

Task 1:

We can create a Laravel project named “MigrationAssignment” by following CLI command:

```
composer create-project laravel/laravel MigrationAssignment
```

OR,

```
laravel new MigrationAssignment
```

Task 2:

To create a new migration file named "create_products_table" we need to write the following command in the terminal:

```
php artisan make:migration create_products_table --create=products
```

Now open “_create_products_table.php” file from the directory “database/migration” and modify the ‘up’ method as the following code:

```
public function up()  
  
{  
  
Schema::create('products', function (Blueprint $table) {  
  
    $table->id();  
  
    $table->string('name');  
  
    $table->decimal('price');  
  
    $table->text('description');  
  
    $table->timestamps();  
  
});  
  
}
```

Task 3:

After creating the migration file, we need to run the migration using the following command in the terminal:

```
php artisan migrate
```

Task 4:

To modify the existing migration file "create_products_table" and add a new column called "quantity" we need to open the migration file and modify the 'up' method as following code:

```
public function up()
{
    Schema::table('products', function (Blueprint $table) {
        $table->integer('quantity')->nullable();
    });
}
```

Task 5:

Now we are going to create a new migration file named "add_category_to_products_table" using the following command in the terminal:

```
php artisan make:migration add_category_to_products_table --table=products
```

Now let's open the generated migration file "_add_category_to_products_table.php" from the directory "database/migrations/" and modify the 'up' method to add the "category" column as follow:

```
public function up()
{
    Schema::table('products', function (Blueprint $table) {
        $table->string('category', 50)->after('description');
    });
}
```

Task 6:

After creating the new migration file, we need to run for the migration using the following terminal command:

```
php artisan migrate
```

Task 7:

In this task we have to create a new migration file named "create_orders_table" using the following terminal command:

```
php artisan make:migration create_orders_table --create=orders
```

Now let's open the generated migration file "_create_orders_table.php" from the directory "database/migrations" and modify the 'up' method to define the table's columns as mentioned in "Task 7":

```
public function up()  
  
{  
  
Schema::create('orders', function (Blueprint $table) {  
  
    $table->id();  
  
    $table->unsignedBigInteger('product_id');  
  
    $table->integer('quantity');  
  
    $table->timestamps();  
  
  
    $table->foreign('product_id')->references('id')->on('products');  
  
});  
  
}
```

Task 8:

to create the "orders" table in the database we need to run the following migration command in the terminal:

```
php artisan migrate
```