



TECNOLÓGICO  
NACIONAL DE MÉXICO



TECNOLÓGICO NACIONAL DE MÉXICO

INSTITUTO TECNOLÓGICO DE MILPA ALTA II

ASIGNATURA:

MEAN STACK FOR FRONT – END

TEMA:

PRACTICA FINAL

ELABORA:

POZOS RIVERA ALEJANDRO

NÚMERO DE CONTROL:

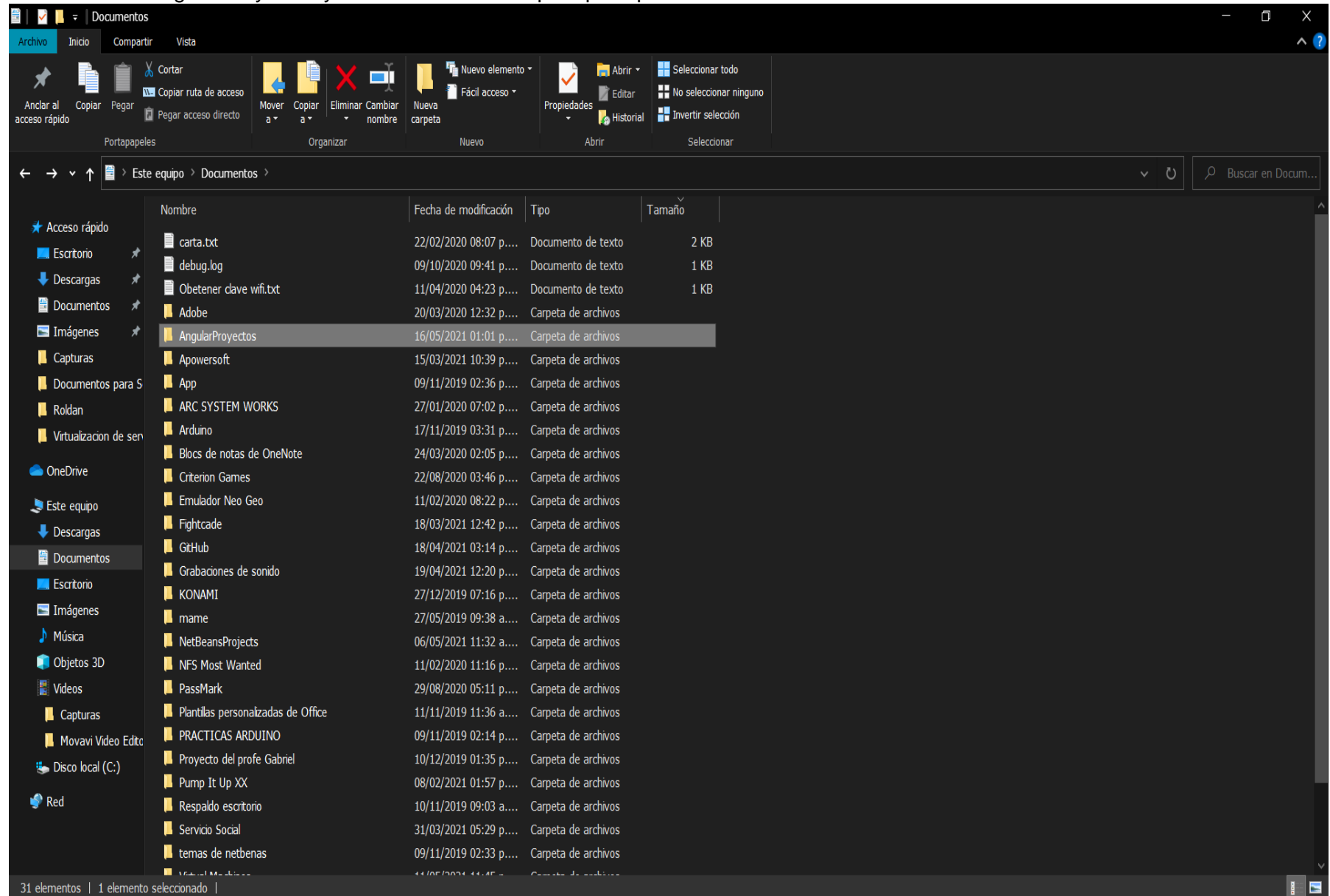
171190025

PROFESOR:

ROLDAN AQUINO SEGURA

23 DE MAYO DE 2021

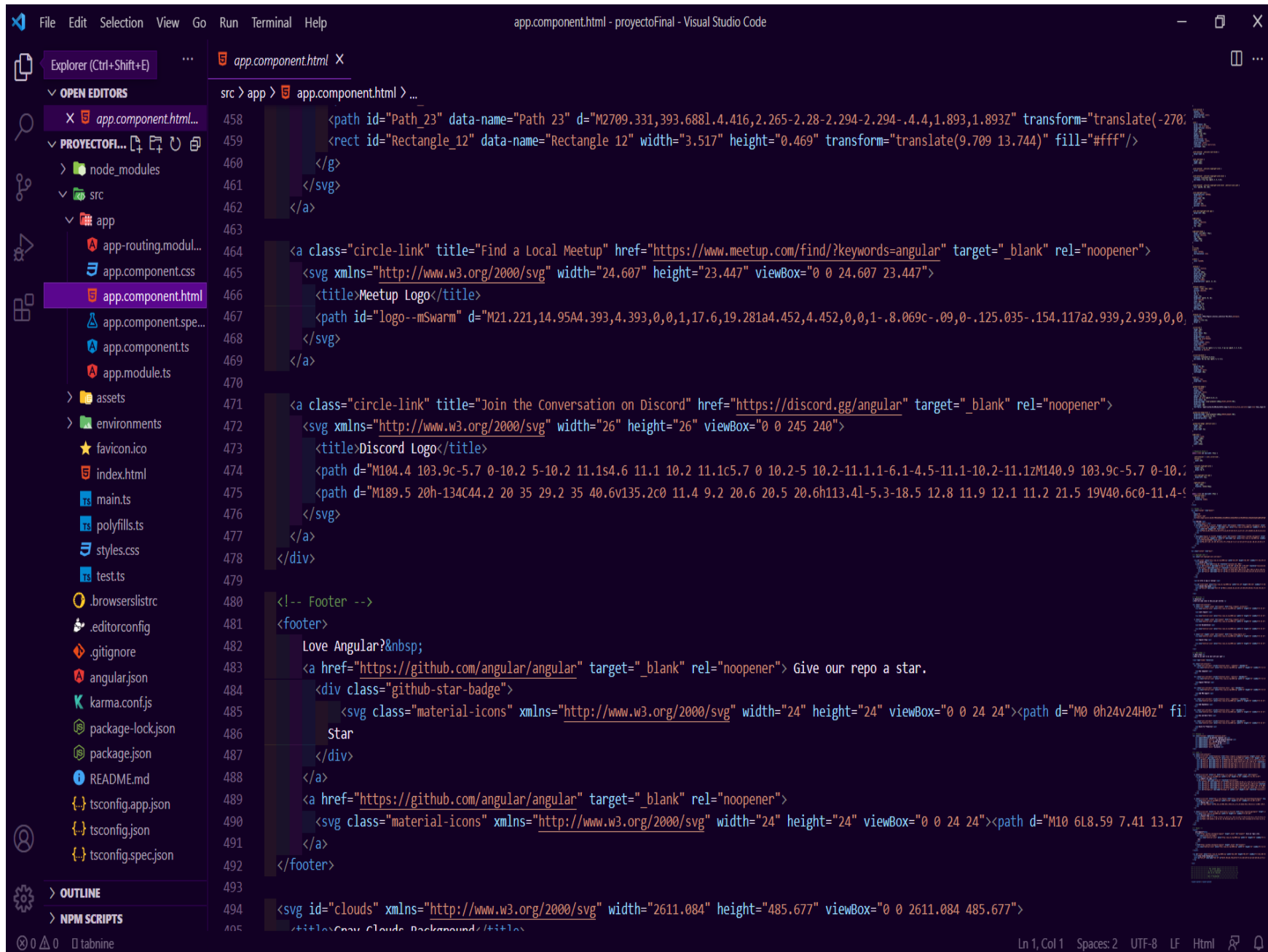
Ahora vamos a crear la carpeta donde se empezarán a alojar los proyectos que se vayan generando. La carpeta que cree lleva como nombre AngularProyectos y está dentro de la carpeta principal de documentos.



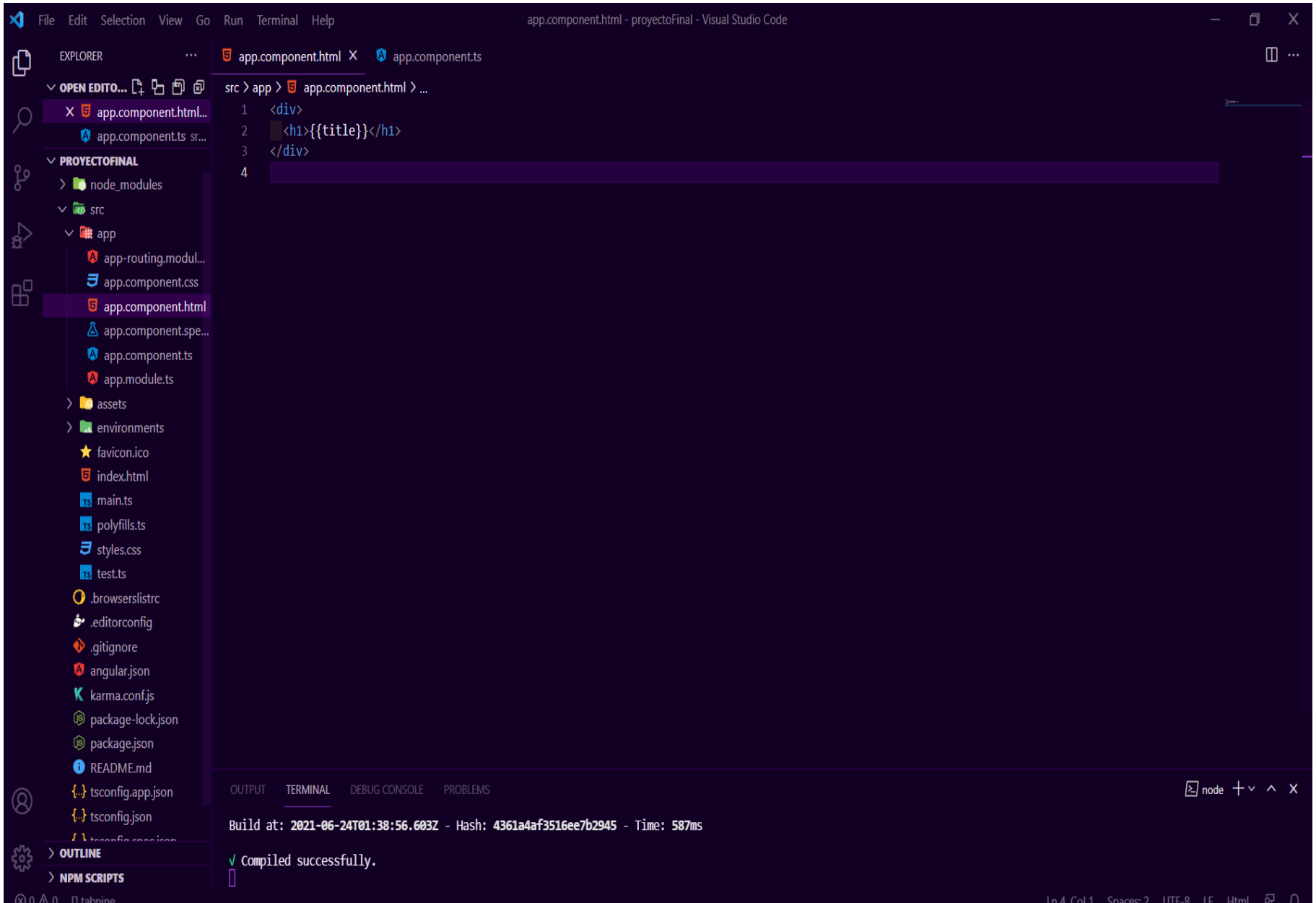
Creamos un nuevo proyecto, pero debemos ingresar la ruta donde se creó la carpeta, por ejemplo.  
C:\Users\Admin\Documents\AngularProyectos.

```
Seleccionar npm install
C:\Users\Admin\Documents\AngularProyectos>ng new proyectoFinal
? Would you like to add Angular routing? Yes
? Which stylesheet format would you like to use? CSS
CREATE proyectoFinal/angular.json (3081 bytes)
CREATE proyectoFinal/package.json (1076 bytes)
CREATE proyectoFinal/README.md (1059 bytes)
CREATE proyectoFinal/tsconfig.json (783 bytes)
CREATE proyectoFinal/.editorconfig (274 bytes)
CREATE proyectoFinal/.gitignore (604 bytes)
CREATE proyectoFinal/.browserslistrc (703 bytes)
CREATE proyectoFinal/karma.conf.js (1430 bytes)
CREATE proyectoFinal/tsconfig.app.json (287 bytes)
CREATE proyectoFinal/tsconfig.spec.json (333 bytes)
CREATE proyectoFinal/src/favicon.ico (948 bytes)
CREATE proyectoFinal/src/index.html (299 bytes)
CREATE proyectoFinal/src/main.ts (372 bytes)
CREATE proyectoFinal/src/polyfills.ts (2820 bytes)
CREATE proyectoFinal/src/styles.css (80 bytes)
CREATE proyectoFinal/src/test.ts (743 bytes)
CREATE proyectoFinal/src/assets/.gitkeep (0 bytes)
CREATE proyectoFinal/src/environments/environment.prod.ts (51 bytes)
CREATE proyectoFinal/src/environments/environment.ts (658 bytes)
CREATE proyectoFinal/src/app/app-routing.module.ts (245 bytes)
CREATE proyectoFinal/src/app/app.module.ts (393 bytes)
CREATE proyectoFinal/src/app/app.component.html (23809 bytes)
CREATE proyectoFinal/src/app/app.component.spec.ts (1078 bytes)
CREATE proyectoFinal/src/app/app.component.ts (217 bytes)
CREATE proyectoFinal/src/app/app.component.css (0 bytes)
```

Vamos a abrir el proyecto dentro de nuestro editor de texto en mi caso visual studio code.



Borramos todo lo que hay en aap.component.html.



The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left. The 'PROJECTFINAL' folder is expanded, showing the 'app' subfolder. The 'app.component.html' file is selected. The main editor displays the content of 'app.component.html', which is currently empty, indicating that all content has been deleted. The file explorer shows various files and folders, including 'node\_modules', 'src', 'assets', 'environments', 'favicon.ico', 'index.html', 'main.ts', 'polyfills.ts', 'styles.css', 'test.ts', '.browserslistrc', '.editorconfig', '.gitignore', 'angular.json', 'karma.conf.js', 'package-lock.json', 'package.json', 'README.md', 'tsconfig.app.json', and 'tsconfig.json'. The bottom status bar shows 'Ln 4, Col 1' and 'Spaces: 2'.

```
src > app > app.component.html > ...
1 <div>
2   <h1>{{title}}</h1>
3 </div>
4
```

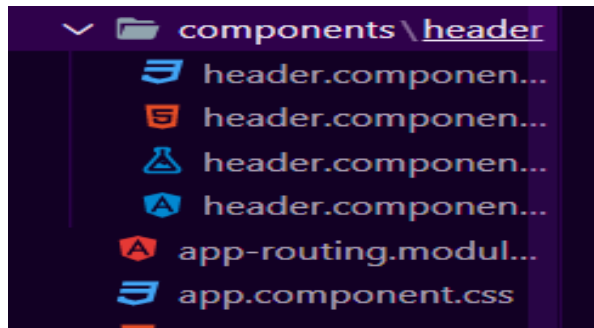
OUTPUT TERMINAL DEBUG CONSOLE PROBLEMS

Build at: 2021-06-24T01:38:56.603Z - Hash: 4361a4af3516ee7b2945 - Time: 587ms

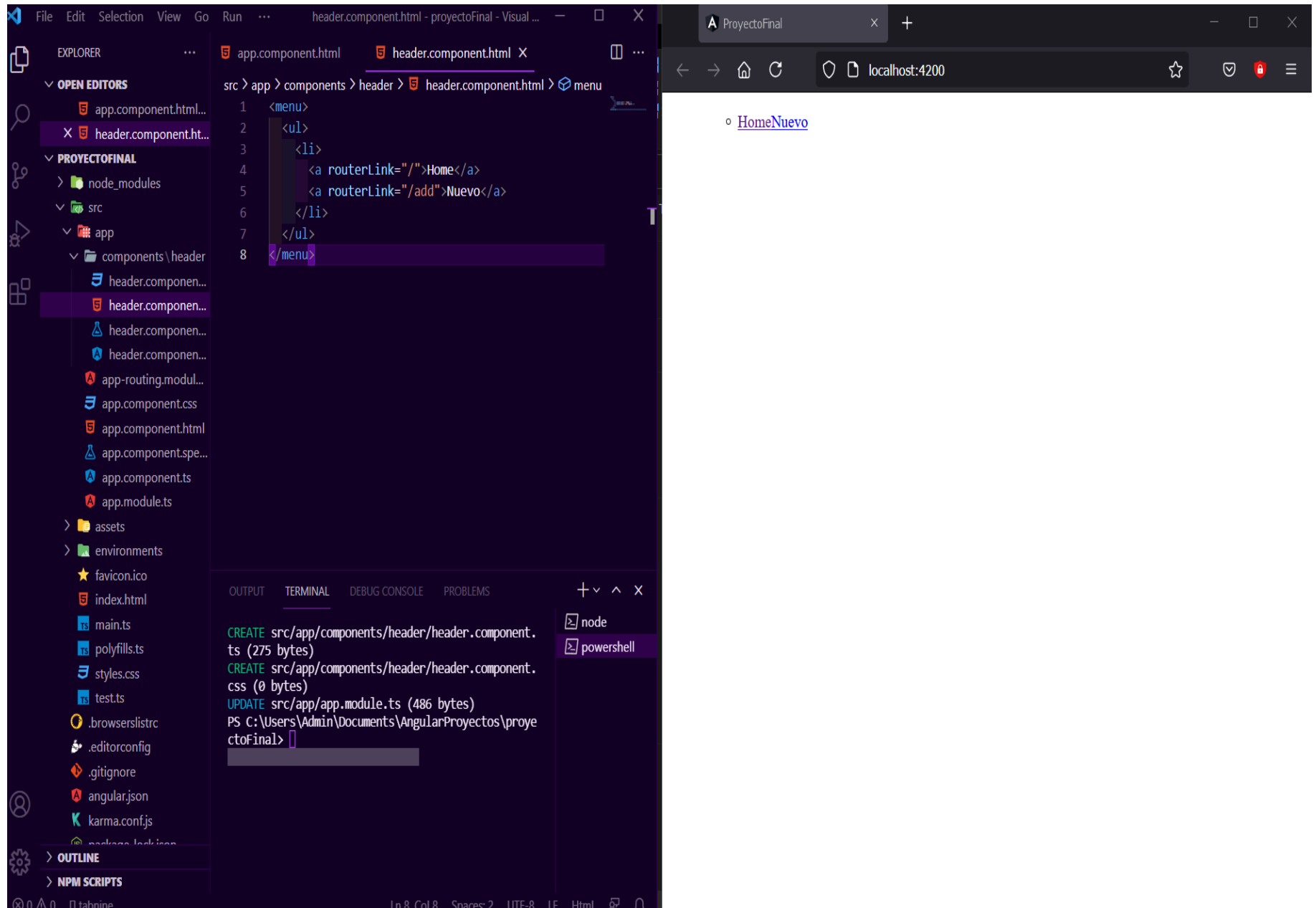
✓ Compiled successfully.

Creamos un nuevo componente.

```
CREATE src/app/components/header/header.component.ts (275 bytes)  
CREATE src/app/components/header/header.component.css (0 bytes)  
UPDATE src/app/app.module.ts (486 bytes)  
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal>
```



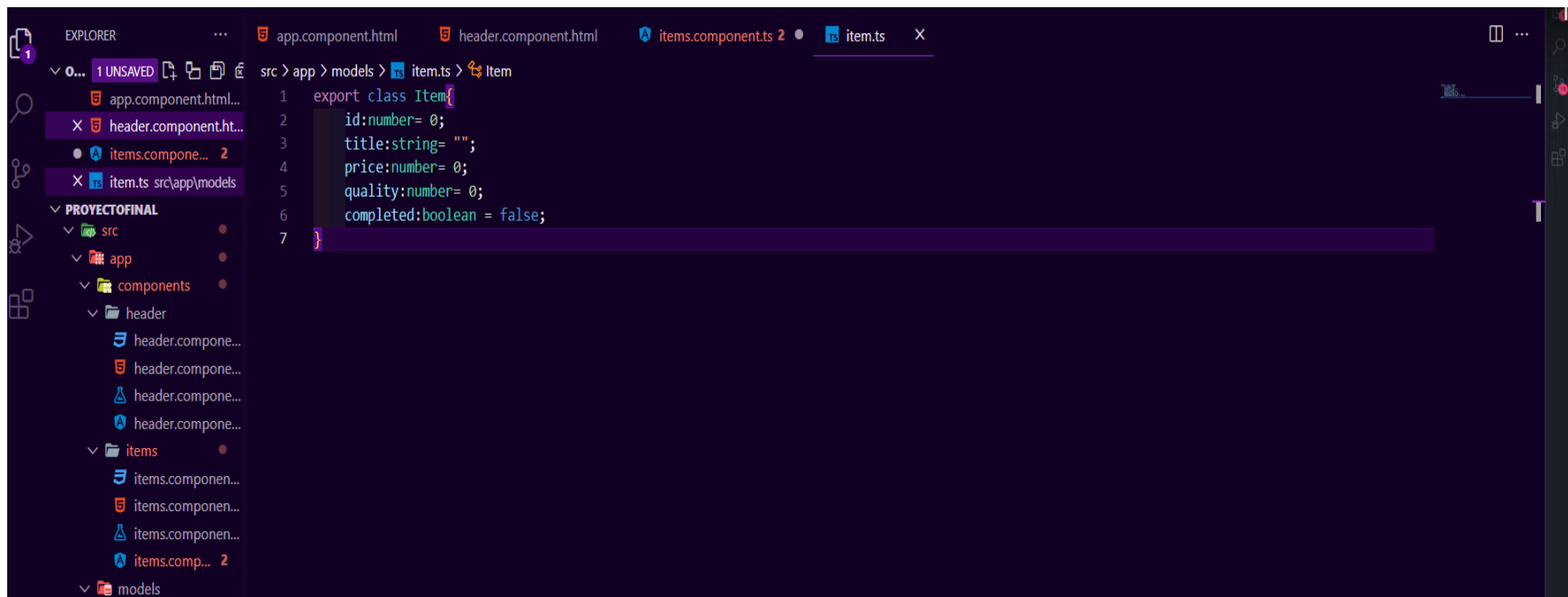
Dentro del componente de `header.component.html` vamos a escribir lo siguiente y se mostrara al mismo tiempo en la web



Creamos el componente de ítems

```
UPDATE src/app/app.module.ts (486 bytes)
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal> ng generate component components/items
CREATE src/app/components/items/items.component.html (20 bytes)
CREATE src/app/components/items/items.component.spec.ts (619 bytes)
CREATE src/app/components/items/items.component.ts (271 bytes)
CREATE src/app/components/items/items.component.css (0 bytes)
UPDATE src/app/app.module.ts (575 bytes)
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal>
```

Creamos una carpeta dentro de app llamada models y dentro de esta un archivo llamado item.ts



The screenshot shows the Visual Studio Code interface. On the left, the Explorer sidebar displays the project structure. The 'models' folder is expanded, showing the 'item.ts' file. The main editor area displays the content of 'item.ts', which defines an 'Item' class with properties: 'id' (number), 'title' (string), 'price' (number), 'quality' (number), and 'completed' (boolean).

```
src > app > models > item.ts > Item
1 export class Item {
2     id:number= 0;
3     title:string= "";
4     price:number= 0;
5     quality:number= 0;
6     completed:boolean = false;
7 }
```



Dentro del archivo `items.component.ts` vamos a crear un array con 2 objetos.

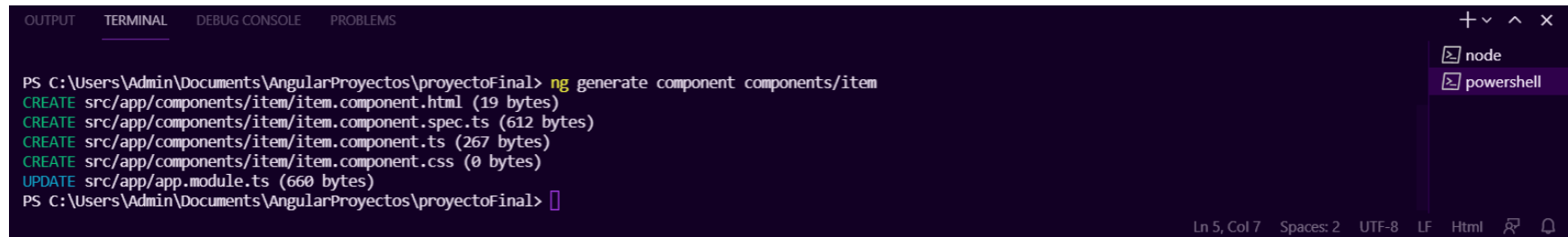
```
constructor() { }

ngOnInit(): void {
  this.items = [
    {
      id:0,
      title: 'manzana',
      price: 10.5,
      quantity: 4,
      completed: false
    },
    {
      id:1,
      title: 'pan',
      price: 3.5,
      quantity: 8,
      completed: false
    }
  ];
}
```

Dentro del archivo `items.component.html` vamos a crear una iteración por medio de `*ngFor`.

```
src > app > components > items > items.component.html > div
Go to component
1 <div>
2   <div *ngFor="let item of items">
3     {{item.title}}
4   </div>
5 </div>
```

Vamos a crear un nuevo componente llamado item



```
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal> ng generate component components/item
CREATE src/app/components/item/item.component.html (19 bytes)
CREATE src/app/components/item/item.component.spec.ts (612 bytes)
CREATE src/app/components/item/item.component.ts (267 bytes)
CREATE src/app/components/item/item.component.css (0 bytes)
UPDATE src/app/app.module.ts (660 bytes)
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal>
```

Ln 5, Col 7 Spaces: 2 UTF-8 LF Html

Visual Studio Code interface showing the Explorer, Editor, and Terminal panels.

**Explorer Panel:** Displays the file structure of the project. The "src" folder is expanded, showing "app", "components", "header", and "item" subfolders. The "item" folder is selected, showing "item.component.html", "item.component.spec.ts", "item.component.ts", and "item.component.css".

**Editor Panel:** Displays the content of the selected file, "item.component.html". The code is as follows:

```
1 <div>
2   <div>
3     {{title}}
4   </div>
5   <div>
6     {{price}}
7   </div>
8   <div>
9     {{quantity}}
10  </div>
11  <div>
12    {{total}}
13  </div>
14 </div>
```

**Terminal Panel:** Displays the output of the command executed in the terminal. The command is "ng generate component components/item". The output shows the files created and updated:

```
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal> ng generate component components/item
CREATE src/app/components/item/item.component.html (19 bytes)
CREATE src/app/components/item/item.component.spec.ts (612 bytes)
CREATE src/app/components/item/item.component.ts (267 bytes)
CREATE src/app/components/item/item.component.css (0 bytes)
UPDATE src/app/app.module.ts (660 bytes)
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal>
```

**Bottom Bar:** Shows the current line and column (Ln 15, Col 1), the number of spaces (Spaces: 2), the encoding (UTF-8), the line feed (LF), the file type (Html), and the status bar.

Visual Studio Code interface showing the Explorer, Editor, and Terminal panels.

**Explorer Panel:** Displays the project structure for 'projectoFinal'. The 'src' directory is expanded, showing 'app' and 'components'. The 'components' directory is expanded, showing 'header' and 'item'. The 'item' directory is expanded, showing 'item.component.html', 'item.component.spec.ts', 'item.component.ts', and 'item.component.css'. The 'item.component.ts' file is selected.

**Editor Panel:** Displays the code for 'item.component.ts'. The code is as follows:

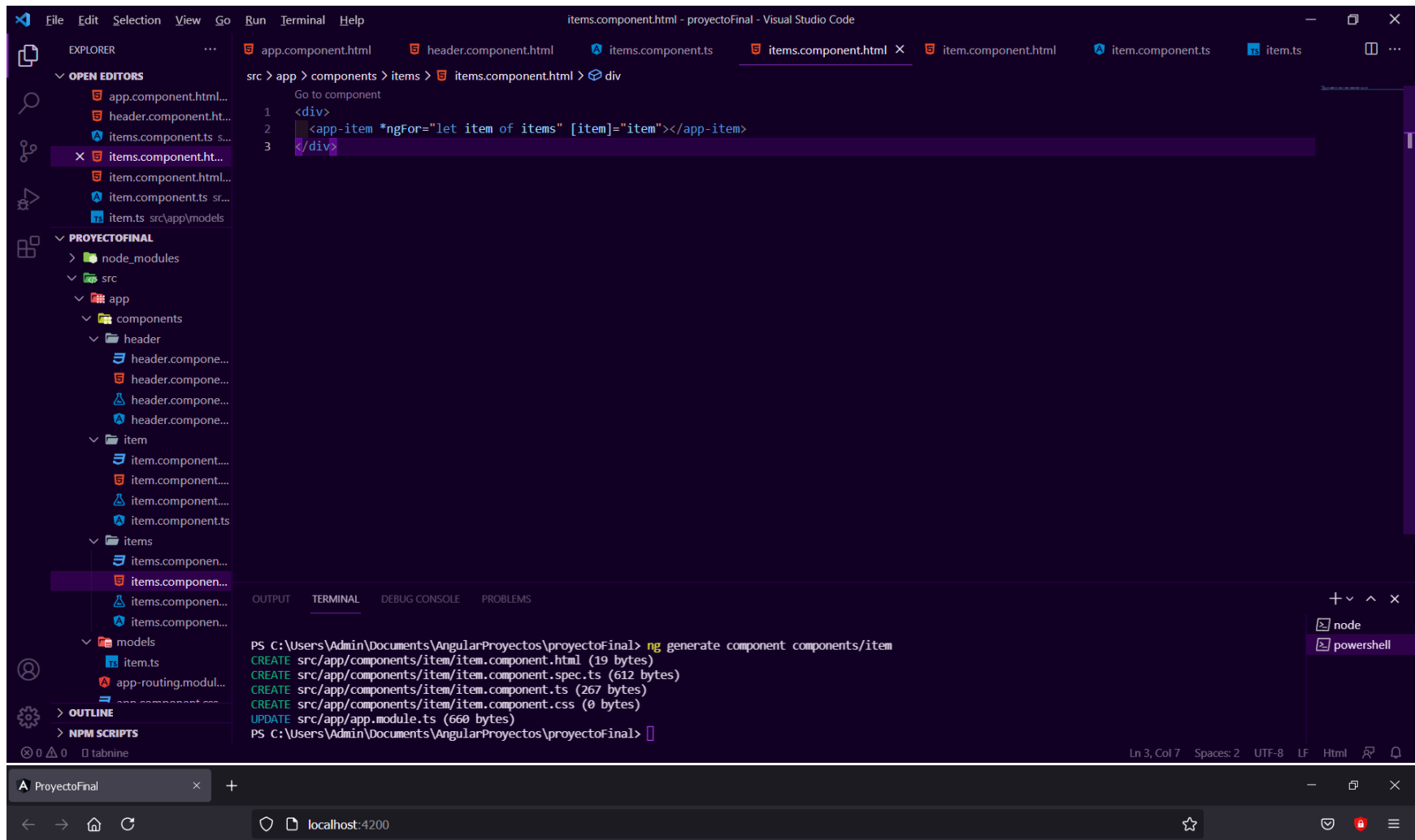
```
src > app > components > item > item.component.ts > ItemComponent > ngOnInit  
1 import { Component, Input, OnInit } from '@angular/core';  
2 import { Item } from 'src/app/models/item';  
3  
4 @Component({  
5   selector: 'app-item',  
6   templateUrl: './item.component.html',  
7   styleUrls: ['./item.component.css']  
8 })  
9 export class ItemComponent implements OnInit {  
10  
11   @Input() item: Item = new Item();  
12  
13   constructor() { }  
14  
15   ngOnInit(): void {  
16  
17  
18 }  
19
```

**Terminal Panel:** Displays the output of the command 'ng generate component components/item'. The output is as follows:

```
PS C:\Users\Admin\Documents\AngularProjectos\projectoFinal> ng generate component components/item  
CREATE src/app/components/item/item.component.html (19 bytes)  
CREATE src/app/components/item/item.component.spec.ts (612 bytes)  
CREATE src/app/components/item/item.component.ts (267 bytes)  
CREATE src/app/components/item/item.component.css (0 bytes)  
UPDATE src/app/app.module.ts (660 bytes)  
PS C:\Users\Admin\Documents\AngularProjectos\projectoFinal>
```

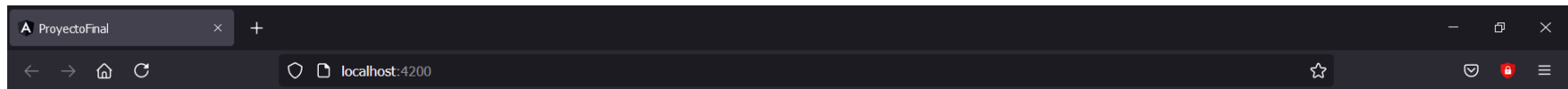
**Terminal Panel:** Displays the output of the command 'ng generate component components/item'. The output is as follows:

```
PS C:\Users\Admin\Documents\AngularProjectos\projectoFinal> ng generate component components/item  
CREATE src/app/components/item/item.component.html (19 bytes)  
CREATE src/app/components/item/item.component.spec.ts (612 bytes)  
CREATE src/app/components/item/item.component.ts (267 bytes)  
CREATE src/app/components/item/item.component.css (0 bytes)  
UPDATE src/app/app.module.ts (660 bytes)  
PS C:\Users\Admin\Documents\AngularProjectos\projectoFinal>
```



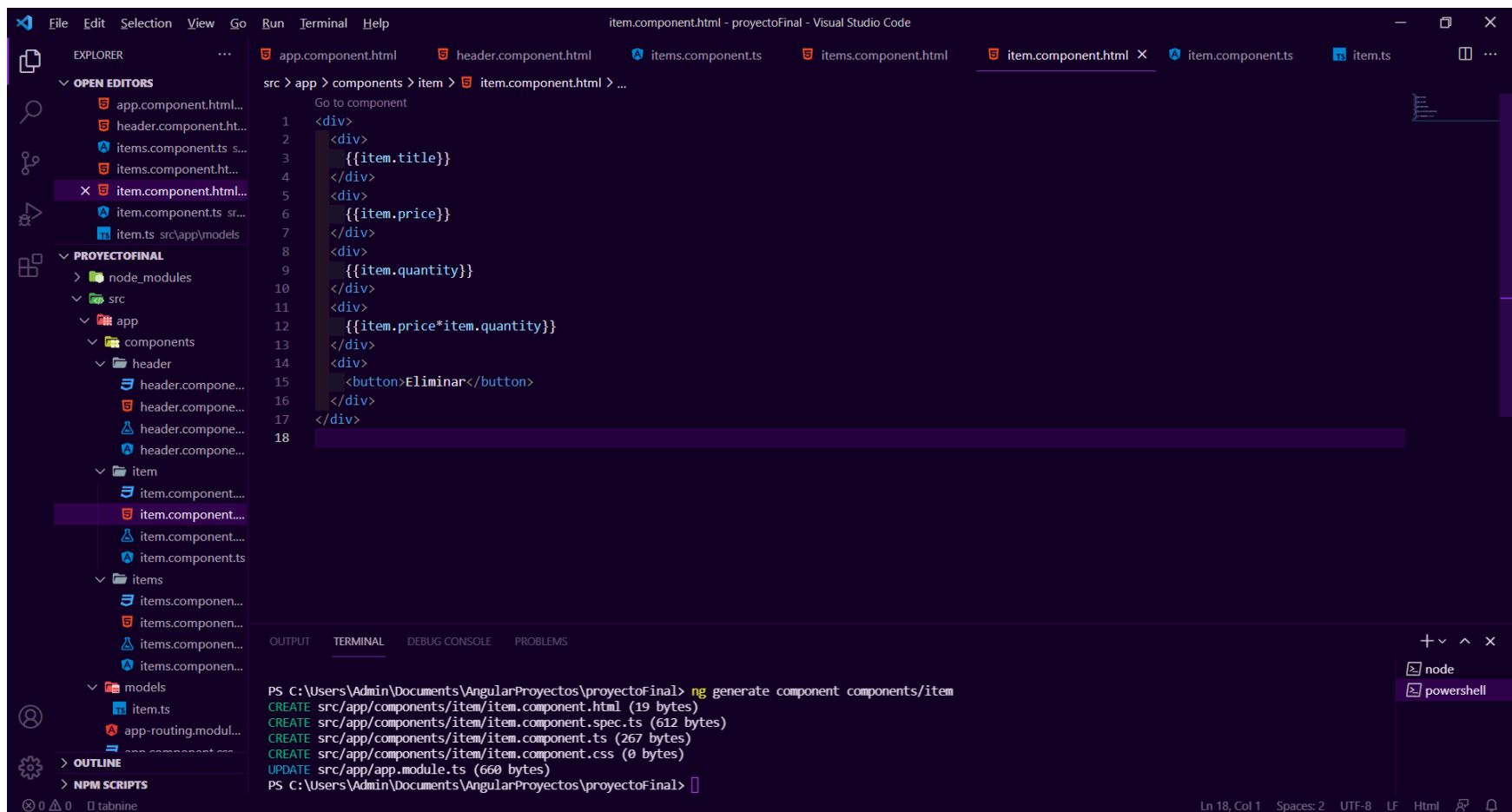
◦ [HomeNuevo](#)

manzana  
10.5  
4  
42  
pan  
3.5  
8  
28



◦ [HomeNuevo](#)

manzana  
10.5  
4  
42  
Eliminar  
pan  
3.5  
8  
28  
Eliminar



Visual Studio Code interface showing a TypeScript file named `item.service.ts` in the `src > app > services > item.service.ts` path. The file contains a `return` statement with an array of objects representing items.

```
11 return [
12   {
13     id:0,
14     title: 'manzana',
15     price: 10.5,
16     quantity: 4,
17     completed: false
18   },
19   {
20     id:1,
21     title: 'pan',
22     price: 3.5,
23     quantity: 8,
24     completed: true
25   },
26 ],
27 {
28   id:2,
29   title: 'chamarra',
30   price: 300,
31   quantity: 1,
32   completed: false
33 }
34 ];
35 }
36 }
37
```

The Explorer sidebar shows the project structure:

- PROJECTOFINAL
  - additem.component.ts
  - header
    - header.component.css
    - header.component.html
    - header.component.spec.ts
    - header.component.ts
  - item
    - item.component.css
    - item.component.html
    - item.component.spec.ts
    - item.component.ts
  - items
    - items.component.css
    - items.component.html
    - items.component.spec.ts
    - items.component.ts
  - total
    - total.component.css
    - total.component.html
    - total.component.spec.ts
    - total.component.ts
  - models
  - services
    - item.service.spec.ts
    - item.service.ts**
    - app-routing.module.ts
    - app.component.css
    - app.component.html
    - app.component.spec.ts
    - app.component.ts
- OUTLINE
- NPM SCRIPTS

The Output/TERMINAL pane shows the following output:

```
main.js | main | 35.83 kB
4 unchanged chunks
Build at: 2021-06-24T03:58:55.390Z - Hash: 41cba3580d583663719b - Time: 520ms
✓ Compiled successfully.
```

The status bar at the bottom indicates the current position: Ln 32, Col 25, Spaces: 2, UTF-8, LF, typescript, 4.3.2.

Visual Studio Code interface showing a TypeScript file named `item.service.ts` in the `src > app > services > item.service.ts` path. The file contains the following code:

```
1 import { Injectable } from '@angular/core';
2
3 @Injectable({
4   providedIn: 'root'
5 })
6 export class ItemService {
7
8   constructor() { }
9
10  getItems(){
11    return [
12      {
13        id:0,
14        title: 'manzana',
15        price: 10.5,
16        quantity: 4,
17        completed: false
18      },
19      {
20        id:1,
21        title: 'pan',
22        price: 3.5,
23        quantity: 8,
24        completed: true
25      },
26    ],
27    [
28      { id:2,
```

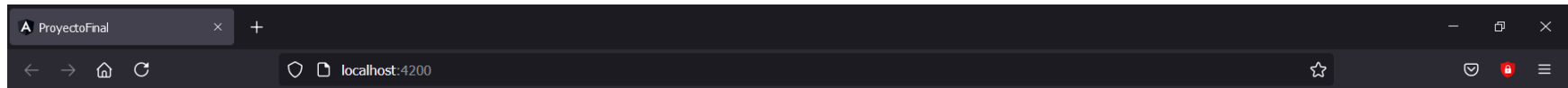
The Explorer sidebar on the left shows the project structure, including folders like `header`, `item`, `items`, `total`, `models`, and `services`. The `services` folder is expanded, showing `item.service.spec.ts` and `item.service.ts`.

The Output window at the bottom shows the following build output:

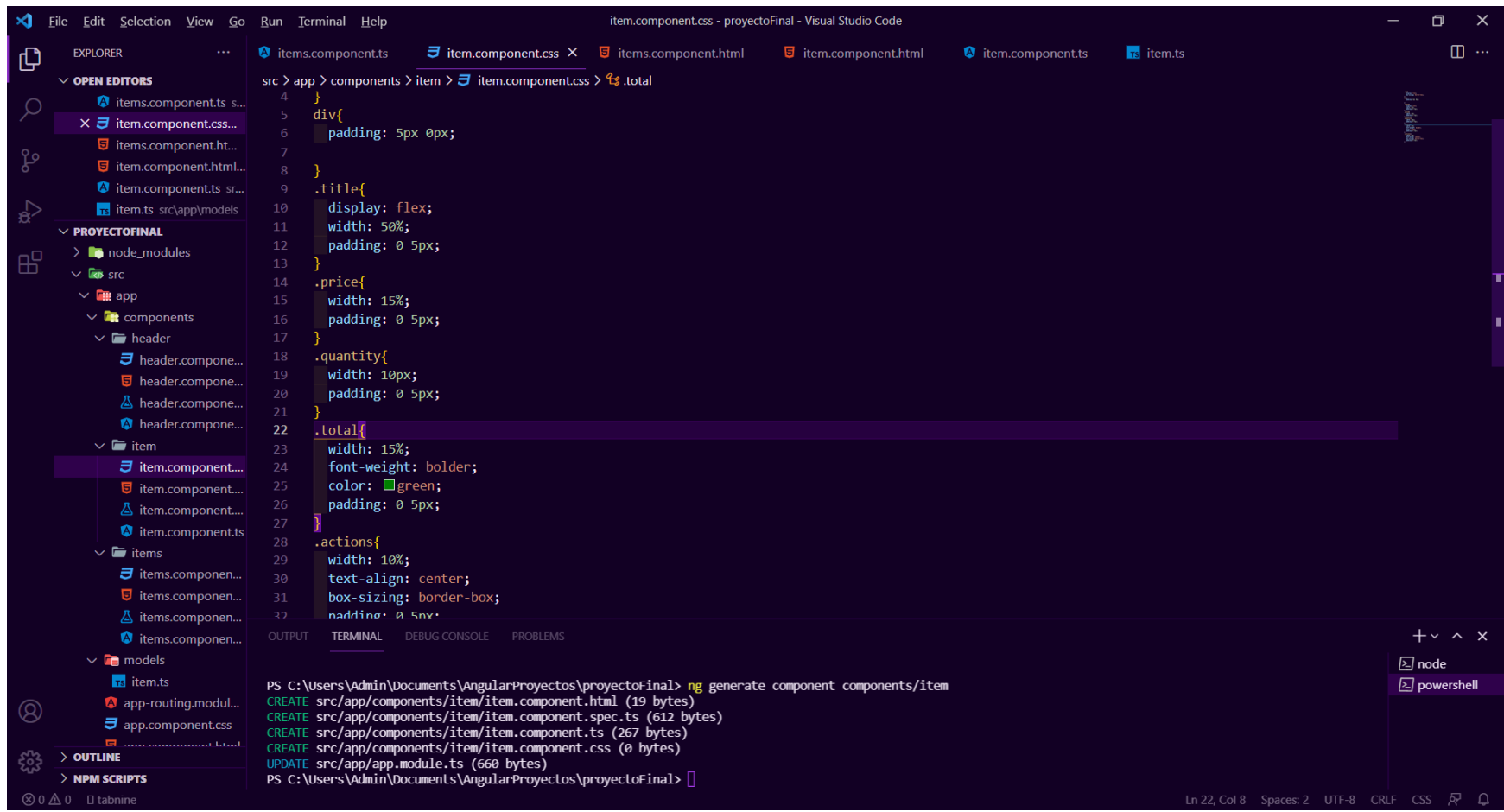
```
main.js | main | 35.83 kB
4 unchanged chunks
Build at: 2021-06-24T03:58:55.390Z - Hash: 41cba3580d583663719b - Time: 520ms
✓ Compiled successfully.
```

The status bar at the bottom indicates the current file is `item.service.ts` at line 32, column 25, using UTF-8 encoding and LF line endings.



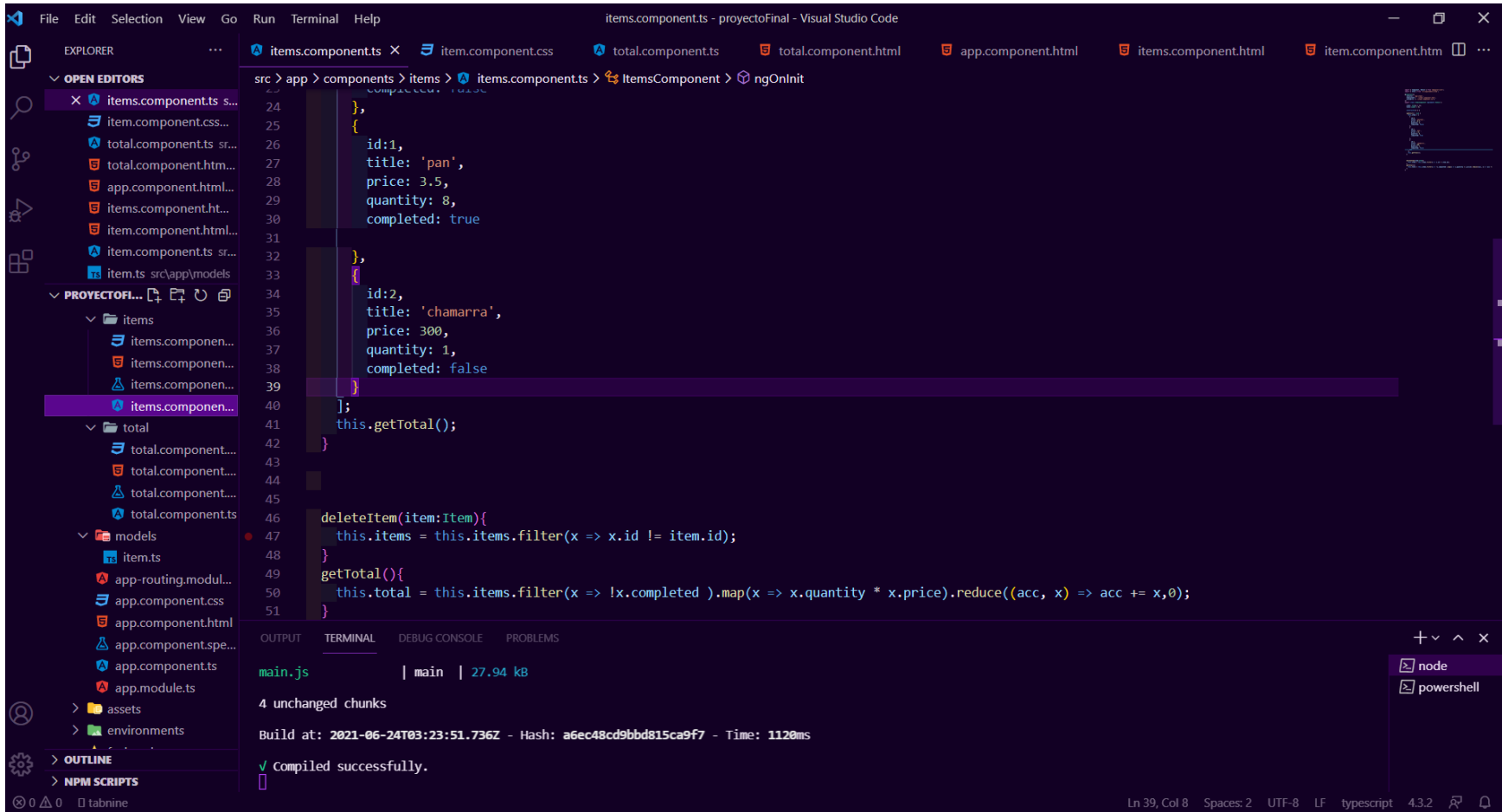


<input type="checkbox"/> manzana	10.5	4 42	Eliminar
<input checked="" type="checkbox"/> pan	3.5	8 28	Eliminar
<input checked="" type="checkbox"/> chamarra	300	1 300	Eliminar



Creamos el componente total

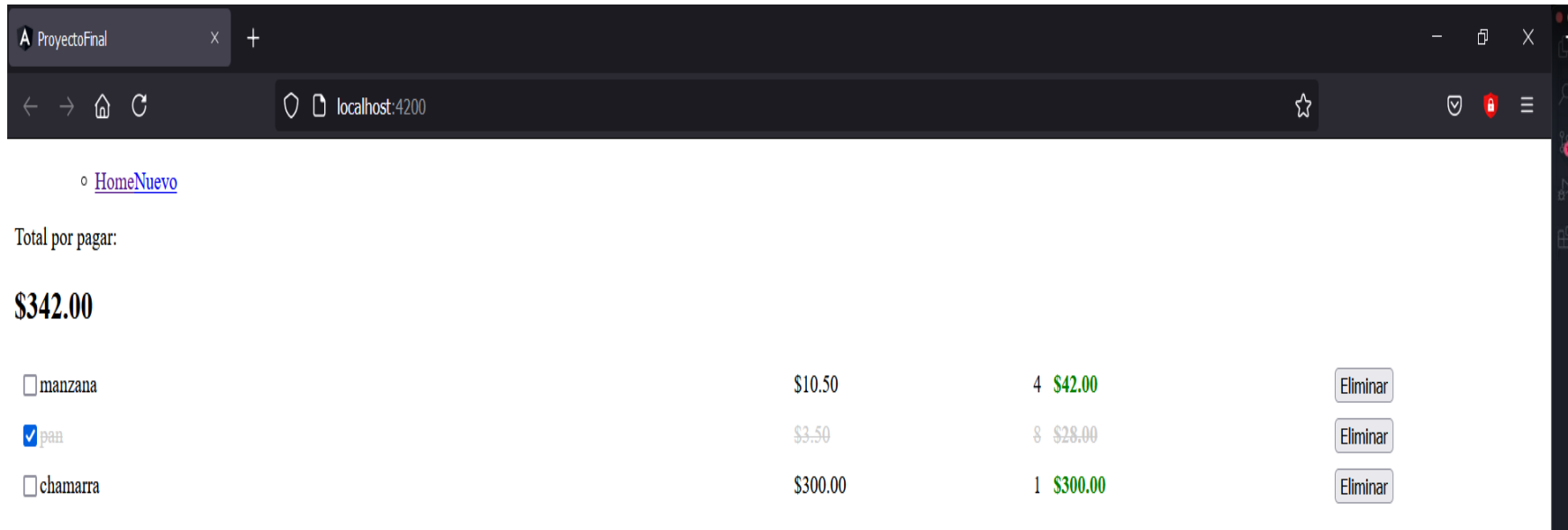
```
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal> ng generate component components/total
CREATE src/app/components/total/total.component.html (20 bytes)
CREATE src/app/components/total/total.component.spec.ts (619 bytes)
CREATE src/app/components/total/total.component.ts (271 bytes)
CREATE src/app/components/total/total.component.css (0 bytes)
UPDATE src/app/app.module.ts (749 bytes)
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal>
```



The screenshot shows the Visual Studio Code interface with the Angular project 'proyectoFinal' open. The Explorer panel on the left displays the project structure, including the 'total' component folder. The main editor shows the 'total.component.ts' file, which contains the following code:

```
src > app > components > items > ItemsComponent > ngOnInit
24      },
25      {
26        id:1,
27        title: 'pan',
28        price: 3.5,
29        quantity: 8,
30        completed: true
31      },
32      {
33        id:2,
34        title: 'chamarra',
35        price: 300,
36        quantity: 1,
37        completed: false
38      }
39    ];
40    this.getTotal();
41  }
42  deleteItem(item:Item){
43    this.items = this.items.filter(x => x.id != item.id);
44  }
45  getTotal(){
46    this.total = this.items.filter(x => !x.completed ).map(x => x.quantity * x.price).reduce((acc, x) => acc += x,0);
47  }
48  }
49  }
50  }
51  }
```

The bottom panel shows the terminal output, indicating that the application was built successfully and the code was compiled successfully.



Creamos un nuevo componente llamado additem

```
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal> ng generate component components/additem
CREATE src/app/components/additem/additem.component.html (22 bytes)
CREATE src/app/components/additem/additem.component.spec.ts (633 bytes)
CREATE src/app/components/additem/additem.component.ts (279 bytes)
CREATE src/app/components/additem/additem.component.css (0 bytes)
UPDATE src/app/app.module.ts (846 bytes)
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal>
```

Creamos un apartado dentro de additem.component.html

```

<form action="">
  <h2>Registrar un nuevo articulo</h2>
  <div>
    <label>Id del Artículo</label>
    <input type="text" name="id" id="" [(ngModel)]="id">
  </div>
  <div>
    <label>Nombre del articulo</label>
    <!-- Validar que si se este mostrando la informacion: {{title}} -->
    <input type="text" name="title" id="" [(ngModel)]="title">
  </div>
  <div>
    <label>Precio</label>
    <input type="text" name="price" id="" [(ngModel)]="price">
  </div>
  <div>
    <label>Cantidad</label>
    <input type="text" name="quantity" id="" [(ngModel)]="quantity">
  </div>
  <input type="submit" value="crear">
</form>

```

Creamos un archivo de tipo service en una carpeta llamada services/item

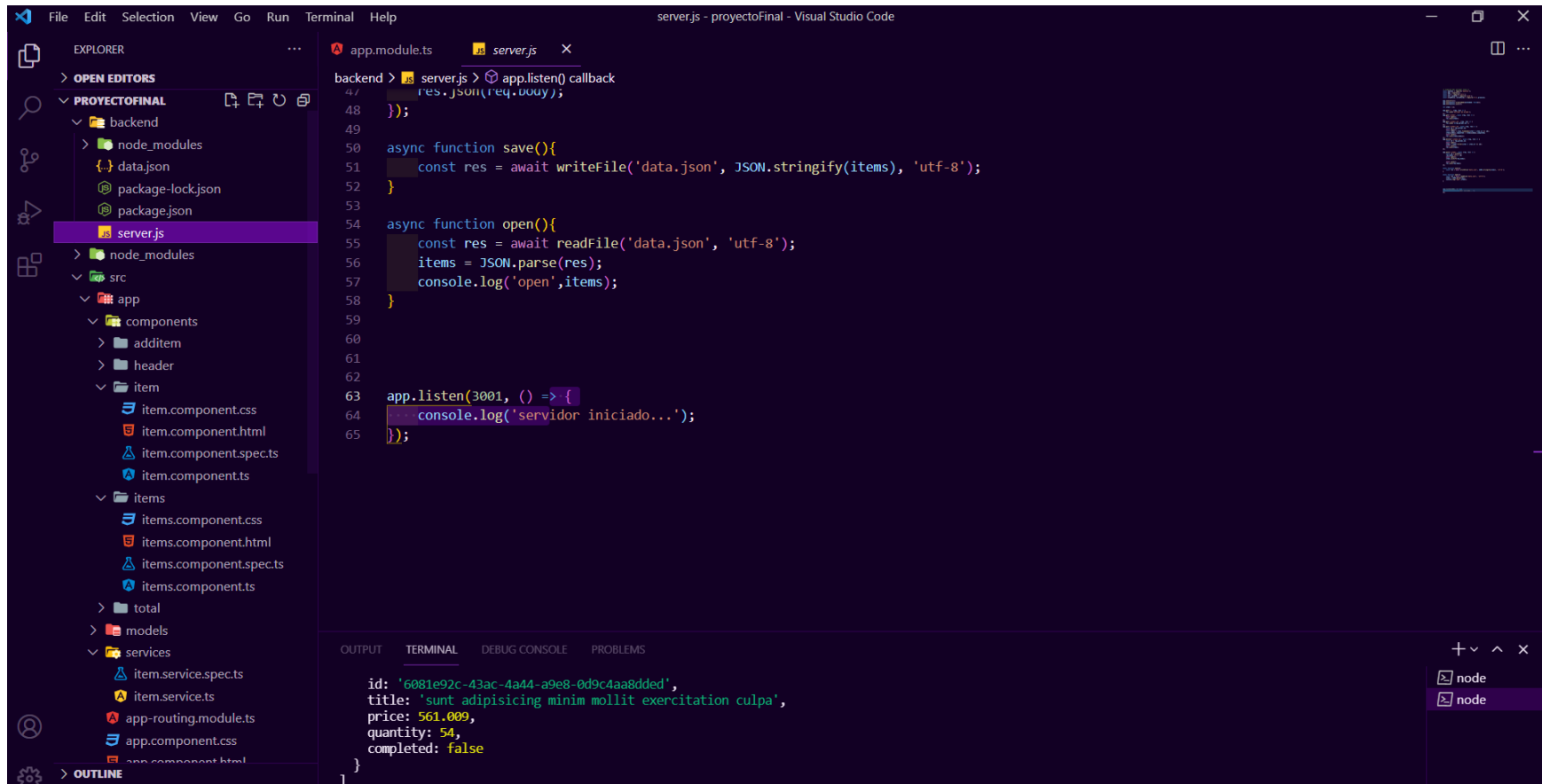
```

PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal> ng generate service services/item
CREATE src/app/services/item.service.spec.ts (347 bytes)
CREATE src/app/services/item.service.ts (133 bytes)
PS C:\Users\Admin\Documents\AngularProyectos\proyectoFinal>

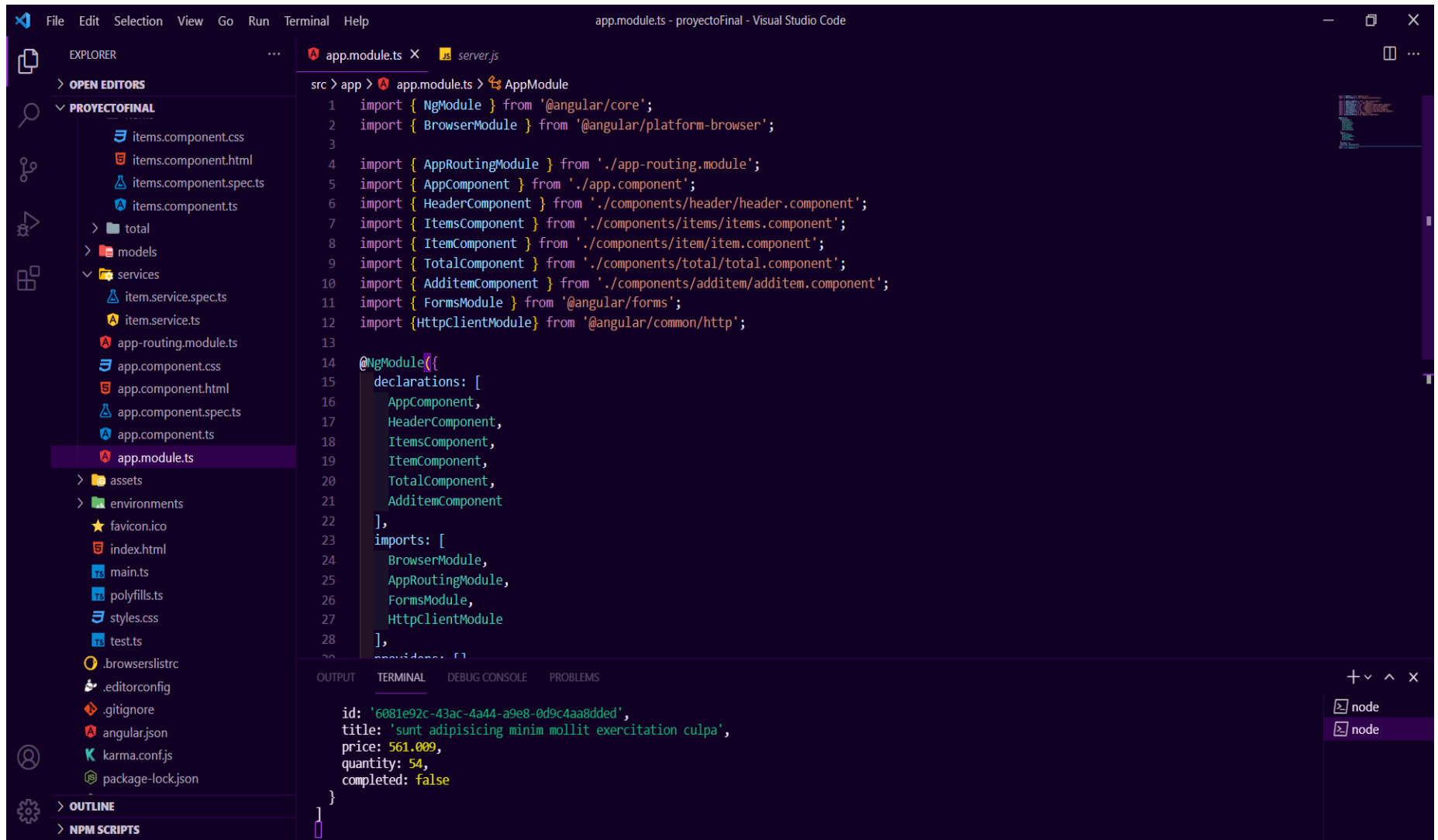
```

Ln 27, Col 28 Spaces: 2 UTF-8 LF typescript 4.3.2

Creamos una carpeta llamada backend donde alojaremos datos e iniciaremos un servidor node.



Ya por ultimo agregamos los complementos que nos faltan en app.module.ts



Vista desde la web

ProyectoFinal

localhost:3001/

localhost:4200

Home Nuevo

Total por pagar:

\$597,716.35

<input type="checkbox"/> Tarjetas para laptop	\$9,000.00	2	\$18,000.00	Eliminar
<input type="checkbox"/> Pan	\$4.00	5	\$20.00	Eliminar
<input checked="" type="checkbox"/> amet tempor aute culpa aliquip proident	\$591.55	16	\$9,464.85	Eliminar
<input checked="" type="checkbox"/> tempor ipsum et est dolore occaecat	\$919.37	10	\$9,193.68	Eliminar
<input checked="" type="checkbox"/> sint do Lorem nulla exercitation culpa	\$297.14	41	\$12,182.86	Eliminar
<input type="checkbox"/> fugiat proident cillum ad commodo ea	\$559.11	74	\$41,374.36	Eliminar
<input checked="" type="checkbox"/> ex-esse-minim-pariatur-culpa-Lorem	\$560.24	75	\$42,015.38	Eliminar
<input checked="" type="checkbox"/> cupidatat non ipsum eu fugiat velit	\$625.46	55	\$34,400.47	Eliminar
<input checked="" type="checkbox"/> sunt excepteur sunt proident proident nostrud	\$209.97	63	\$13,227.98	Eliminar
<input type="checkbox"/> est magna duis minim ut irure	\$293.20	64	\$18,764.99	Eliminar
<input type="checkbox"/> nisi est reprehenderit eiusmod cupidatat in	\$535.16	78	\$41,742.64	Eliminar
<input checked="" type="checkbox"/> amet adipisicing nisi sunt ut eu	\$159.50	57	\$9,091.50	Eliminar
<input checked="" type="checkbox"/> sint ex consectetur cillum ea sint	\$992.71	5	\$4,963.55	Eliminar
<input type="checkbox"/> veniam quis incididunt adipisicing aute eiusmod	\$588.52	15	\$8,827.76	Eliminar
<input type="checkbox"/> nisi dolore incididunt Lorem anim nostrud	\$598.20	64	\$38,284.80	Eliminar
<input checked="" type="checkbox"/> occaecat aute in laboris pariatur cupidatat	\$313.29	58	\$18,170.88	Eliminar
<input checked="" type="checkbox"/> enim et velit officia eu pariatur	\$628.44	10	\$6,284.37	Eliminar
<input type="checkbox"/> duis aute anim dolore anim velit	\$954.39	17	\$16,224.60	Eliminar
<input type="checkbox"/> enim ullamco insum ullamco nostrud dolore	\$100.42	44	\$4,404.24	Eliminar



Servidor de prueba