
| IS\_NULLABLE | varchar(3) | No |  |
| DATA\_TYPE | longtext | Yes | NULL |
| CHARACTER\_MAXIMUM\_LENGTH | bigint | Yes | NULL |
| CHARACTER\_OCTET\_LENGTH | bigint | Yes | NULL |
| NUMERIC\_PRECISION | bigint | Yes | NULL |
| NUMERIC\_SCALE | bigint | Yes | NULL |
| DATETIME\_PRECISION | int | Yes | NULL |
| CHARACTER\_SET\_NAME | varchar(64) | Yes | NULL |
| COLLATION\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_TYPE | mediumtext | No |  |
| COLUMN\_KEY | enum('', 'PRI', 'UNI', 'MUL') | No |  |
| EXTRA | varchar(256) | Yes | NULL |
| PRIVILEGES | varchar(154) | Yes | NULL |
| COLUMN\_COMMENT | text | No |  |
| GENERATION\_EXPRESSION | longtext | No |  |
| SRS\_ID | int | Yes | NULL |

## Dumping data for table COLUMNS

|  |  |  |
| --- | --- | --- |
| fine | int | NULL |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [TABLE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) student MODIFY fine INT(30) [DEFAULT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/miscellaneous-functions.html%23function_default) 0;

[UPDATE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/update.html) student [SET](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/set.html) fine = 0;

# Database university

## Table structure for table student

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| ***student\_id*** | int | No |  |
| **student\_name** | varchar(25) | Yes | NULL |
| department\_name | varchar(25) | Yes | NULL |
| total\_credits | int | Yes | NULL |
| birthdate | date | Yes | NULL |
| fine | int | Yes | 0 |

## Dumping data for table student

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2001 | jason | comp | 8 | NULL | 0 |
| 2002 | johnson | civil | 7 | NULL | 0 |
| 2003 | judit | electronics | 4 | NULL | 0 |
| 2004 | Martin | comp | 4 | NULL | 0 |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [table](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) instructor MODIFY department\_name varchar(50);

# Database INFORMATION\_SCHEMA

## Table structure for table COLUMNS

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| TABLE\_CATALOG | varchar(64) | Yes | NULL |
| TABLE\_SCHEMA | varchar(64) | Yes | NULL |
| TABLE\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_NAME | varchar(64) | Yes | NULL |
| ORDINAL\_POSITION | int | No |  |
| COLUMN\_DEFAULT | text | Yes | NULL |
| IS\_NULLABLE | varchar(3) | No |  |
| DATA\_TYPE | longtext | Yes | NULL |
| CHARACTER\_MAXIMUM\_LENGTH | bigint | Yes | NULL |
| CHARACTER\_OCTET\_LENGTH | bigint | Yes | NULL |
| NUMERIC\_PRECISION | bigint | Yes | NULL |
| NUMERIC\_SCALE | bigint | Yes | NULL |
| DATETIME\_PRECISION | int | Yes | NULL |
| CHARACTER\_SET\_NAME | varchar(64) | Yes | NULL |
| COLLATION\_NAME | varchar(64) | Yes | NULL |
| COLUMN\_TYPE | mediumtext | No |  |
| COLUMN\_KEY | enum('', 'PRI', 'UNI', 'MUL') | No |  |
| EXTRA | varchar(256) | Yes | NULL |
| PRIVILEGES | varchar(154) | Yes | NULL |
| COLUMN\_COMMENT | text | No |  |
| GENERATION\_EXPRESSION | longtext | No |  |
| SRS\_ID | int | Yes | NULL |

## Dumping data for table COLUMNS

|  |  |  |
| --- | --- | --- |
| department\_name | varchar | 50 |

1. [ALTER](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) [TABLE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/alter-table.html) student DROP COLUMN birthdate;

# Database university

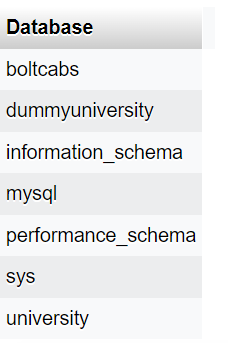
## Table structure for table student

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| ***student\_id*** | int | No |  |
| **student\_name** | varchar(25) | Yes | NULL |
| department\_name | varchar(25) | Yes | NULL |
| total\_credits | int | Yes | NULL |
| fine | int | Yes | 0 |

## Dumping data for table student

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2001 | jason | comp | 8 | 0 |
| 2002 | johnson | civil | 7 | 0 |
| 2003 | judit | electronics | 4 | 0 |
| 2004 | Martin | comp | 4 | 0 |

1. create database dummyuniversity;



1. [create](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/create-table.html) [table](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/create-table.html) dummyinstructor as [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) \* from University.instructor;

# Database dummyuniversity

## Table structure for table dummyinstructor

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| instructor\_id | int | No |  |
| instructor\_name | varchar(25) | Yes | NULL |
| department\_name | varchar(50) | Yes | NULL |
| salary | bigint | Yes | NULL |

## Dumping data for table dummyinstructor

|  |  |  |  |
| --- | --- | --- | --- |
| 5001 | john | comp | 100000 |
| 5002 | bob | comp | 50000 |
| 5003 | dwayne | civil | 150000 |
| 5004 | amita | electronics | 75000 |

1. [create](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/create-table.html) [table](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/create-table.html) dummystudent as [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) \* from University.student;

# Database dummyuniversity

## Table structure for table dummystudent

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| student\_id | int | No |  |
| student\_name | varchar(25) | Yes | NULL |
| department\_name | varchar(25) | Yes | NULL |
| total\_credits | int | Yes | NULL |
| fine | int | Yes | 0 |

## Dumping data for table dummystudent

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2001 | jason | comp | 8 | 0 |
| 2002 | johnson | civil | 7 | 0 |
| 2003 | judit | electronics | 4 | 0 |
| 2004 | Martin | comp | 4 | 0 |

1. [TRUNCATE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/truncate-table.html) [table](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/truncate-table.html) dummystudent;

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_count)(\*) AS row\_count FROM dummystudent;

# Database dummyuniversity

## Table structure for table dummystudent

|  |  |  |  |
| --- | --- | --- | --- |
| **Column** | **Type** | **Null** | **Default** |
| student\_id | int | No |  |
| student\_name | varchar(25) | Yes | NULL |
| department\_name | varchar(25) | Yes | NULL |
| total\_credits | int | Yes | NULL |
| fine | int | Yes | 0 |

## Dumping data for table dummystudent

|  |
| --- |
| 0 |