Ashley Eatly

2031927

2031927 – CSF304: Web App Development – Lab Class 3

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# Ashley Eatly 2031927Lab 3..

CSF304 Web Application Development– Lab Class

**Randell Gaya**

CSF304 Web App Development – Lab Class 3 05/10/2022

Ü Task 3.1

Create a new migration and model to store People. The table should be named people and the model should be named Person.

Hint: The artisan command

php artisan make:model NameOfModel -m

will create both the model NameOfModel and the corresponding migration (named correctly).

To see all available options use the command

php artisan help make:model

Yes, we could use the pre-existing model User for this. But, let’s avoid using that until we get to authentication and the ability to login to the website.

A Person should have:

* Title (optional).
* First Name.
* Surname.
* Address.
* Two fields of your choice.

Once the above is working, complete the following within Tinker. Take screen-shots to allow for a quick sign-off:

* Create some manual models (at least 2).
* Find a model by id.
* Cause an error by trying to find a non-existent model by id.
* Use the ::all() and ::first() methods.
* Use ::all() and then extract (get) the model at index 1.
* Delete a model by calling the delete method on it. Show it doesn’t exist by trying to find it again.

Ü **Task 3.2**

Create a seed file for creating a few hard-coded models (at least 2). Once you have this working, create a factory that produces fairly realistic models. Add a call to the factory to your seed file so that you bulk create People when seeding.

You should now be able to reset your database and be back up and running with realistic sample data within seconds!

# Task 3.1

|  |  |  |
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|  | Create a new migration and model to store People. | Completed Y/N |
| 1 | A model is equivalent to an object on a table – an instance of the item.  In this case the Model is Person and the table will be automatically pluralised to People (usually)  A Person should have: •Title (optional). •First Name. •Surname. •Address. •Two fields of your choice. |  |
| 2 | Depending on the way the environment has been configured the commands for creating an empty model migration (no fields) can be of various forms |  |
|  | php artisan make:model Person -m sail artisan make:model Person -m  (note -m can be in full --migrate |  |
|  | Don’t forget run up the containers/services by ./vendor/bin/sail up -d  (or if you have created an alias sail up -d (-d to run in background) |  |
|  | Also note if you then do sail artisan help make:model.. you will get a large table of help.. |  |

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| 3 | **sail up -d**  **sail artisan make:model Person --migration** |  |
|  | ashleyeatly@v0019227 lab3a-app % **sail artisan make:model Person -m**  INFO Model [app/Models/Person.php] created successfully.  INFO Created migration [2022\_10\_17\_143808\_create\_people\_table]. |  |
|  | Inspection..  2022\_10\_17\_143808\_create\_people\_table  **<?php  use** Illuminate\Database\Migrations\Migration; **use** Illuminate\Database\Schema\Blueprint; **use** Illuminate\Support\Facades\Schema;  **return new class extends** Migration {  */\*\*  \* Run the migrations.  \*  \** ***@return*** *void  \*/* **public function** up()  {  Schema::**create**(**'people'**, **function** (Blueprint $table) {  $table->id();  $table->timestamps();  });  }   */\*\*  \* Reverse the migrations.  \*  \** ***@return*** *void  \*/* **public function** down()  {  Schema::**dropIfExists**(**'people'**);  } }; |  |
|  | This creates a bare bones up which is run to create the table and the row definitions and the down to reverse thye migration and delete the table. |  |
|  | Adding the required row definitions to **up** and adding two other types a date and Boolean Note timestamps() will create two timestamp rows |  |
|  | **public function** up() {  Schema::**create**(**'people'**, **function** (Blueprint $table) {  $table->id();   $table->string(column: **'title'**)->**nullable**();  $table->string(column: **'firstname'**);  $table->string(column: **'surname'**);  $table->text(column: **'address'**);  $table->date(column:**'date\_of\_birth'**)->**nullable**();  $table->boolean(column: **'current'**);  $table->timestamps();  }); } |  |
|  | **sail artisan migrate** to run the migration |  |
|  | ashleyeatly@v0019227 lab3a-app % **sail artisan migrate**  INFO Preparing database.  Creating migration table .............................................................................................................. 116ms DONE  INFO Running migrations.  2014\_10\_12\_000000\_create\_users\_table 90ms DONE  2014\_10\_12\_100000\_create\_password\_resets\_table 33ms DONE  2019\_08\_19\_000000\_create\_failed\_jobs\_table 36ms DONE  2019\_12\_14\_000001\_create\_personal\_access\_tokens\_table 58ms DONE  2022\_10\_17\_143808\_create\_people\_table 19ms DONE |  |

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|  | Note the default app contains 4 default migrations – could have deleted |  |
| 3 | In PHP Storm database  Graphical user interface, application  Description automatically generated |  |

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|  | **Start using Tinker** |  |
|  | Create some manual models (at least 2). |  |
|  | ashleyeatly@v0019227 lab3a-app % sail artisan tinker  Psy Shell v0.11.8 (PHP 8.1.11 — cli) by Justin Hileman  >>> |  |
|  | use App\Models\Person;  $a = new Person();  $a->title=’Mr’;  $a->firstname='Ashley';  $a->surname='Eatly';  $a->address='Ferryside Carmarthenshire';  $a->date\_of\_birth=date('1959-03-31');  $a->current=true;  $a->created\_at=now();  $a->updated\_at=now();  $a->save(); |  |
|  | $a = new Person();  $a->title='Mr';  $a->firstname='First';  $a->surname='SurName';  $a->address='Ferryside Dyfed';  $a->date\_of\_birth=date('1970-02-19');  $a->current=true;  $a->created\_at=now();  $a->updated\_at=now();  $a->save(); |  |
|  | $a = new Person();  $a->title=”mr”;  $a->firstname='First1';  $a->surname='SurName1';  $a->address='Ferryside Dyfed SA17 5TT';  $a->date\_of\_birth=date('1989-05-10');  $a->current=true;  $a->created\_at=now();  $a->updated\_at=now();  $a->save(); |  |
|  | $a = new Person();  $a->title='mr';  $a->firstname='First1';  $a->surname='SurName1';  $a->address='Ferryside Dyfed SA17 5TT';  $a->date\_of\_birth=date('1989-05-10');  $a->current=true;  $a->created\_at=now();  $a->updated\_at=now();  $a->save(); |  |

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|  | Find a model by id. | Done |
|  | >>> Person::find(1);  => App\Models\Person {#4615  id: 1,  title: null,  firstname: "Ashley",  surname: "Eatly",  address: "Ferryside Carmarthenshire",  date\_of\_birth: "1959-03-31",  current: 1,  created\_at: "2022-10-17 15:44:28",  updated\_at: "2022-10-17 15:44:28",  } |  |
|  | Cause an error by trying to find a non-existent model by id. | Done |
|  | >>> Person::find(10);  => null |  |
|  | Use the ::all() and ::first() methods. | Done |
|  | ::all() | Done part 1 |
|  | >>> Person::all();  => Illuminate\Database\Eloquent\Collection {#4605  all: [  App\Models\Person {#4617  id: 1,  title: null,  firstname: "Ashley",  surname: "Eatly",  address: "Ferryside Carmarthenshire",  date\_of\_birth: "1959-03-31",  current: 1,  created\_at: "2022-10-17 15:44:28",  updated\_at: "2022-10-17 15:44:28",  },  App\Models\Person {#4618  id: 2,  title: null,  firstname: "First",  surname: "SurName",  address: "Ferryside Dyfed",  date\_of\_birth: "1970-02-19",  current: 1,  created\_at: "2022-10-17 15:49:36",  updated\_at: "2022-10-17 15:49:36",  },  App\Models\Person {#4619  id: 3,  title: "Mr",  firstname: "First",  surname: "SurName",  address: "Ferryside Dyfed",  date\_of\_birth: "1970-02-19",  current: 1,  created\_at: "2022-10-17 15:50:50",  updated\_at: "2022-10-17 15:50:50",  },  App\Models\Person {#4613  id: 4,  title: null,  firstname: "First1",  surname: "SurName1",  address: "Ferryside Dyfed SA17 5TT",  date\_of\_birth: "1989-05-10",  current: 1,  created\_at: "2022-10-17 15:54:45",  updated\_at: "2022-10-17 15:54:45",  },  App\Models\Person {#4607  id: 5,  title: null,  firstname: "First1",  surname: "SurName1",  address: "Ferryside Dyfed SA17 5TT",  date\_of\_birth: "1989-05-10",  current: 1,  created\_at: "2022-10-17 15:56:05",  updated\_at: "2022-10-17 15:56:05",  },  App\Models\Person {#4353  id: 6,  title: "mr",  firstname: "First1",  surname: "SurName1",  address: "Ferryside Dyfed SA17 5TT",  date\_of\_birth: "1989-05-10",  current: 1,  created\_at: "2022-10-17 15:57:24",  updated\_at: "2022-10-17 15:57:24",  },  ],  } |  |
|  | Person::first(); | Done part 2 |
|  | >>> Person::first();  => App\Models\Person {#4603  id: 1,  title: null,  firstname: "Ashley",  surname: "Eatly",  address: "Ferryside Carmarthenshire",  date\_of\_birth: "1959-03-31",  current: 1,  created\_at: "2022-10-17 15:44:28",  updated\_at: "2022-10-17 15:44:28",  },  : |  |
|  | Use ::all() and then extract (get) the model at index 1. | Done |
|  | >>> Person::all()->get(1);  => App\Models\Person {#4605  id: 2,  title: null,  firstname: "First",  surname: "SurName",  address: "Ferryside Dyfed",  date\_of\_birth: "1970-02-19",  current: 1,  created\_at: "2022-10-17 15:49:36",  updated\_at: "2022-10-17 15:49:36",  } |  |
|  | Note index 1 is not id 1 but the second item in the collection that is returned by ::all() |  |
|  | If you want the first entry then use   >>> Person::all()->get(0);  => App\Models\Person {#4353  id: 1,  title: null,  firstname: "Ashley",  surname: "Eatly",  address: "Ferryside Carmarthenshire",  date\_of\_birth: "1959-03-31",  current: 1,  created\_at: "2022-10-17 15:44:28",  updated\_at: "2022-10-17 15:44:28",  } |  |
|  | •Delete a model by calling the delete method on it. Show it doesn’t exist by trying to find it again. | Done |
|  | >>> Person::all()->get(1)->delete();  => true  >>> Person::find(2);  => null |  |
|  | Using database access |  |
|  | 1,,Ashley,Eatly,Ferryside Carmarthenshire,1959-03-31,1,2022-10-17 15:44:28  2,,First,SurName,Ferryside Dyfed,1970-02-19,1,2022-10-17 15:49:36  3,Mr,First,SurName,Ferryside Dyfed,1970-02-19,1,2022-10-17 15:50:50  4,,First1,SurName1,Ferryside Dyfed SA17 5TT,1989-05-10,1,2022-10-17 15:54:45  5,,First1,SurName1,Ferryside Dyfed SA17 5TT,1989-05-10,1,2022-10-17 15:56:05  6,mr,First1,SurName1,Ferryside Dyfed SA17 5TT,1989-05-10,1,2022-10-17 15:57:24  1,,Ashley,Eatly,Ferryside Carmarthenshire,1959-03-31,1,2022-10-17 15:44:28  3,Mr,First,SurName,Ferryside Dyfed,1970-02-19,1,2022-10-17 15:50:50  4,,First1,SurName1,Ferryside Dyfed SA17 5TT,1989-05-10,1,2022-10-17 15:54:45  5,,First1,SurName1,Ferryside Dyfed SA17 5TT,1989-05-10,1,2022-10-17 15:56:05  6,mr,First1,SurName1,Ferryside Dyfed SA17 5TT,1989-05-10,1,2022-10-17 15:57:24 |  |

# Task 3.2

Ü **Task 3.2**

Create a seed file for creating a few hard-coded models (at least 2). Once you have this working, create a factory that produces fairly realistic models. Add a call to the factory to your seed file so that you bulk create People when seeding.

You should now be able to reset your database and be back up and running with realistic sample data within seconds!

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| --- | --- | --- |
|  | Create a seed file for creating a few hard-coded models (at least 2). | Completed Y/N |
| 1 | Sail artisan make:seeder PersonSeeder | Done |
|  | **<?php  namespace** Database\Seeders;  **use** Illuminate\Database\Console\Seeds\WithoutModelEvents; **use** Illuminate\Database\Seeder;  **class PersonSeeder** **extends** Seeder {  */\*\*  \* Run the database seeds.  \*  \** ***@return*** *void  \*/* **public function** run()  {  *//* } } |  |

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|  | **Adding the values** |  |
|  | **<?php  namespace** Database\Seeders;  **use** Illuminate\Database\Console\Seeds\WithoutModelEvents; **use** Illuminate\Database\Seeder;  **class** PersonSeeder **extends** Seeder {  */\*\*  \* Run the database seeds.  \*  \** ***@return*** *void  \*/* **public function** run()  {  \App\Models\Person::*factory*(50) ->create([  **'title'** => **'Test Title 1'**,  **'firstname'** => **'First name 1'**,  **'surname'** => **'SurName 1'**,  **'address'** => **'Address 1 where 1'**,  **'date\_of\_birth'** => *date*(**'2010-03-31'**),  **'current'** => **true**,  **'created\_at'** => now(),  **'updated\_at'** => now(),  ]); *// \App\Models\Person::factory(50) ->create();* } } |  |
|  | sail artisan db:seed --class=PersonSeeder | Done |
|  | ashleyeatly@v0019227 lab3a-app % sail artisan db:seed --class=PersonSeeder  INFO Seeding database. |  |
|  | I re-ran this as the printout was bad and used  sail artisan migrate:fresh --seed  1,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  2,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  3,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  4,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  5,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  6,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  7,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  8,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  9,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  10,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  11,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  12,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06  13,Test Title 1,First name 1,SurName 1,Address 1 where 1,2010-03-31,1,2022-10-27 10:22:06,2022-10-27 10:22:06 |  |
|  |  |  |
|  | Once you have this working, create a factory that produces fairly realistic models. |  |
|  | sail artisan make:factory PersonFactory |  |
|  | **<?php  namespace** Database\Factories;  **use** Illuminate\Database\Eloquent\Factories\Factory;  */\*\*  \** ***@extends*** *\Illuminate\Database\Eloquent\Factories\Factory<\App\Models\Model>  \*/* **class** PersonFactory **extends** Factory {  */\*\*  \* Define the model's default state.  \*  \** ***@return*** *array<string, mixed>  \*/* **public function** definition()  {  **return** [  *//* ];  } } |  |

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|  | Adding the row definitions |  |
|  | **<?php  namespace** Database\Factories;  **use** Illuminate\Database\Eloquent\Factories\Factory;  */\*\*  \** ***@extends*** *\Illuminate\Database\Eloquent\Factories\Factory<\App\Models\Person>  \*/* **class** PersonFactory **extends** Factory {  */\*\*  \* Define the model's default state.  \*  \** ***@return*** *array<string, mixed>  \*/* **public function** definition()  {  **return** [  **'title'** => fake()->**title**(),  **'firstname'** => fake()->**firstName**(),  **'surname'** => fake()->**lastName**(),  **'address'** => fake()->**address**(),  **'date\_of\_birth'** => fake()->**date**(),  **'current'** => fake()->**boolean**(50),  **'created\_at'** => fake()->**date**(),  **'updated\_at'** => fake()->**date**(),  ];  } } |  |
|  | **Remove the original seeders** |  |
|  | **<?php  namespace** Database\Seeders;  **use** Illuminate\Database\Console\Seeds\WithoutModelEvents; **use** Illuminate\Database\Seeder;  **class** PersonSeeder **extends** Seeder {  */\*\*  \* Run the database seeds.  \*  \** ***@return*** *void  \*/* **public function** run()  { \App\Models\Person::*factory*(50) ->create();   } } |  |
|  | **ashleyeatly@v0019227 lab3a-app % sail artisan migrate:fresh --seed**  **Dropping all tables ................................................................................................................... 409ms DONE**  **INFO Preparing database.**  **Creating migration table ...............................57ms DONE**  **INFO Running migrations.**  **2014\_10\_12\_000000\_create\_users\_table .................. 79ms DONE**  **2014\_10\_12\_100000\_create\_password\_resets\_table ..........................................................32ms DONE**  **2019\_08\_19\_000000\_create\_failed\_jobs\_table ..........................................................41ms DONE**  **2019\_12\_14\_000001\_create\_personal\_access\_tokens\_table . 55ms DONE**  **2022\_10\_17\_143808\_create\_people\_table ..........................................................20ms DONE**  **INFO Seeding database.**  **Database\Seeders\PersonSeeder .........................................................RUNNING**  **Database\Seeders\PersonSeeder .........................................................735.16 ms DONE**  **ashleyeatly@v0019227 lab3a-app %** |  |
|  | **1,Dr.,Sophia,Hintz,"336 Mills Heights**  **South Icie, TX 49120-1771",1988-10-16,0,1996-10-07 00:00:00,1975-12-11 00:00:00**  **2,Prof.,Juliet,Cassin,"77180 Marks Cliff**  **Kreigerport, TN 62537",1995-01-06,1,1972-01-26 00:00:00,2017-07-05 00:00:00**  **3,Dr.,Lamont,Witting,"817 Edmond Wall**  **Alberthastad, GA 37241",1999-12-07,1,2014-07-02 00:00:00,1993-04-07 00:00:00**  **4,Dr.,Lavinia,Orn,"74139 General Gardens Apt. 548**  **Homenickbury, LA 75453-3143",1991-09-28,0,2020-05-19 00:00:00,1992-10-05 00:00:00**  **5,Dr.,Alycia,Hirthe,"450 Bergstrom Lights**  **West Arloborough, VT 24251",2002-05-23,0,2006-02-06 00:00:00,2012-12-10 00:00:00**  **6,Prof.,Marcelle,Smitham,"20981 Rhianna Hollow**  **Lutherton, AR 87623",1994-07-05,1,1982-02-10 00:00:00,2010-12-17 00:00:00**  **7,Mr.,Dortha,Swaniawski,"65478 Schaefer Station Suite 454**  **Paolochester, AK 07860-7394",2007-01-05,0,2000-09-04 00:00:00,2008-02-13 00:00:00**  **8,Mr.,Floy,Homenick,"42668 Elmira Inlet**  **Bruenland, OK 47434-9296",1985-10-18,0,2011-10-03 00:00:00,1988-09-05 00:00:00**  **9,Mrs.,Kacie,Klocko,"1944 Zieme Squares Suite 111**  **Port Skylar, CO 00121-4799",2020-09-02,0,1996-03-27 00:00:00,1990-11-26 00:00:00**  **10,Prof.,Dominique,Lang,"2830 Daugherty Throughway**  **East Mercedesshire, PA 34020-9767",1985-03-17,0,1985-06-15 00:00:00,2003-09-28 00:00:00**  **11,Dr.,Edgardo,Bashirian,"7196 Zulauf Glen Apt. 524**  **West Bell, FL 43558-5067",2019-03-12,0,2016-06-29 00:00:00,1980-05-10 00:00:00**  **12,Dr.,Rickie,Mohr,"63968 Sigurd Ville**  **Dariusfurt, MD 46400-3051",1978-04-20,1,1994-09-17 00:00:00,2012-08-16 00:00:00**  **13,Mr.,Meagan,Klein,"6181 Fay Common**  **Hermistonport, KS 75087-8609",2011-05-21,1,1986-07-18 00:00:00,1988-10-23 00:00:00** |  |
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