

SEMANA #2:
BILLETERAS
DIGITALES Y SOLANA

POR:
HEAVY DUTY
BUILDERS



AGENDA DE LA CLASE #2

- Aprendiendo sobre criptografía.
- ¿Cómo funcionan las billeteras digitales?
- ¿Qué es un indexador?
- Configuración del Wallet Adapter.
- Integración con Shyft API.
- Páginas en Angular.
- Secciones en Angular.

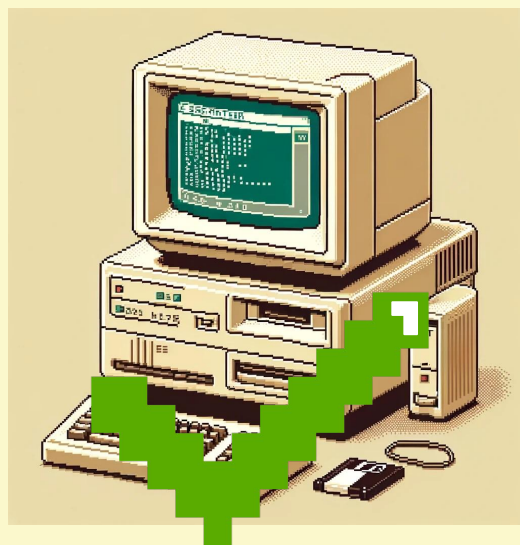
CRIPTOGRAFÍA



CIFRADO







COMUNICACIONES
SEGURAS



CRIPTOGRAFÍA SIMÉTRICA

DOM	L
4	5
11	12
18	19



CRIPTOGRAFÍA
ASIMÉTRICA

QUIZ #1




WALLETS: INSTALACIÓN DE DEPENDENCIAS

```
npm i -S @heavy-duty/wallet-adapter
```


```
npm i -S @heavy-duty/wallet-adapter-cdk
```

```
npm i -S @heavy-duty/wallet-adapter-material
```



```
import { ApplicationConfig } from '@angular/core';
import { provideRouter } from '@angular/router';
import { appRoutes } from './app.routes';
import { provideAnimationsAsync } from '@angular/platform-browser/animations/async';
import { provideWalletAdapter } from '@heavy-duty/wallet-adapter';

export const appConfig: ApplicationConfig = {
  providers: [
    provideRouter(appRoutes),
    provideAnimationsAsync(),
    → provideWalletAdapter()
  ],
};
```

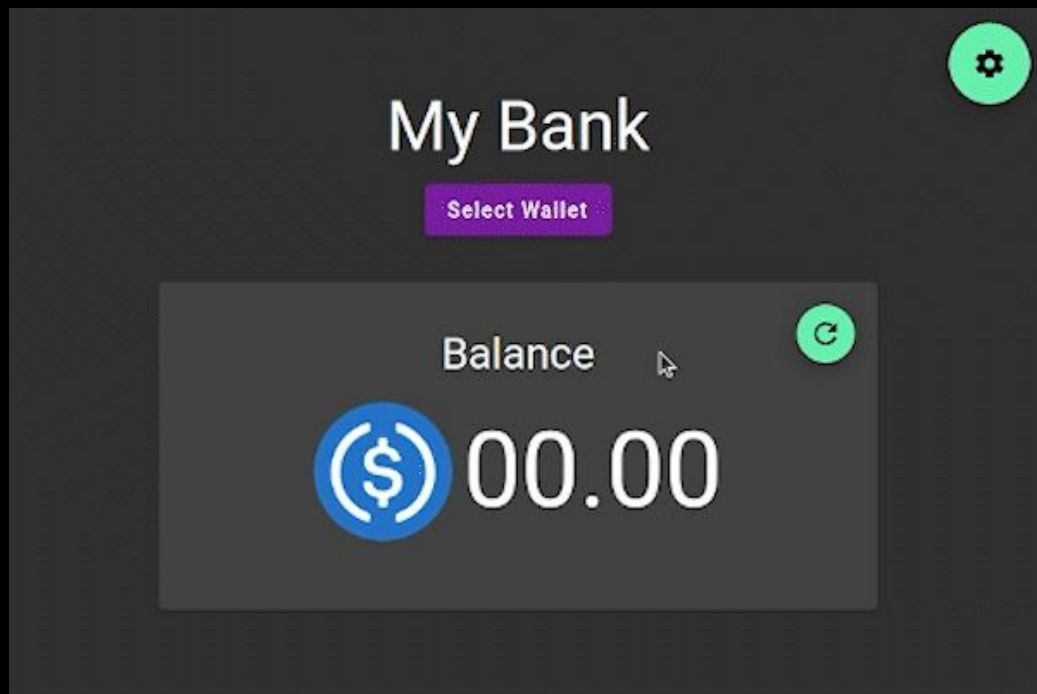


```
import { Component } from '@angular/core';
import { RouterModule } from '@angular/router';
→ import { HdWalletMultiButtonComponent } from '@heavy-duty/wallet-adapter-material';
```

```
...
@Component({
  standalone: true,
  imports: [RouterModule, HdWalletMultiButtonComponent],
  selector: 'bob-root',
  template: `
    <header class="px-16 pt-24 pb-8">
      <h1 class="text-center text-5xl mb-4">My Bank</h1>
      <div class="flex justify-center">
→      <hd-wallet-multi-button></hd-wallet-multi-button>
      </div>
    </header>

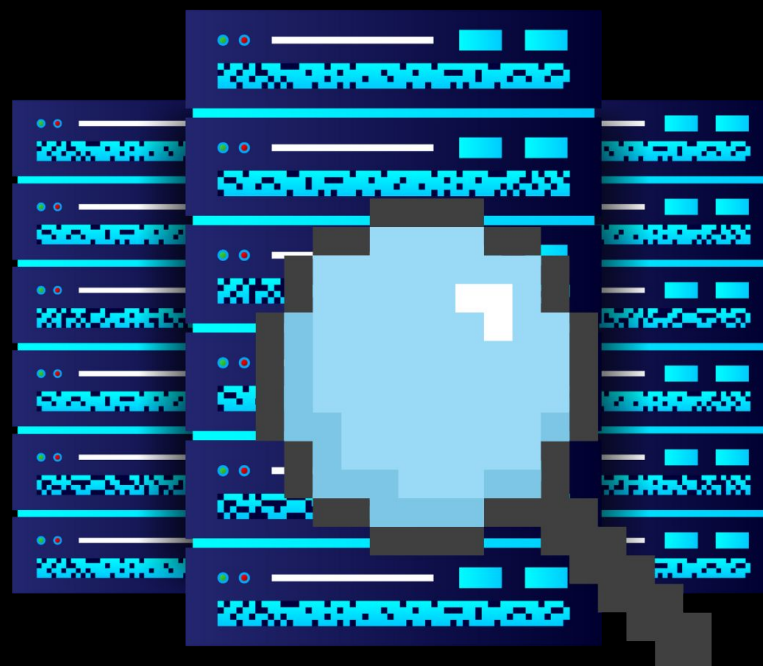
    <main></main>
  `,
})
export class AppComponent {}
```

WALLETS



QUIZ #2

INDEXERS



EFICIENTES

DEPENDES DEL
PROVEEDOR



<https://shyft.to/get-api-key>



Get your Super Powers

E-mail Address

Enter email address

☐ I agree to the [Terms](#) and [Privacy Policy](#)



I'm not a robot



reCAPTCHA
[Privacy](#) - [Terms](#)

Continue


I would add @Shyft_to that provides great tools and APIs to simplify @solana Web3 development especially for guys with Web2 past I vouch for them.



Serj Korj 

@SerjKorj





```
import { ApplicationConfig } from '@angular/core';
import { provideRouter } from '@angular/router';
import { appRoutes } from './app.routes';
import { provideAnimationsAsync } from '@angular/platform-browser/animations/async';
import { provideWalletAdapter } from '@heavy-duty/wallet-adapter';
→ import { provideHttpClient } from '@angular/common/http';
```

```
export const appConfig: ApplicationConfig = {
  providers: [
    provideRouter(appRoutes),
    provideAnimationsAsync(),
    provideWalletAdapter(),
→ provideHttpClient(),
  ],
};
```

```
import { HttpClient } from '@angular/common/http';
import { Injectable, inject } from '@angular/core';
import { map, of } from 'rxjs';

...
@Injectable({ providedIn: 'root' })
export class ShyftApiService {
  private readonly _httpClient = inject(HttpClient);
  private readonly _headers = { 'x-api-key': 'S3VW7sB4rNNZUmtS' };
  private readonly _mint = '7EYnhQoR9YM3N7UoaKRoaA44Uy8JeaZV3qyouov87awMs';

  getAccount(publicKey: string | null | undefined) {
    if (!publicKey) {
      return of(null);
    }

    const url = new URL('https://api.shyft.to/sol/v1/wallet/token_balance');

    url.searchParams.append('network', 'mainnet-beta');
    url.searchParams.append('wallet', publicKey);
    url.searchParams.append('token', this._mint);

    return this._httpClient
      .get<{ result: { balance: number; info: { image: string } } }>(
        url.toString(),
        { headers: this._headers }
      )
      .pipe(map(({ result }) => result));
  }
}
```

```
    </ul>
  </nav>
</header>

  <main>
    <router-outlet></router-outlet>
  </main>
},
})
export class AppComponent {
  private readonly _shyftApiService = inject(ShyftApiService);
  private readonly _walletStore = inject(WalletStore);
  private readonly _publicKey = toSignal(this._walletStore.publicKey$);

  readonly account = computedAsync(
    () => this._shyftApiService.getAccount(this._publicKey()?.toBase58()),
    { requireSync: true },
  );
}
```



```
@Component({
  standalone: true,
  imports: [
    RouterOutlet,
    RouterLink,
    DecimalPipe,
    MatAnchor,
    HdWalletMultiButtonComponent,
  ],
  selector: 'bob-root',
  template: `
    <header class="px-16 pt-20 pb-8 relative">
      <h1 class="text-center text-5xl mb-4">My Bank</h1>

      @if (account()) {
        <div class="absolute top-4 left-4 flex items-center gap-2">
          <img [src]="account()?.info?.image" class="w-8 h-8" />
          <p class="text-2xl font-bold">
            {{ account()?.balance | number }}
          </p>
        </div>

        <div class="flex justify-center mb-4">
          <hd-wallet-multi-button></hd-wallet-multi-button>
        </div>
      }
    `
})
```

INDEXER

My Bank

Select Wallet

Home

Settings



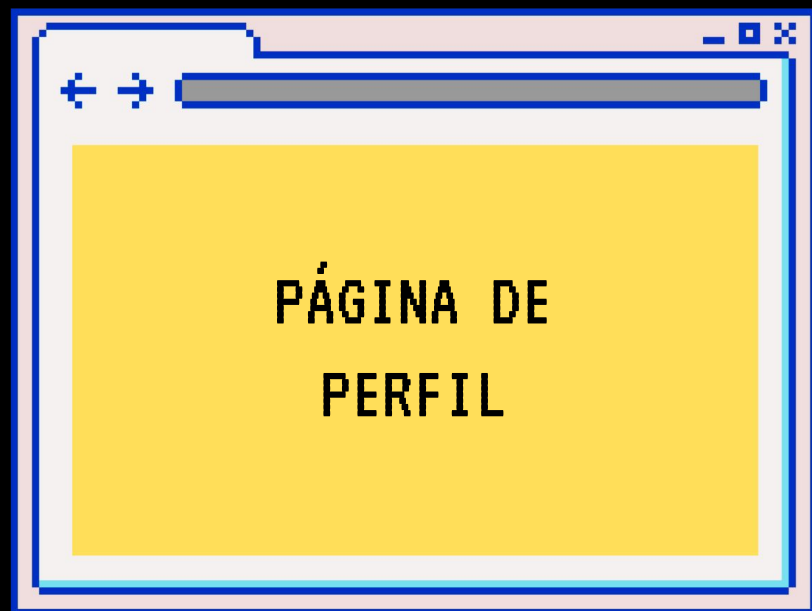
Home Page

Welcome to the home page!

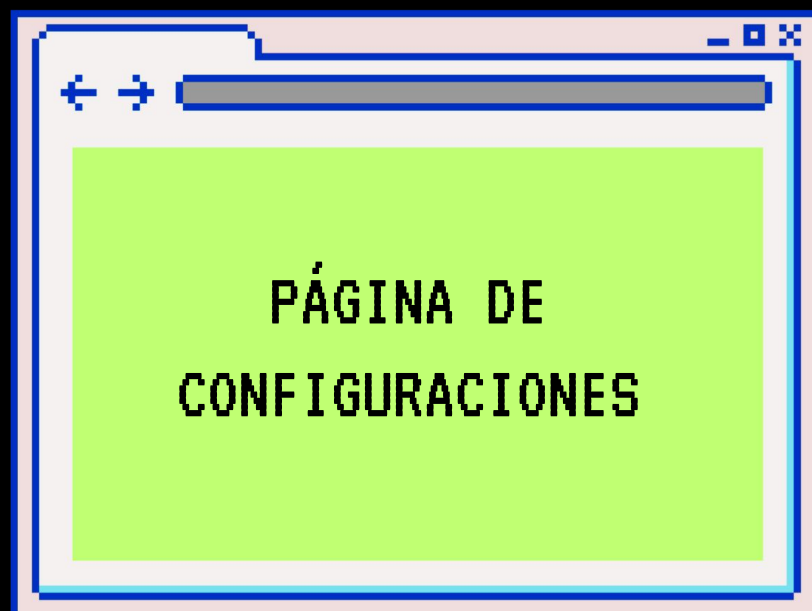
QUIZ #3




PÁGINAS



/<RUTA>/PERFIL




/<RUTA>/CONFIGURACIONES



```
import { Component } from '@angular/core';


...
@Component({
  selector: 'bob-home-page',
  template: `
    <section>
      <h2 class="text-center text-3xl">Home Page</h2>
      <p class="text-center">Welcome to the home page!</p>
    </section>
  `,
  standalone: true,
})
export class HomePageComponent {}
```

```
import { Component } from '@angular/core';

...

@Component({
  selector: 'bob-settings-page',
  template: `
    <section>
      <h2 class="text-center text-3xl">Settings Page</h2>
      <p class="text-center">Welcome to the settings page!</p>
    </section>
  `,
  standalone: true
})
export class SettingsPageComponent {}
```



```
import { Route } from '@angular/router';

export const appRoutes: Route[] = [
  {
    path: '',
    loadComponent: () =>
      import('./home-page.component').then((m) => m.HomePageComponent),
  },
  {
    path: 'settings',
    loadComponent: () =>
      import('./settings-page.component').then((m) => m.SettingsPageComponent),
  },
  {
    path: '**',
    redirectTo: ''
  }
];
```

```
import { Component } from '@angular/core';
import { MatAnchor } from '@angular/material/button';
import { RouterLink, RouterOutlet } from '@angular/router';
import { HdWalletMultiButtonComponent } from '@heavy-duty/wallet-adapter-material';
```

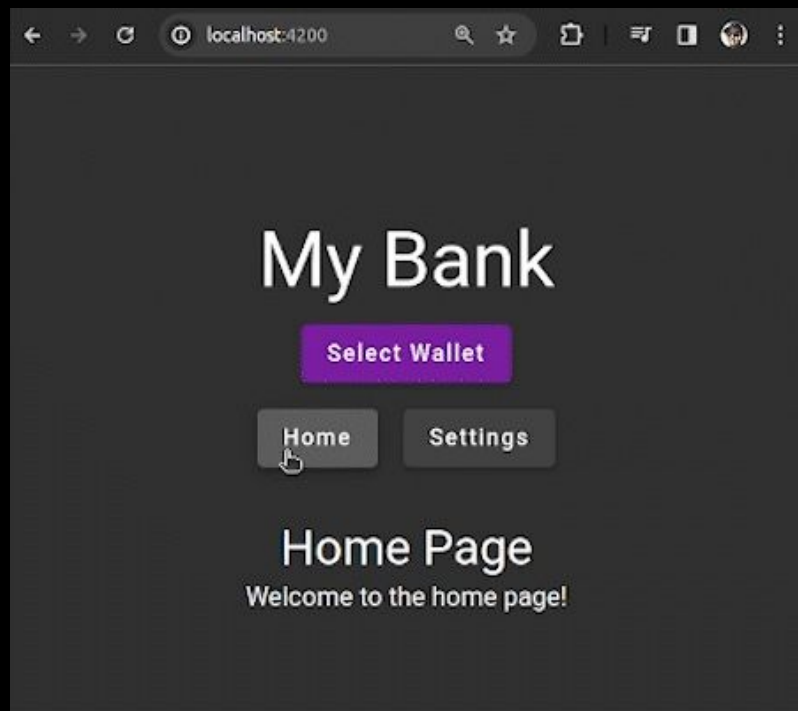
```
...
@Component({
  standalone: true,
  imports: [RouterOutlet, RouterLink, MatAnchor, HdWalletMultiButtonComponent],
  selector: 'bob-root',
  template: `
    <header class="px-16 pt-24 pb-8">
      <h1 class="text-center text-5xl mb-4">My Bank</h1>

      <div class="flex justify-center mb-4">
        <hd-wallet-multi-button></hd-wallet-multi-button>
      </div>

      <nav>
        <ul class="flex justify-center gap-4">
          <li>
            <a [routerLink]="['']" mat-raised-button>Home</a>
          </li>
          <li>
            <a [routerLink]="['settings']" mat-raised-button>Settings</a>
          </li>
        </ul>
      </nav>
    </header>

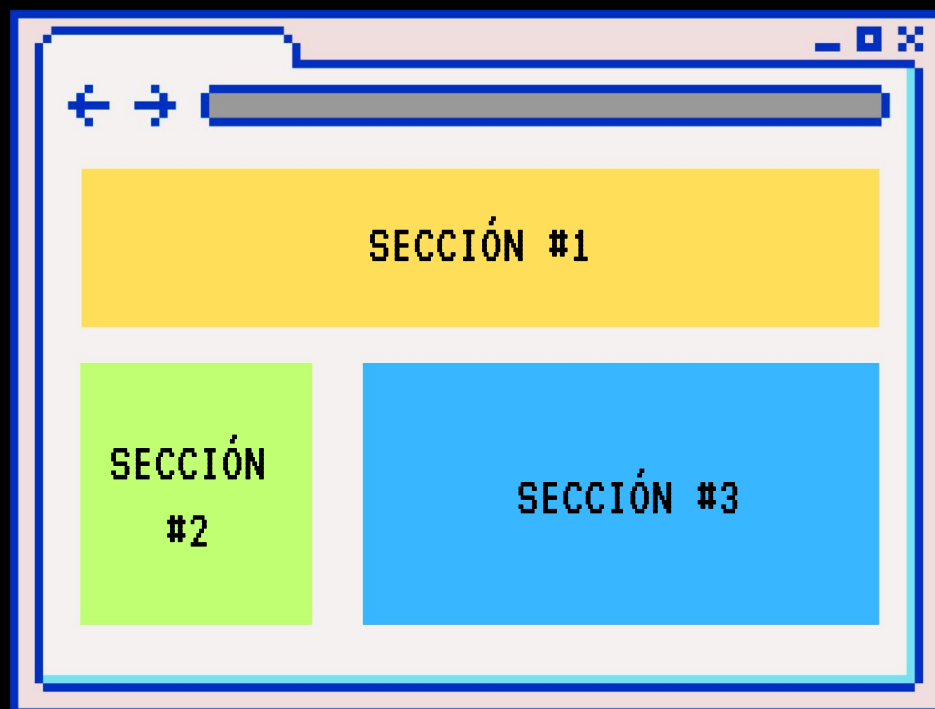
    <main>
      <router-outlet></router-outlet>
    </main>
  `
})
export class AppComponent {}
```


PÁGINAS



QUIZ #4


SECCIONES





```
import { Component } from '@angular/core';
```

```
@Component({  
  selector: 'bob-hero-section',  
  template: `  
    <section class="px-16 py-24 ■ bg-white bg-opacity-5">  
      <h2 class="text-center text-3xl">Home Page</h2>  
      <p class="text-center">Welcome to the home page!</p>  
    </section>  
  `,  
  standalone: true,  
})  
export class HeroSectionComponent {}
```



```
import { Component } from '@angular/core';
```

```
@Component({  
  selector: 'bob-features-section',  
  template: `  
    <section class="px-16 py-24">  
      <ul class="flex justify-center gap-16">  
        <li class="text-xl font-bold">Rapido</li>  
        <li class="text-xl font-bold">Seguro</li>  
        <li class="text-xl font-bold">Eficiente</li>  
      </ul>  
    </section>  
  `,  
  standalone: true,  
})  
export class FeaturesSectionComponent {}
```



```
import { Component } from '@angular/core';
import { HeroSectionComponent } from './hero-section.component';
import { FeaturesSectionComponent } from './features-section.component';
```

```
...
```

```
@Component({
  selector: 'bob-home-page',
  template: `
    <bob-hero-section></bob-hero-section>
    <bob-features-section></bob-features-section>
  `,
  imports: [HeroSectionComponent, FeaturesSectionComponent],
  standalone: true,
})
export class HomePageComponent {}
```

SECCIONES

My Bank

Select Wallet

Home

Settings

Home Page

Welcome to the home page!

Rapido

Seguro

Eficiente

QUIZ #5



RETO #2

El propósito de este desafío es incentivar a los participantes a crear una aplicación donde muestran el saldo disponible en su billetera.

¡SUERTE!