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SQL Table Layout

Table Key
* Indicates a Primary Key
^ Indicates a Foreign Key

Department Table
// For the time being the department table only contains the department codes and the titles of the departments. In the future it may be desirable to attach the college associated with each department.

dept_id*	***title***
VARCHAR()	VARCHAR()
CSCE	Computer Science and Computer Engineering
MATH	Mathematics

Course Table
// The course_id is initially conceived as a combination of the department and course number field but that might be changed.

course_id*	***dept_id^***	***course_no***	***title***
VARCHAR()	VARCHAR()	INT()	VARCHAR()
CSCE1010	CSCE	1010	Introduction to Computer Science

Term Table
// The term_id is based upon UNT's EIS numbering scheme.

term_id*	***semester***	***year***
INT()	VARCHAR()	INT()
1071	Spring	2007

Class Table
// class_id should be a unique autogenerated key. Although it seems retarded it may be possible that an instructor could want to have two or more gradebooks for a class.

class_id*	***course_id^***	***section***	***term_id^***	***cutoffs***
INT()	VARCHAR()	INT()	INT()	VARCHAR()
	CSCE1010	002	1071	A=90,B=80,C=70,D=60,F=50

Low-level Functions

```
bool dept_create(dept_id, title)
{
  if (!dept_exists(dept_id))
    // Query string should contain properly formatted SQL
    query := 'INSERT dept_id, title INTO dept'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
bool dept_edit(dept_id, title)
{
  if (dept_exists(dept_id))
    // Query string should contain properly formatted SQL, will want to update
    // only changed information
    query := 'UPDATE dept SET title WHERE dept_id={dept_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
bool dept_delete(dept_id)
{
  if (dept_exists(dept_id))
    // Query string should contain properly formatted SQL
    query := 'DELETE FROM dept WHERE dept_id={dept_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
array dept_get(dept_id)
{
  if (dept_exists(dept_id))
    // Query string should contain properly formatted SQL
    query := 'SELECT * FROM dept WHERE dept_id={dept_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return result
  else
    return failure
}
bool dept_get_all()
{
  query := 'SELECT * FROM dept'
  results := mysql(query)
  return results
}
bool dept_exists(dept_id)
```

```
{
  result := dept_get(dept_id)
  if (result != 0)
    return success
  else
    return failure
}

******

bool course_create()
{
  if (!course_exists(course_id))
    // Query string should contain properly formatted SQL
    query := 'INSERT course_id, dept_id, course_no, title INTO course'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
bool course_edit(course_id)
{
  if (course_exists(course_id))
    // Query string should contain properly formatted SQL, will want to update
    // only changed information
    query := 'UPDATE course SET dept_id, course_no, title WHERE
course_id={course_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
bool course_delete(course_id)
{
  if (course_exists(course_id))
    // Query string should contain properly formatted SQL
    query := 'DELETE FROM course WHERE course_id={course_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
array course_get(course_id)
{
  if (course_exists(course_id))
    // Query string should contain properly formatted SQL
    query := 'SELECT * FROM course WHERE course_id={course_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return result
  else
```

```
    return failure
}
array course_get_all()
{
  query := 'SELECT * FROM course'
  results := mysql(query)
  return results
}
bool course_exists(course_id)
{
  result := course_get(course_id)
  if (result != 0)
    return success
  else
    return failure
}

******

bool term_create(term_id, semester, year)
{
  if (!term_exists(term_id))
    // Query string should contain properly formatted SQL
    query := 'INSERT term_id, semester, year INTO term'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
bool term_edit(term_id)
{
  if (term_exists(term_id))
    // Query string should contain properly formatted SQL, will want to update
    // only changed information
    query := 'UPDATE classes SET semester, year WHERE term_id={term_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
bool term_delete(term_id)
{
  if (term_exists(term_id))
    // Query string should contain properly formatted SQL
    query := 'DELETE FROM term WHERE term_id={term_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
array term_get(term_id)
{
```

```
  if (term_exists(term_id))
    // Query string should contain properly formatted SQL
    query := 'SELECT * FROM term WHERE term_id={term_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return result
  else
    return failure
}
array term_get_all()
{
  query := 'SELECT * FROM term'
  results := mysql(query)
  return results
}
bool term_exists(term_id)
{
  result := term_get(term_id)
  if (result != 0)
    return success
  else
    return failure
}

******

int class_create(title, dept, course, section, term, year, cutoffs[])
{
  if (!class_exists(dept, course, section, term, year))
    // Query string should contain properly formatted SQL
    query := 'INSERT title, dept, course, section, term, year, cutoffs INTO
classes'
    result := mysql(query)
    if (result != success)
      return failure
    return class_id
  else
    return failure
}
bool class_edit(class_id, title, dept, course, section, term, year, cutoffs[])
{
  if (class_exists(class_id))
    // Query string should contain properly formatted SQL, will want to update
    // only changed information
    query := 'UPDATE classes SET title, dept, course, section, term, year, cutoffs
WHERE class_id={class_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
bool class_delete(class_id)
{
  if (class_exists(class_id))
    // Query string should contain properly formatted SQL
```

```
    query := 'DELETE FROM classes WHERE class_id={class_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return success
  else
    return failure
}
array class_get(class_id)
{
  if (class_exists(class_id))
    // Query string should contain properly formatted SQL
    query := 'SELECT * FROM classes WHERE class_id={class_id}'
    result := mysql(query)
    if (result != success)
      return failure
    return result
  else
    return failure
}
array class_get_all()
{
  // Query string should contain properly formatted SQL
  query := 'SELECT * FROM classes'
  results := mysql(query)
  if (results != success)
    return failure
  else
    return results
}
bool class_exists(course_id)
{
  result := class_get(course_id)
  if (result != 0)
    return success
  else
    return failure
}

******

array mysql(query)
{
  connect_database()
  results := perform_sql_query(query)
  disconnect_query()
  return results
}
```