

Updating our Factory Relationships (Laravel 8+)

1. Introduction

If you open up `DatabaseSeeder.php` you'll see this line of code in `run` method:

```
Company::factory()->hasContacts(5)->count(50)->create();
```

If you remember, this code will create 50 companies, and for each generated company it will generate 5 contacts.

Now since we have added `user_id` column in both `companies` and `contacts` tables to link them to `users` table, we need to make a bit change to our factory relationships.

In this lesson I'm going to show you *two options* on how to update factory relationships.

2. 1st option: Simple option

First, before we generate companies and contacts table with Factory, we generate some users, let's say 5 users.

```
User::factory()->count(5)->create();

Company::factory()->hasContacts(5)->count(50)->create();
```

Second, let's open `CompanyFactory`. In `definition` method we add in the returned array a new item. The array key is `user_id`, while the value is contain id of the user that taken from `User` model randomly. Don't forget to import the `User` model namespace.

database/factories/CompanyFactory.php

```
public function definition()
{
    return [
        // ...
        'user_id' => User::pluck('id')->random()
    ];
}
```

Last, let's open `ContactFactory`. And we do almost the same way with `CompanyFactory`. Except, the value of `user_id` is not taken directly from `User` model. Why? Because if you remember `contacts` table also has relationship to `companies` table. We need to make both tables to have the same user id.

To do that we can randomly choose a company id, using that id to find the model instance, and then get its user id.

```
Company::pluck('id')->random()
Company::find(Company::pluck('id')->random())
Company::find(Company::pluck('id')->random())->user_id
```

Here how we implement that in `ContactFactory`.

database/factories/ContactFactory.php

```
public function definition()
{
    return [
        // ...
        'user_id' => Company::find(Company::pluck('id')->random())->user_id
    ];
}
```

An alternative way is to get all companies, take one item randomly, and get its user id. It's much simpler than the code before.

```
Company::all()->random()->user_id
```

Go to terminal and run this command.

```
php artisan migrate:fresh --seed
```

If you now see your database, you'll have 5 users, 50 companies with random user id, and then 250 contacts.

TABLES										
<div> <div>companies</div> <div>contacts</div> <div>failed_jobs</div> <div>migrations</div> <div>password_resets</div> <div>personal_access_tokens</div> <div>users</div> </div>										
TABLE INFORMATION										
<div> <div>created: 10/01/22</div> <div>updated: 10/01/22</div> <div>engine: InnoDB</div> <div>rows: 250</div> <div>size: 80.0 KiB</div> <div>encoding: utf8mb4</div> <div>auto_increment: 251</div> </div>										
<div> <div>Search: id</div> <div>Filter</div> </div>										
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1	Salma	Reichel	(530) 359-8689	mann.clare@hotmail.com	4802 Hilpert Shore "Lake Shanny,...	1	4	2022-01-10 03:58:37	2022	
2	Breanna	Weissnat	682-700-6664	lula.keeling@paucek.net	199 Ransom Roads "New Rayton,...	1	4	2022-01-10 03:58:37	2022	
3	Cullen	Dietrich	1-774-812-0847	orn.ole@yahoo.com	62852 Bode Stravenue "South Gayl,...	1	4	2022-01-10 03:58:37	2022	
4	Gregg	Schneider	352-804-7268	nbayer@hotmail.com	5339 Marlon Cliffs Apt. 202 "Dian,...	1	4	2022-01-10 03:58:37	2022	
5	Nia	Wilderman	331-415-4024	ikoep@torphy.net	34831 Homenick Cliff "Edamouth,...	1	4	2022-01-10 03:58:37	2022	
6	Avis	Kautzer	1-458-916-2524	shaun01@ullrich.com	428 Amara Greens "Serenityburgh,...	2	4	2022-01-10 03:58:37	2022	
7	Lesley	Schmeler	785-661-2152	maia72@hotmail.com	9624 Erika Junction "Roxaneshire,...	2	4	2022-01-10 03:58:37	2022	
8	Nyah	Roob	+1-862-635-4937	hherzog@gmail.com	430 Emil Divide Apt. 375 "West Sa,...	2	4	2022-01-10 03:58:37	2022	
9	Arlo	Murphy	(534) 253-8700	ibernier@fisher.net	4403 Rhoda Rest "East Saraihaven,...	2	4	2022-01-10 03:58:37	2022	
10	Henderson	Rice	1-757-755-5574	bzieme@nicolas.com	229 Tristian Grove "Jakobshire, TX,...	2	4	2022-01-10 03:58:37	2022	
11	Gage	Gottlieb	(813) 435-8326	ilockman@yahoo.com	49819 Berge Island Apt. 450 "Lake,...	3	4	2022-01-10 03:58:37	2022	
12	Reece	Oberbrunner	239-568-7379	heathcote.demarcus@gmail.com	228 Bruen Crescent "Schoenton, I,...	3	4	2022-01-10 03:58:37	2022	
13	Steve	Hagenes	+1-938-981-9361	ksteuber@schoen.com	661 Stiedemann Square "Jedediah,...	3	4	2022-01-10 03:58:37	2022	
14	Una	Pagac	904-353-2637	hortense.macejkovic@braun.biz	918 Maci Trail Apt. 603 "Tretan, C,...	3	3	2022-01-10 03:58:37	2022	
15	Devan	Larkin	650.588.4553	conn.dylan@gerhold.com	547 Anne Forest Suite 356 "Port M,...	3	4	2022-01-10 03:58:37	2022	
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17	Domingo	Fadel	+1 (856) 290-5312	pascalle.boyer@yahoo.com	88504 Janick Knolls "East Johnnby,...	4	4	2022-01-10 03:58:37	2022	
18	Ruthie	Fritsch	(253) 257-5402	wiegand.lemuel@hotmail.com	331 Chris Lock Apt. 151 "New Noe,...	4	4	2022-01-10 03:58:37	2022	
19	Hudson	Kovacek	(718) 869-0757	orin.nolan@gmail.com	91460 Okuneva Plains Suite 612 "L,...	4	4	2022-01-10 03:58:37	2022	
20	Keyon	Gerhold	+1-424-552-2902	adams.elinore@hotmail.com	154 Darien Manor "Travonburgh,...	4	3	2022-01-10 03:58:37	2022	
21	Loyal	Leffler	+1 (601) 734-0564	adolfo36@hartmann.com	44503 Pasquale Square Suite 592,...	5	4	2022-01-10 03:58:37	2022	
22	Shanna	Lubowitz	+1 (479) 515-8886	lura.anderson@yahoo.com	3655 Gutmann Lakes "North Myrtl,...	5	5	2022-01-10 03:58:37	2022	
23	Yasmeen	Schaefer	801.239.2673	ifisher@kirlin.biz	778 Koss Forest Apt. 619 "New Cl,...	5	5	2022-01-10 03:58:37	2022	
24	Arnaldo	Weimann	762.746.0240	nikolaus.verda@jacobi.com	315 Matilde Cove "Jastfurt, KY 170,...	5	4	2022-01-10 03:58:37	2022	
25	Jovanny	Farrell	480.575.3303	ddooley@howell.com	58214 Blaze Ville "Port Easter, WY,...	5	4	2022-01-10 03:58:37	2022	
26	Allison	Bosco	(361) 645-1201	pfannerstill.tyrique@rempe.com	47462 Upton Village Suite 672 "Ea,...	6	4	2022-01-10 03:58:37	2022	
27	Jackson	Mayer	+1-930-884-5774	eric46@gmail.com	419 Casandra Neck "Jalenside, CT,...	6	4	2022-01-10 03:58:37	2022	
28	Sadie	Yundt	1-727-472-0479	lavinia73@hotmail.com	9748 Clifton Roads "East Rudolph,...	6	4	2022-01-10 03:58:37	2022	

3. 2nd option: Advance

First, like the first option, before we generate companies and contacts table with Factory, we generate some users, we'll create 5 users in this case. Then we loop through each user instance using `each` method, and pass a function.

```
User::factory()->count(5)->create(function ($user) {  
  
});
```

Second, we move the `Company::factory` code into the function. We also change the number of companies that will be generated from `50` to `10`. However it will produce the same result: $5 \times 10 = 50$.

```
User::factory()->count(5)->create(function ($user) {  
    Company::factory()->hasContacts(5)->count(10)->create();  
});
```

Third, change `hasContacts` magic method to `has` method, and pass the `Contact::factory` in.

```
User::factory()->count(5)->create()->each(function ($user) {  
    Company::factory()->has(  
        Contact::factory()->count(5)  
    )  
    ->count(10)->create();  
});
```

Fourth, specify `user_id` in company model creation by specifying an array contains `user_id`. We can get the value from `$user` instance.

```
User::factory()->count(5)->create()->each(function ($user) {  
    Company::factory()->has(  
        Contact::factory()->count(5)  
    )  
    ->count(10)->create([  
        'user_id' => $user->id  
    ]);  
});
```

Last, we need to pass `user_id` to contact model creation. Since we're not call `create` method we cannot do the same way with the previous step. As alternative we can use [factory state](#) which return an array contains `user_id`. It's value is taken from the company instance.

```
User::factory()->count(5)->create()->each(function ($user) {
  Company::factory()->has(
    Contact::factory()->count(5)->state(function ($attributes, Company $company) {
      return ['user_id' => $company->user_id];
    })
  )
  ->count(10)->create([
    'user_id' => $user->id
  ]);
});
```

That's it, we don't need to touch `CompanyFactory`, `ContactFactory` or other files. Go to terminal and run this migrate & seed command.

```
php artisan migrate:fresh --seed
```

If you now see your database, you'll have 5 users, 50 companies with random user id, and then 250 contacts. You'll see in first 50 rows have user_id 1, next 50 rows have user_id 2, and so on.

TABLES

companies

contacts

failed_jobs

migrations

password_resets

personal_access_tokens

users

Search:

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Filter

	first_name	last_name	phone	email	address	company_id	user_id	created_at	updated_at
1	Efen	Ebert	+1 (409) 326-6260	benton.gerhold@considine.biz	1318 Predovic Roads\Adanview,...	1	1	2022-01-10 04:58:33	2022-01-
2	Skyla	Kassulke	(580) 475-2480	sjohnston@yahoo.com	3310 Gilberto Common Suite 194...	1	1	2022-01-10 04:58:33	2022-01-
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5	Ola	Schiller	470.883.8067	drake58@sporer.org	586 Hirthe Ramp\North Davon, P...	1	1	2022-01-10 04:58:33	2022-01-
6	Major	Smitham	484.494.9052	hanna80@yahoo.com	82479 Kozey Passage Apt. 020\Emm...	2	1	2022-01-10 04:58:33	2022-01-
7	Cristian	Romaquera	+1.760.789.5175	adam31@hotmail.com	60922 Merl Forge Suites 550\Nad...	2	1	2022-01-10 04:58:33	2022-01-
8	Assunta	Bayer	501-778-6032	eritchie@yahoo.com	49450 Douglas Fields\South Gudr...	2	1	2022-01-10 04:58:33	2022-01-
9	Amanda	Corkery	+1-678-314-9276	thea.lockman@mccclure.com	9332 Bosco Pass Suite 158\Oralm...	2	1	2022-01-10 04:58:33	2022-01-
10	Esteban	Durgan	+1-402-320-4049	kovacek.joelle@gmail.com	184 Walter Terrace Apt. 020\Emm...	2	1	2022-01-10 04:58:33	2022-01-
11	Rubie	Spinka	224-308-7238	raynor.jayda@yahoo.com	92174 Schaefer Freeway\North Ro...	3	1	2022-01-10 04:58:33	2022-01-10 04:58:33
12	Clara	Hamill	774.240.7593	meagan83@hotmail.com	3985 Era Crossing Apt. 376\New...	3	1	2022-01-10 04:58:33	2022-01-
13	Marge	Lakin	+1-559-657-7221	oceane82@gmail.com	608 Walker Corners\Abbotville...	3	1	2022-01-10 04:58:33	2022-01-
14	Billie	Satterfield	505.648.1332	anita59@hotmail.com	14430 Durgan Highway Apt. 206\K...	3	1	2022-01-10 04:58:33	2022-01-
15	Evan	Lind	(870) 571-3827	rudolph42@harber.net	964 Ilene Gateway\Smithshire, KY...	3	1	2022-01-10 04:58:33	2022-01-
16	Madge	Gleichner	+1-651-303-5962	maeve.cartwright@connelly.com	4604 Leffler Port Apt. 345\Mohrt...	4	1	2022-01-10 04:58:33	2022-01-
17	Retha	Watsica	731-683-6402	charles95@koss.net	14649 Marks Lodge\New Juanita...	4	1	2022-01-10 04:58:33	2022-01-
18	Florence	Bernhard	(218) 699-1592	kyle.olson@gmail.com	1654 Arielle Run\Hoegerberg, MS...	4	1	2022-01-10 04:58:33	2022-01-
19	Jaime	Schuster	1-260-817-2463	pollich.khall@gmail.com	45457 Kyleigh Forge Apt. 413\L...	4	1	2022-01-10 04:58:33	2022-01-
20	Vidal	Frami	1-434-866-7140	fay.nola@gleason.com	8371 Pedro Stravenue\Guskowski...	4	1	2022-01-10 04:58:33	2022-01-
21	Jennie	Prohaska	+1 (754) 995-4992	okuneva.ervin@yahoo.com	17368 Moore Hill\Streichchester...	5	1	2022-01-10 04:58:33	2022-01-
22	Zoey	Konopelski	561.623.1188	roy.smith@yahoo.com	50541 Wisozk Points Suite 955\G...	5	1	2022-01-10 04:58:33	2022-01-
23	Amanda	Roob	+1-463-644-1958	doug.medhurst@hotmail.com	843 Roxanne Key\Kiehnmouth, M...	5	1	2022-01-10 04:58:33	2022-01-
24	Stefanie	Leuschke	+1 (585) 427-5407	everardo.bergstrom@yahoo.com	638 Hand Camp Suite 720\Lake...	5	1	2022-01-10 04:58:33	2022-01-
25	Sarai	Lindgren	1-380-950-7229	laury.harvey@tromp.com	84008 Brooks Viaduct\East Newto...	5	1	2022-01-10 04:58:33	2022-01-
26	Marilyne	Bogan	1-510-948-0998	jessie.mitchell@gmail.com	849 Elsa Plains Apt. 945\South Es...	6	1	2022-01-10 04:58:33	2022-01-
27	Alvis	Schumm	(743) 970-0405	verner.homenick@carter.org	11344 Bonnie View\New Birdie, A...	6	1	2022-01-10 04:58:33	2022-01-
28	Raquel	Hamill	916.958.3475	libby95@gorczany.com	8961 Antwon Station\East Elwinc...	6	1	2022-01-10 04:58:33	2022-01-

TABLE INFORMATION

created: 10/01/22

updated: 10/01/22

engine: InnoDB

rows: 250

size: 80,0 K B

encoding: utf8mb4

auto_increment: 251

25 rows in table: 1 row selected

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