

## Product (Computer)

```
1  <?php
2
3  namespace App\Models;
4
5  use Illuminate\Database\Eloquent\Factories\HasFactory;
6  use Illuminate\Database\Eloquent\Model;
7
8  class Computer extends Model
9  {
10     use HasFactory;
11
12     protected $fillable = ['cpu', 'ram', 'storage'];
13
14     // Usa casting para convertir el campo `parts` en un array automáticamente
15     protected $casts = [
16         'parts' => 'array',
17     ];
18 }
```

## Builder

```
1  <?php
2
3  namespace App\Patron;
4
5
6  /**
7   * La interfaz Builder especifica métodos para crear las diferentes partes del computador.
8   */
9  interface Builder
10 {
11     public function buildCPU(): void;
12
13     public function buildRAM(): void;
14
15     public function buildStorage(): void;
16 }
```

## ConcreteBuilder (Computer Builder):

```
1  <?php
2  namespace App\Patron;
3
4
5  use App\Models\Computer;
6  use App\Patron\Builder;
7  use App\Patron\Director;
8
9  class ComputerBuilder implements Builder
10 {
11     private $computer;
12
13     public function __construct()
14     {
15         $this->reset();
16     }
17
18     public function reset(): void
19     {
20         $this->computer = new Computer();
21         $this->computer->parts = []; // Inicializa el array de parts
22     }
23
24     public function buildCPU(): void
25     {
26         $parts = $this->computer->parts;
27         $parts[] = "Intel i7 CPU";
28         $this->computer->parts = $parts;
29     }
30 }
```

```
31     public function buildRAM(): void
32     {
33         $parts = $this->computer->parts;
34         $parts[] = "16GB RAM";
35         $this->computer->parts = $parts;
36     }
37
38     public function buildStorage(): void
39     {
40         $parts = $this->computer->parts;
41         $parts[] = "512GB SSD";
42         $this->computer->parts = $parts;
43     }
44
45     public function getComputer(): Computer
46     {
47         $result = $this->computer;
48         $this->reset();
49
50         return $result;
51     }
52 }
```

## Director:

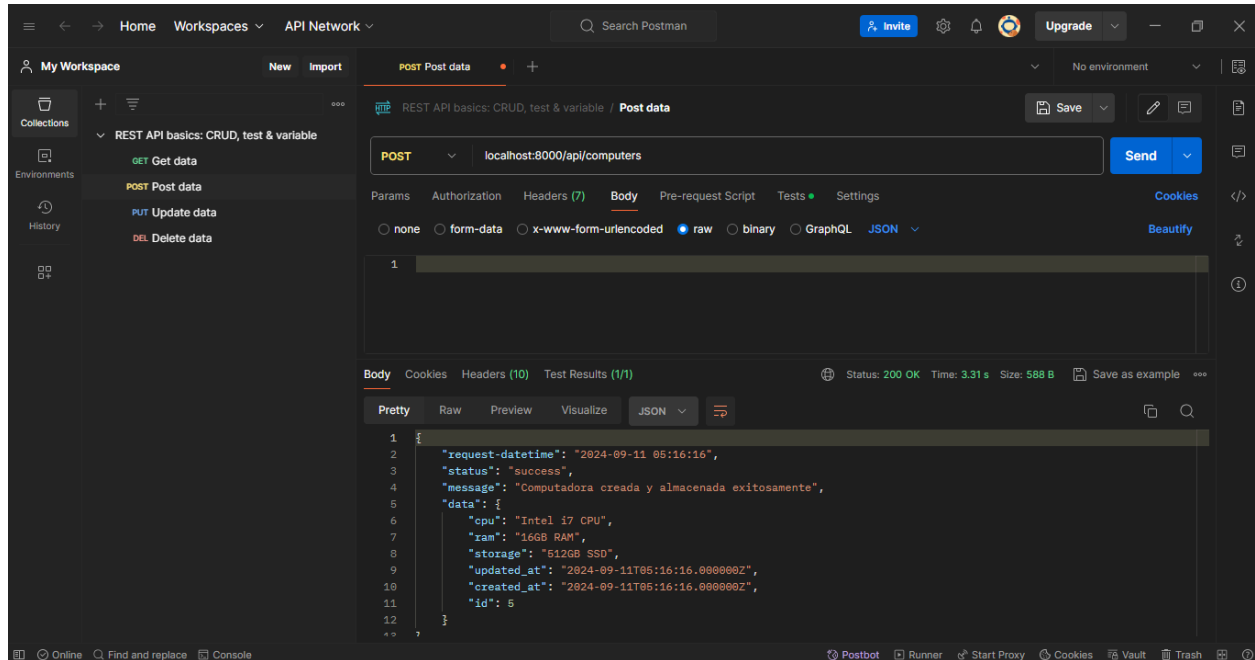
```
1  <?php
2
3  namespace App\Patron;
4
5  use App\Patron\Builder;
6
7  class Director
8  {
9      private $builder;
10
11     public function setBuilder(Builder $builder): void
12     {
13         $this->builder = $builder;
14     }
15
16     public function buildBasicComputer(): void
17     {
18         $this->builder->buildCPU();
19     }
20
21     public function buildHighEndComputer(): void
22     {
23         $this->builder->buildCPU();
24         $this->builder->buildRAM();
25         $this->builder->buildStorage();
26     }
27 }
```

## ClientCode (Computer Controller):

```
1  <?php
2
3  namespace App\Http\Controllers;
4
5
6  use Illuminate\Http\Request;
7  use App\Models\Computer;
8  use App\Patron\ComputerBuilder;
9  use App\Patron\Director;
10
11 class ComputerController extends Controller
12 {
13     public function store(Request $request)
14     {
15         $director = new Director();
16         $builder = new ComputerBuilder();
17         $director->setBuilder($builder);
18
19         // Construcción de un computador de alta gama (High-End)
20         $director->buildHighEndComputer();
21
22         // Para computador básico, usa esta línea en su lugar:
23         //$director->buildBasicComputer();
24
25         // Para un computador personalizado, puedes usar esto directamente:
26         //$builder->buildCPU();
27         //$builder->buildStorage();
28
29
```

```
30         $computer = $builder->getComputer();
31
32         // Guardar en la base de datos
33         $newComputer = Computer::create([
34             'cpu' => $computer->parts[0] ?? null,
35             'ram' => $computer->parts[1] ?? null,
36             'storage' => $computer->parts[2] ?? null,
37         ]);
38
39         return response()->json([
40             'request-datetime' => Date('Y-m-d H:i:s'),
41             'status' => 'success',
42             'message' => 'Computadora creada y almacenada exitosamente',
43             'data' => $newComputer
44         ]);
45     }
46 }
47
```

## Resultado de la ejecución (Postman):



computer\_example.computers: 5 rows total (approximately)

» Next

id	cpu	ram	storage	created_at	updated_at
1	Intel i7 CPU	16GB RAM	512GB SSD	2024-09-05 09:45:34	2024-09-05 09:45:34
2	Intel i7 CPU	(NULL)	(NULL)	2024-09-05 09:48:59	2024-09-05 09:48:59
3	Intel i7 CPU	512GB SSD	(NULL)	2024-09-05 09:50:27	2024-09-05 09:50:27
4	Intel i7 CPU	16GB RAM	512GB SSD	2024-09-05 09:50:41	2024-09-05 09:50:41
5	Intel i7 CPU	16GB RAM	512GB SSD	2024-09-11 05:16:16	2024-09-11 05:16:16