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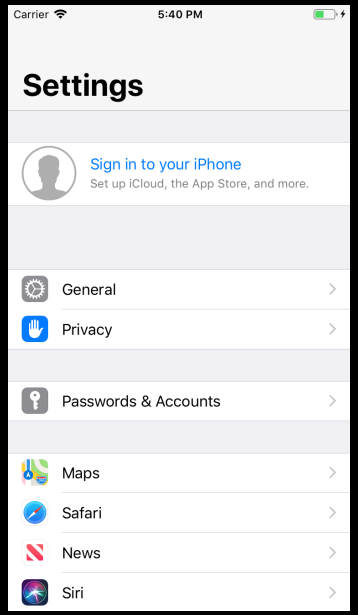
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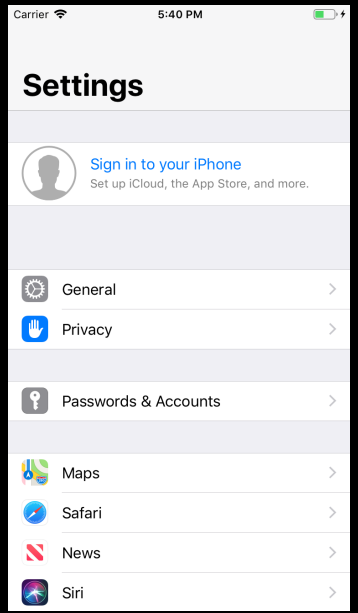
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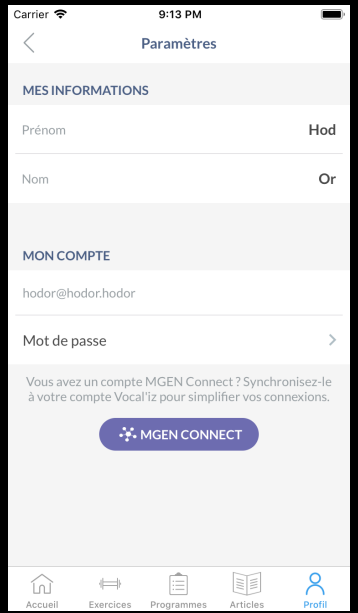
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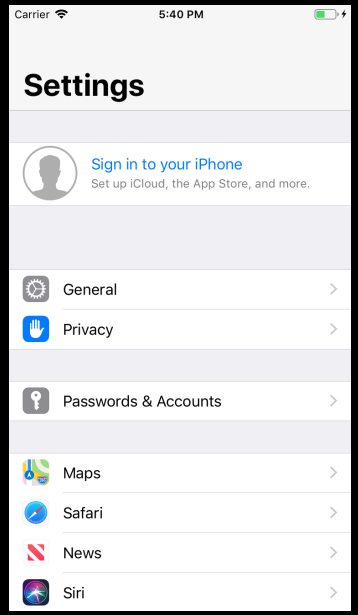
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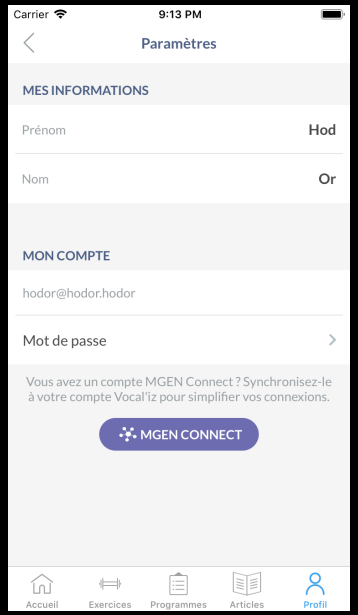
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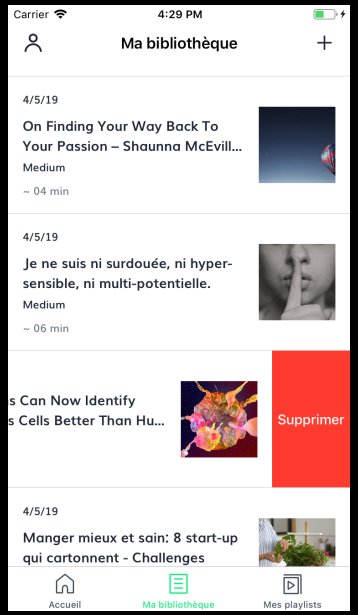
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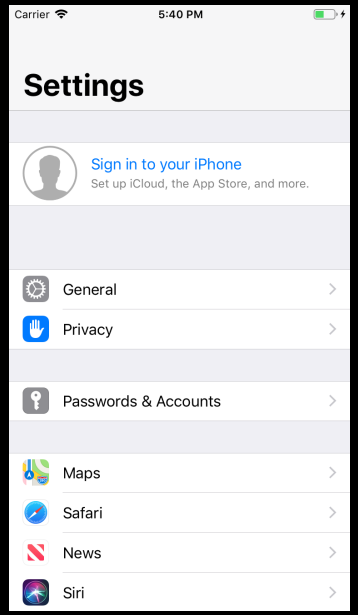
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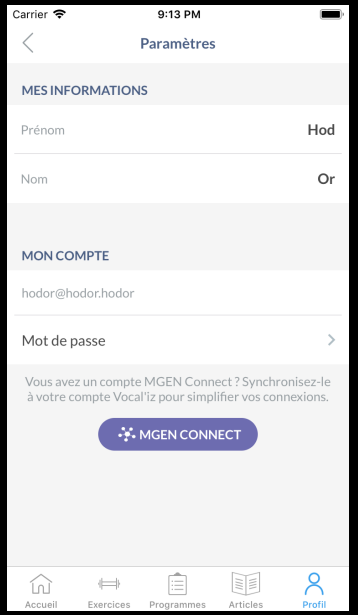
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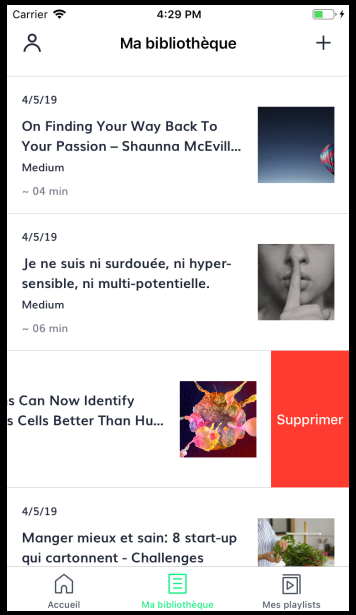
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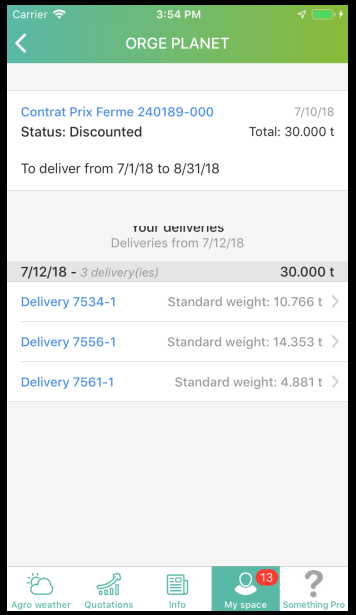
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7/10/18
Status: Discounted
Total: 30.000 t
To deliver from 7/1/18 to 8/31/18
Deliveries from 7/12/18
7/12/18 - 3 delivery(ies)
30.000 t
Delivery 7534-1
Standard weight: 10.766 t
Delivery 7556-1
Standard weight: 14.353 t
Delivery 7561-1
Standard weight: 4.881 t
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Info
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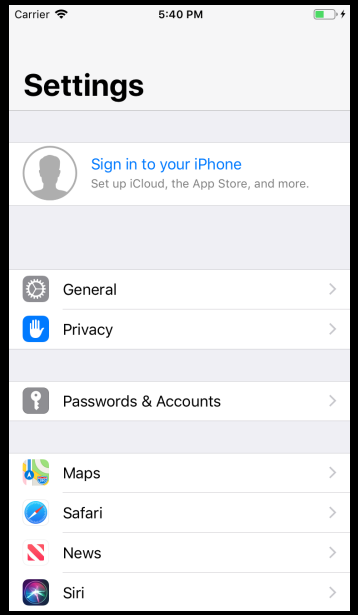
1 Model a TableView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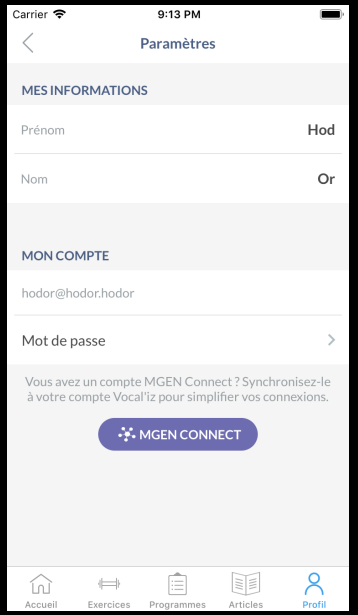
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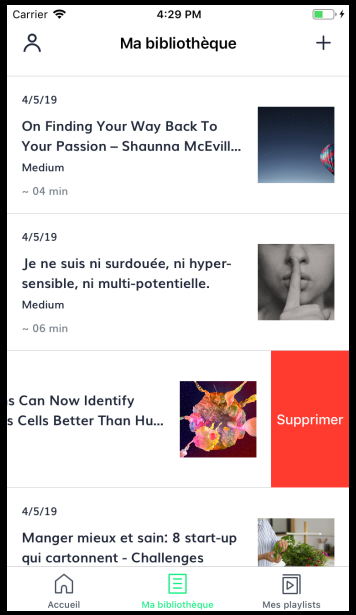
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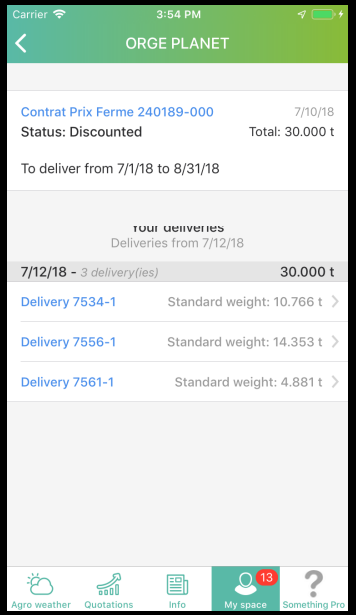
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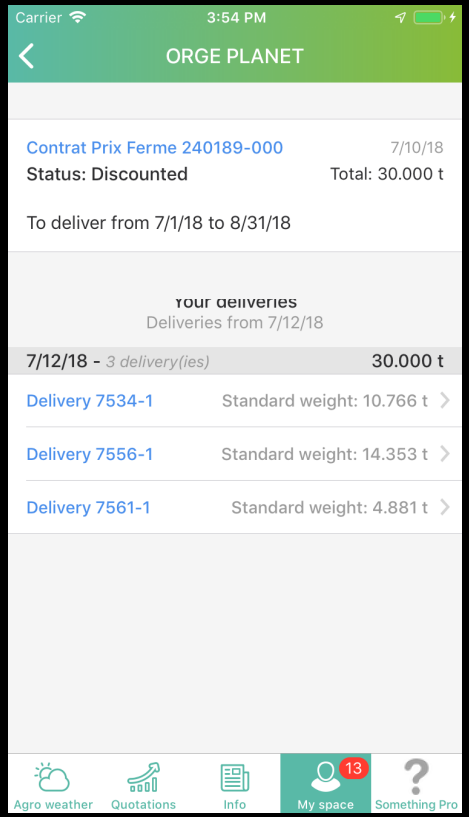
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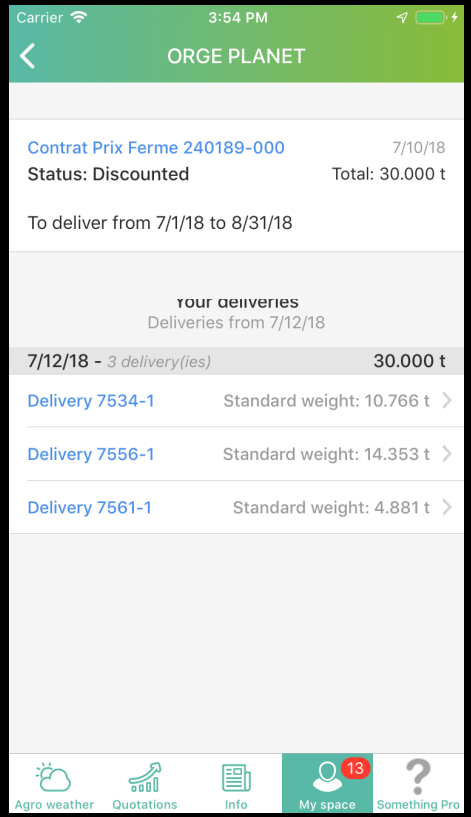
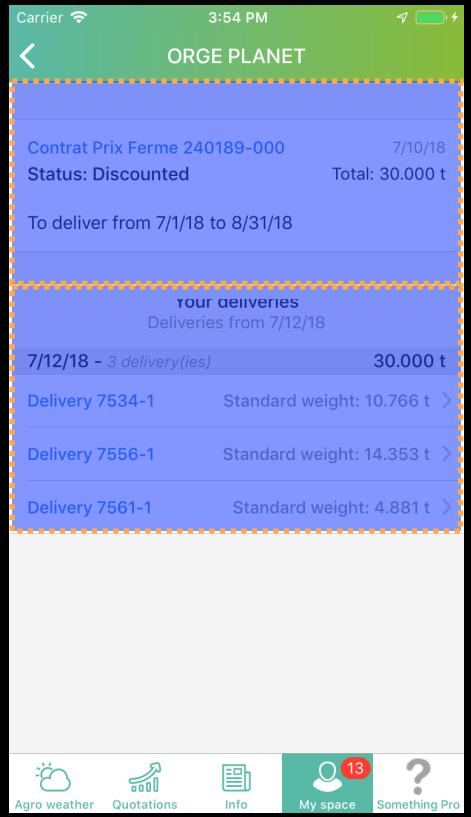



```
struct TableViewModel {

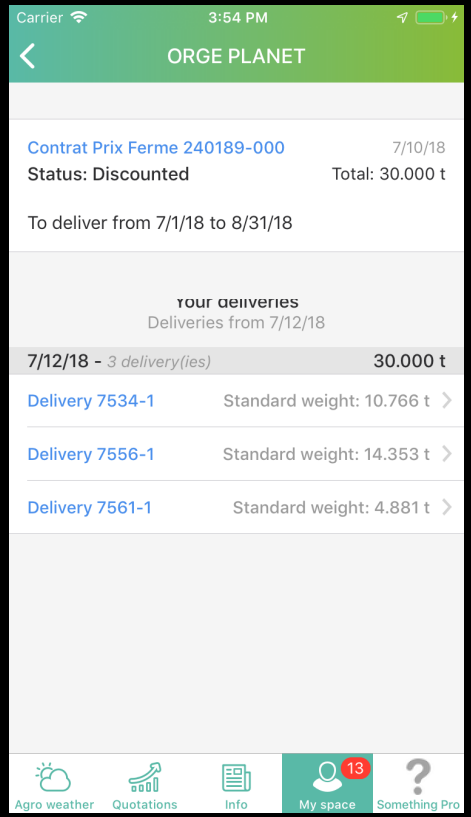
}
```




```
struct TableViewModel {

    var sections: [Section]

}
```

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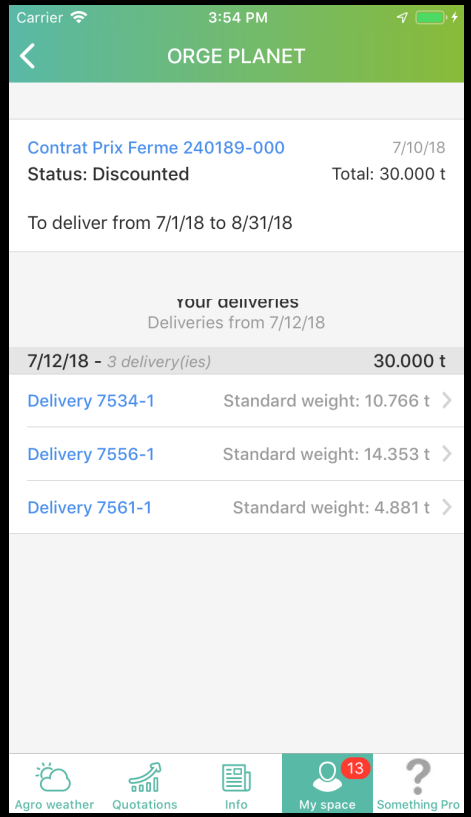


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}
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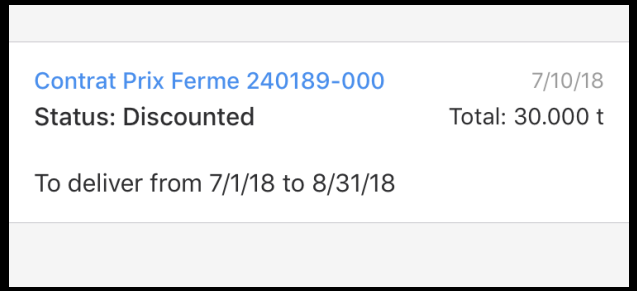
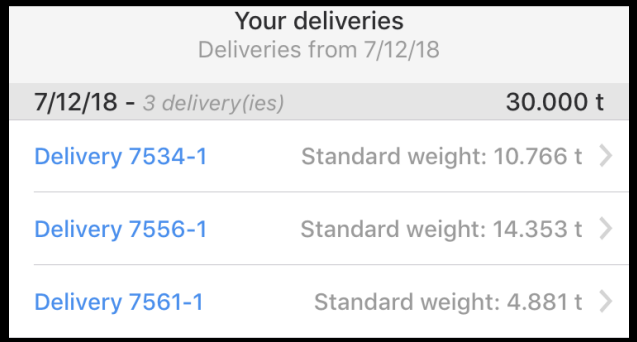





```
struct TableViewModel {

    var sections: [Section]

}


struct TableSectionViewModel {

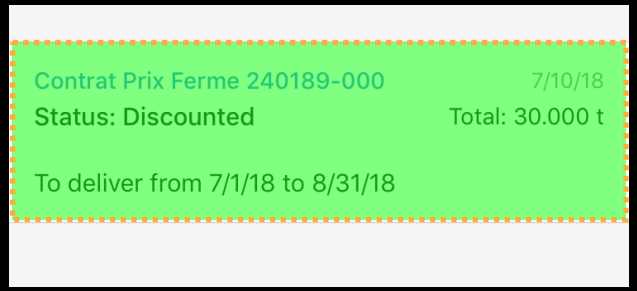


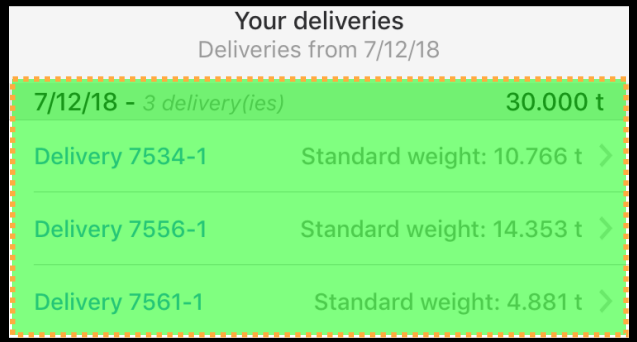






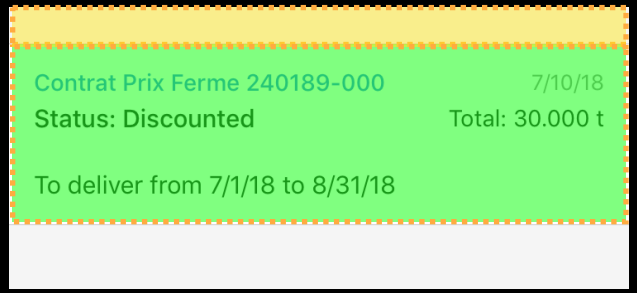
}
```

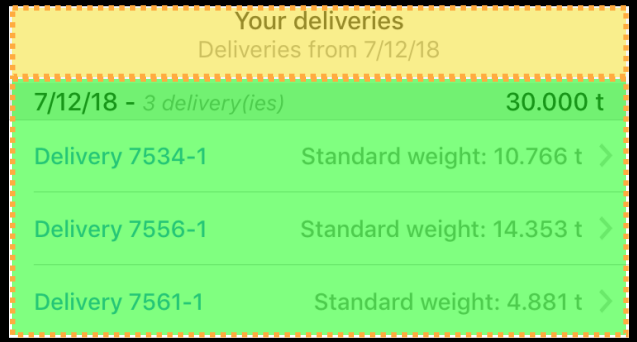





```
struct TableViewModel {
    var sections: [Section]
}

struct TableSectionViewModel<Cell> {
    var cells: [Cell]
}
```






```
struct TableViewModel {

    var sections: [Section]

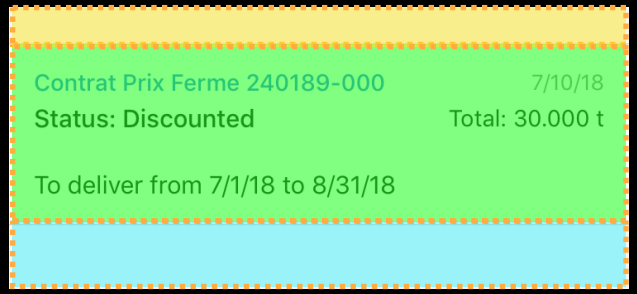
}

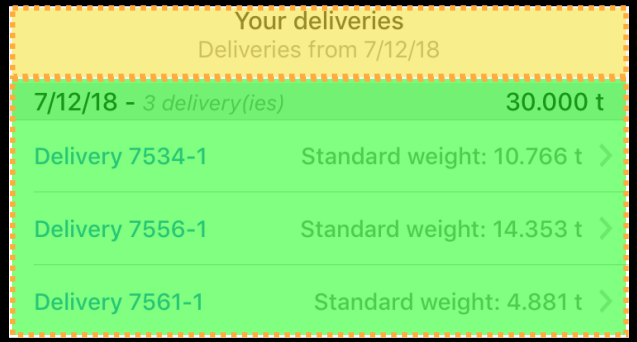

struct TableSectionViewModel
     <Cell, Header> {

    var header: Header
    var cells: [Cell]




}
```






```
struct TableViewModel {

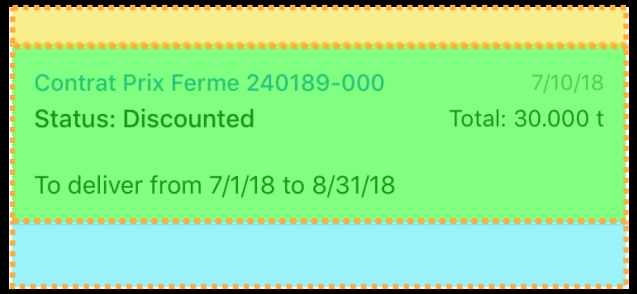
    var sections: [Section]

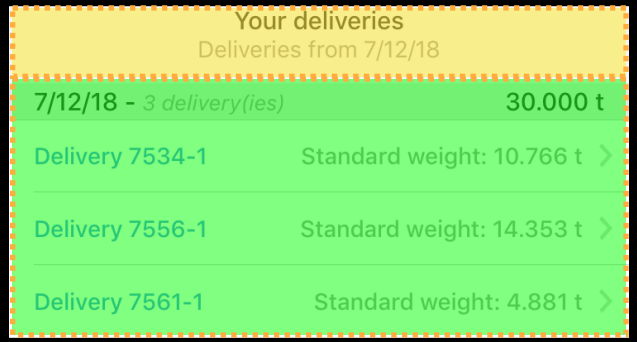
}


struct TableSectionViewModel
     <Cell, Header, Footer> {

    var header: Header
    var cells: [Cell]
    var footer: Footer?

}
```






```
struct TableViewModel {

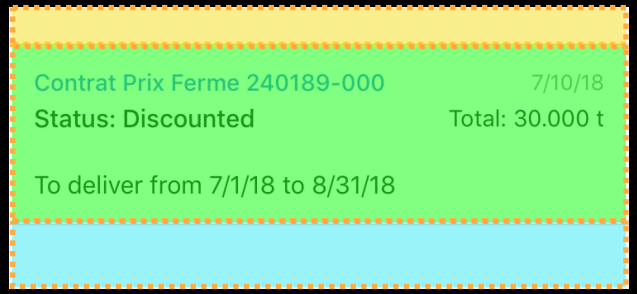
    var sections: [Section]

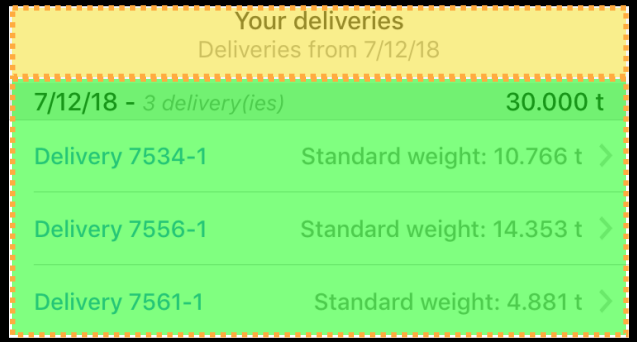
}


struct TableSectionViewModel
     <Cell, Header, Footer> {

    var header: Header?
    var cells: [Cell]
    var footer: Footer?

}
```






```
struct TableViewModel {

    var sections: [Section]

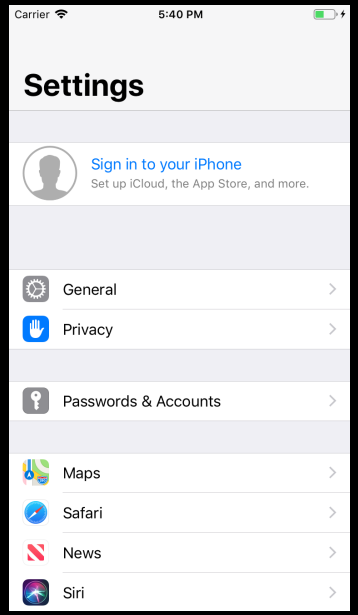
}


struct TableSectionViewModel
     <Cell, HeaderFooter> {

    var header: HeaderFooter?
    var cells: [Cell]
    var footer: HeaderFooter?

}
```

2 Our model in the real world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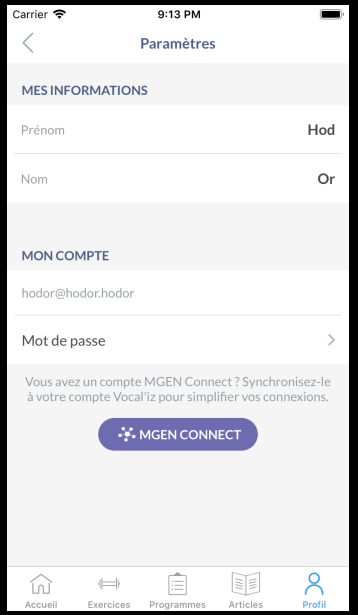
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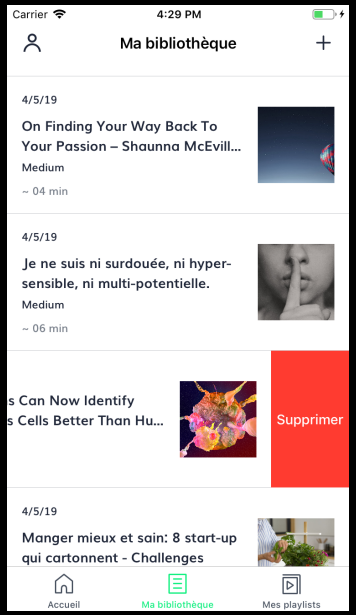
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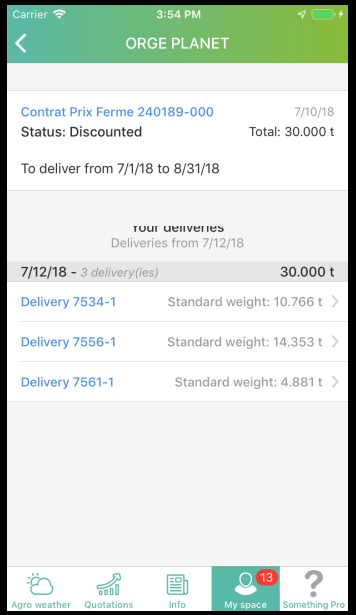
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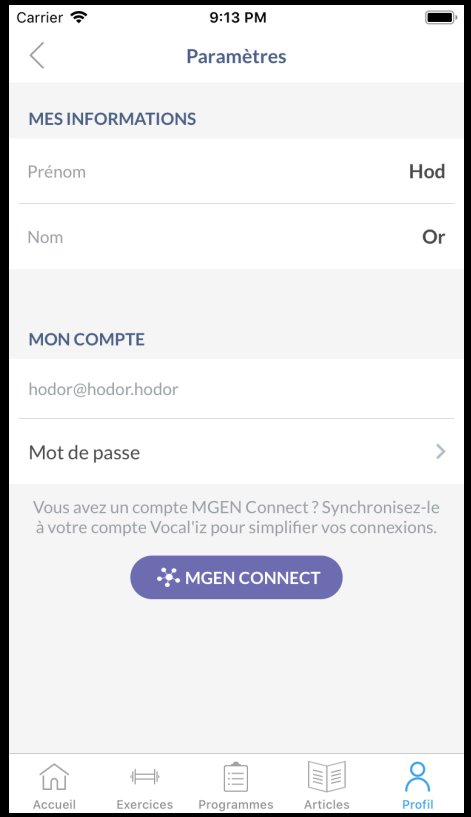
13
Something Pro


Carrier
9:13 PM
Paramètres
MES INFORMATIONS
Prénom
Hod
Nom
Or
MON COMPTE
hodor@hodor.hodor
Mot de passe
Vous avez un compte MGEN Connect ? Synchronisez-le à votre compte Vocal'iz pour simplifier vos connexions.
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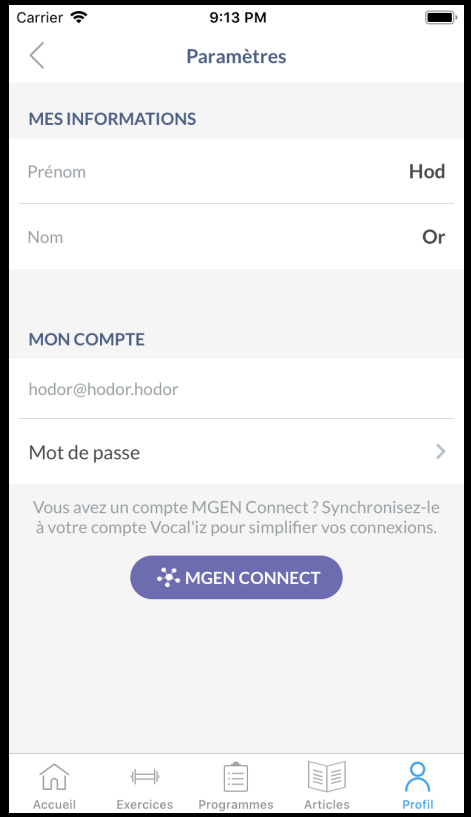
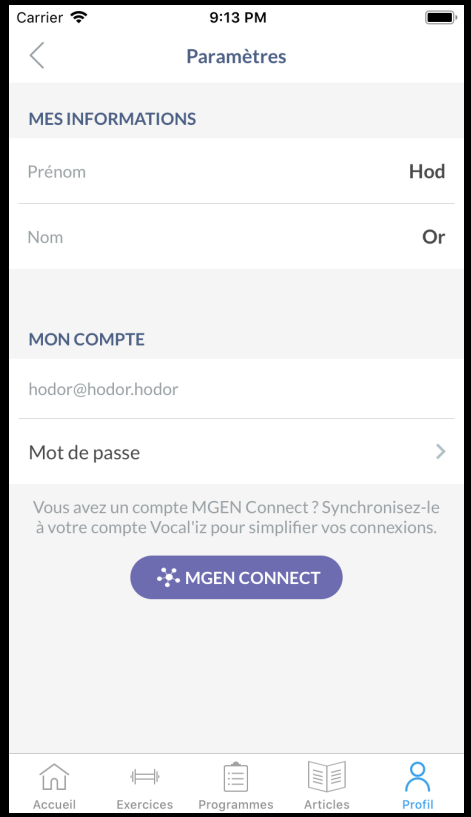



```
enum Section: Int,
    CaseIterable {

    case userInfo
    case account
}
```




```
enum Section: Int,
    CaseIterable {

    case userInfo
    case account
}

enum UserInfoCells: Int,
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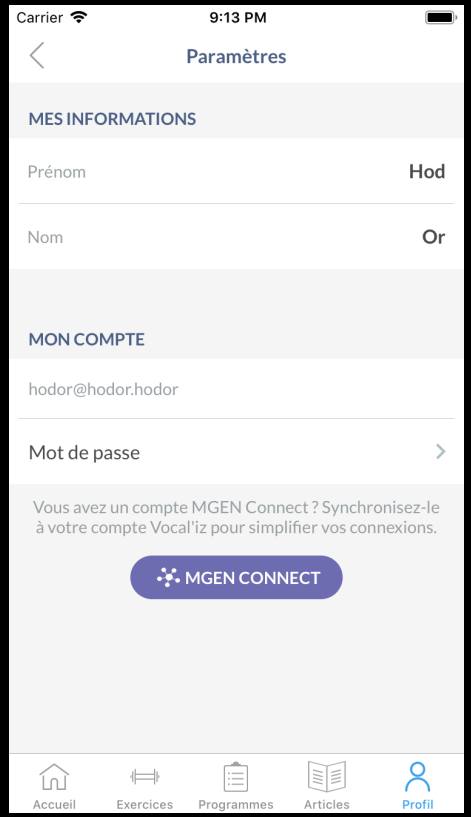
    case firstName
    case familyName
}
```

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enum Section: Int,
    CaseIterable {

    case userInfo
    case account
}

enum UserInfoCells: Int,
    CaseIterable {

    case firstName
    case familyName
}


enum AccountCells: Int,
    CaseIterable {

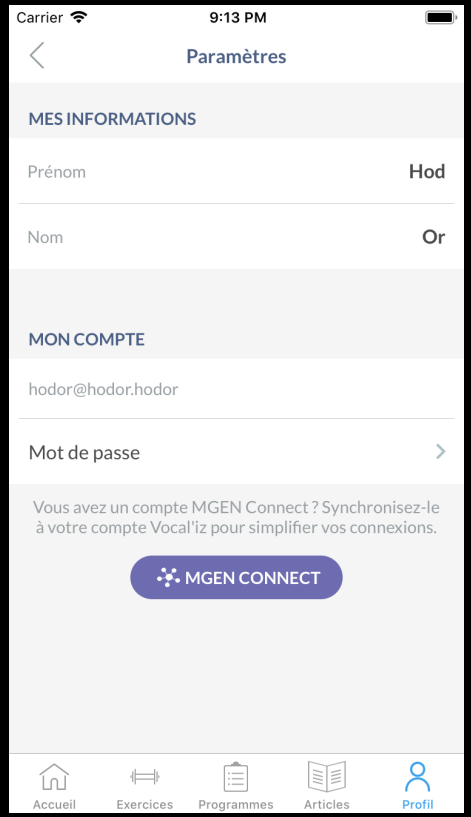
    case email
    case password
}
```

```swift
func numberOfSections(in tableView: UITableView) -> Int {
    return Section.allCases.count
}

func tableView(_ tableView: UITableView,
               numberOfRowsInSection section: Int) -> Int {
    switch Section(rawValue: section) {
    case .userInfo?:
        return UserInfoCells.allCases.count
    case .account?:
        return AccountCells.allCases.count
    default:
        return 0
    }
}
```

```swift
func tableView(_ tableView: UITableView,
               cellForRowAt indexPath: IndexPath) -> UITableViewCell {
    guard let section = Section(rawValue: indexPath.section) else { fatalError() }
    switch section {
    case .account:
        return accountSectionCell(at: indexPath, in: tableView)
    case .userInfo:
        return userInfoSectionCell(at: indexPath, in: tableView)
    }
}

func accountSectionCell(at indexPath: IndexPath,
                        in tableView: UITableView) -> UITableViewCell {
    guard case .account? = Section(rawValue: indexPath.section) else { fatalError() }
    guard let cell = AccountCells(rawValue: indexPath.row) else { fatalError() }
    switch cell {
    case .email:
        /* dequeue and configure for email cell */
    case .password:
        /* dequeue and configure for password cell */
    }
}
```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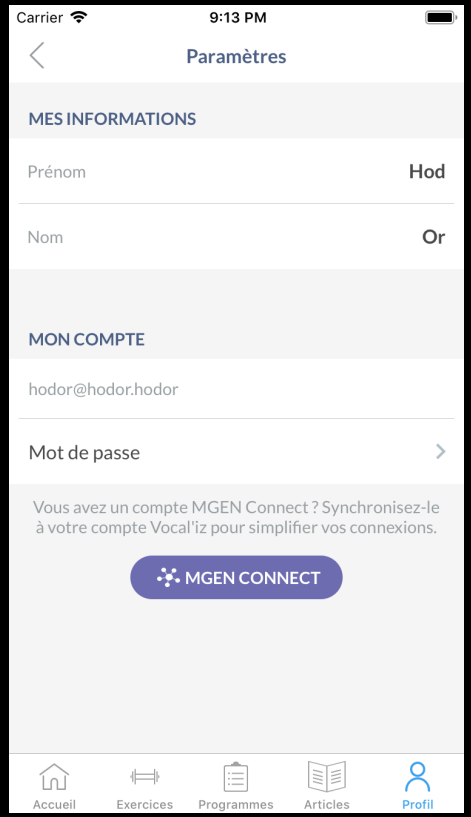
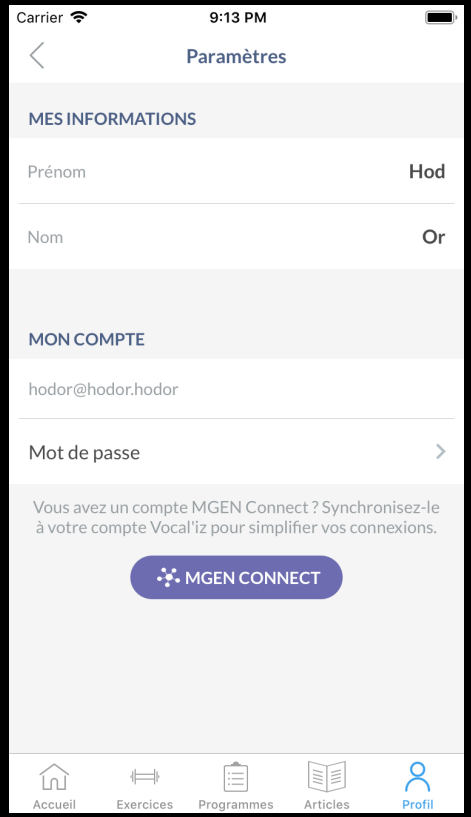



```
enum SettingsSection {
    case userInfo
    case account
}
```




```
enum SettingsSection {
    case userInfo
    case account
}

enum SettingCell {
    case firstName
    case familyName
    case email
    case password
}
```

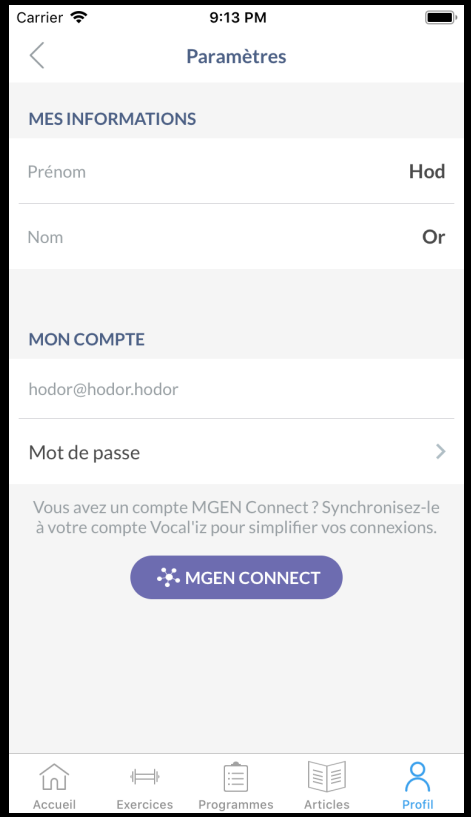
```swift
func numberOfSections(in tableView: UITableView) -> Int {
    return viewModel.sections.count
}

func tableView(_ tableView: UITableView,
               numberOfRowsInSection section: Int) -> Int {
    return viewModel.sections[section].cells.count
}

func tableView(_ tableView: UITableView,
               cellForRowAt indexPath: IndexPath) -> UITableViewCell {
    switch viewModel[indexPath] {
    .firstName:
        /* Return cell */
    .familyName:
        /* Return cell */
    .email:
        /* Return cell */
    .password:
        /* Return cell */
    }
}
```

```swift
typealias SettingsTableViewModel = TableViewModel<SettingCell, SettingsSection>

func computeViewModel() -> SettingsTableViewModel {
    return SettingsTableViewModel(
        sections: [
            SettingsTableViewModel.Section(
                header: .userInfo,
                cells: [
                    .firstName,
                    .familyName,
                ]
            ),
            SettingsTableViewModel.Section(
                header: .account,
                cells: [
                    .email,
                    .password,
                ]
            )
        ]
    )
}
```

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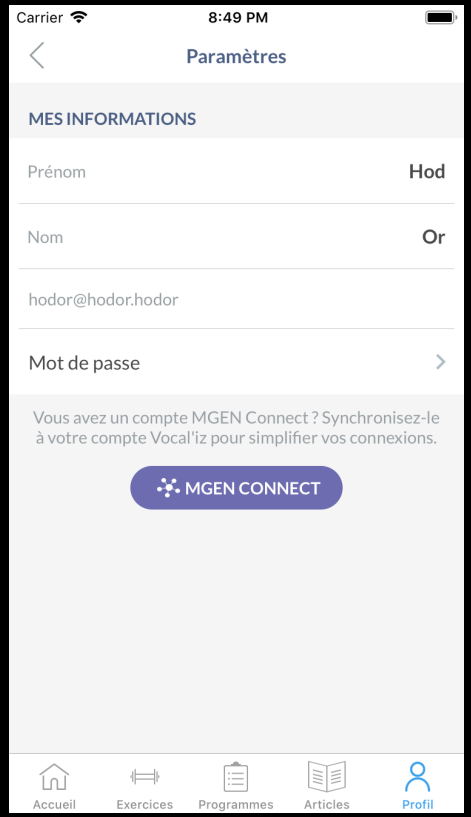


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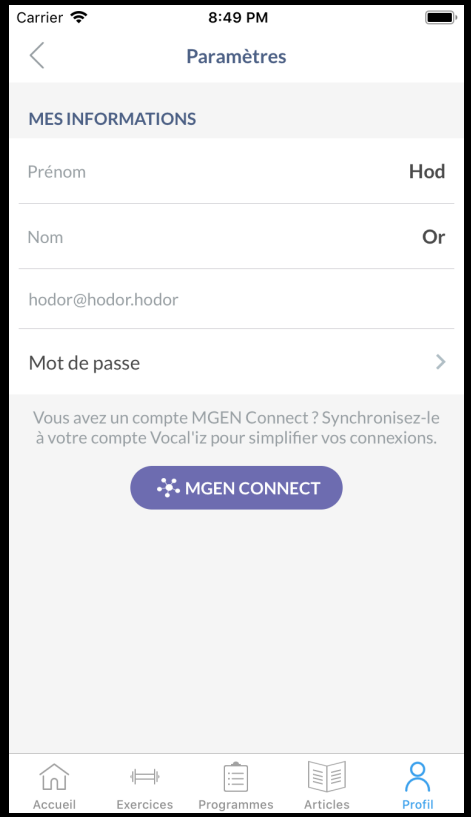


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        return AccountCells.allCases.count
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    }
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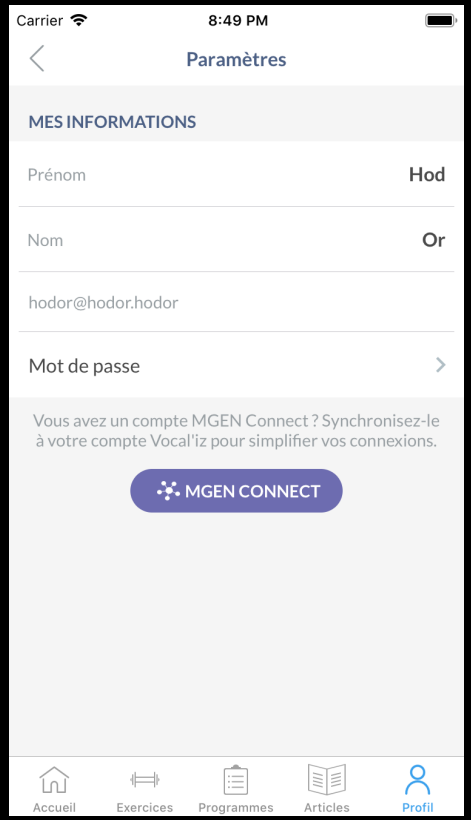
    default:
        return 0
    }
}
```

```swift
func tableView(_ tableView: UITableView,
               cellForRowAt indexPath: IndexPath) -> UITableViewCell {
    guard let section = Section(rawValue: indexPath.section) else { fatalError() }
    switch section {
    case .account:
        return accountSectionCell(at: indexPath, in: tableView)
    case .userInfo:
        return userInfoSectionCell(at: indexPath, in: tableView)
    }
}

func accountSectionCell(at indexPath: IndexPath,
                        in tableView: UITableView) -> UITableViewCell {
    guard case .account? = Section(rawValue: indexPath.section) else { fatalError() }
    guard let cell = AccountCells(rawValue: indexPath.row) else { fatalError() }
    switch cell {
    case .email:
        /* dequeue and configure for email cell */
    case .password:
        /* dequeue and configure for password cell */
    }
}
```

```
func tableView(_ tableView: UITableView,
               cellForRowAt indexPath: IndexPath) -> UITableViewCell {
    guard let section = Section(rawValue: indexPath.section) else { fatalError() }
    switch section {
    case .account:
        return accountSectionCell(at: indexPath, in: tableView)
    case .userInfo:
        return userInfoSectionCell(at: indexPath, in: tableView)
    }
}

func userInfoSectionCell(at indexPath: IndexPath,
                         in tableView: UITableView) -> UITableViewCell {
    guard case .account? = Section(rawValue: indexPath.section) else { fatalError() }
    guard let cell = AccountCells(rawValue: indexPath.row) else { fatalError() }
    switch cell {
    case .email:
        /* dequeue and configure for email cell */
    case .password:
        /* dequeue and configure for password cell */
    /* user info */
    }
}
```

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enum SettingsSection {
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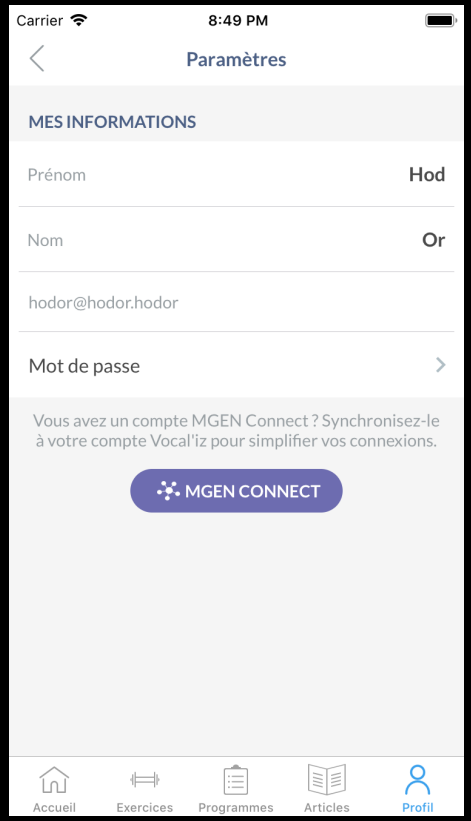
    case email
    case password
}
```




```
enum SettingsSection {
    case userInfo
}


enum SettingCell {
    case firstName
    case familyName
    case email
    case password
}
```

```
typealias SettingsTableViewModel = TableViewModel<SettingCell, SettingsSection>

func computeViewModel() -> SettingsTableViewModel {
    return SettingsTableViewModel(
        sections: [
            SettingsTableViewModel.Section(
                header: .userInfo,
                cells: [
                    .firstName,
                    .familyName,
                ]
            ),
            SettingsTableViewModel.Section(
                header: .userInfo,
                cells: [
                    .email,
                    .password,
                ]
            )
        ]
    )
}
```

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typealias SettingsTableViewModel = TableViewModel<SettingCell, SettingsSection>

func computeViewModel() -> SettingsTableViewModel {
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                    .email,
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                ]
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}
```

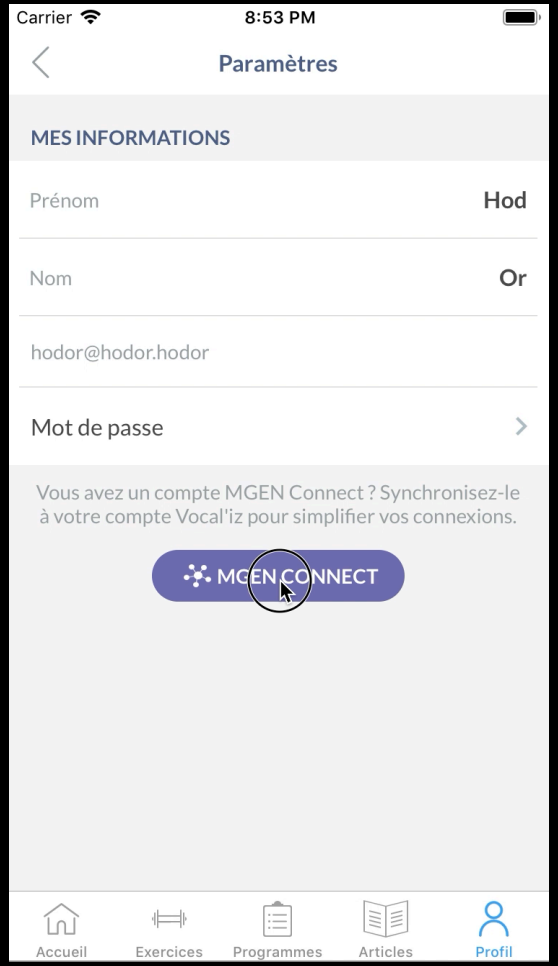
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3 Animation

DifferenceKit

```swift
public protocol Differentiable: ContentEquatable {
    /// A type representing the identifier.
    associatedtype DifferenceIdentifier: Hashable

    /// An identifier value for difference calculation.
    var differenceIdentifier: DifferenceIdentifier { get }
}
```

```swift
public protocol Differentiable: ContentEquatable {
    /// A type representing the identifier.
    associatedtype DifferenceIdentifier: Hashable

    /// An identifier value for difference calculation.
    var differenceIdentifier: DifferenceIdentifier { get }
}
```

```swift
public protocol ContentEquatable {
    /// Indicate whether the content of `self` is equals to the content of
    /// the given source value.
    ///
    /// - Parameters:
    ///   - source: A source value to be compared.
    ///
    /// - Returns: A Boolean value indicating whether the content of `self` is equals
    ///            to the content of the given source value.
    func isContentEqual(to source: Self) -> Bool
}
```

```swift
public protocol DifferentiableSection: Differentiable {
    /// A type representing the elements in section.
    associatedtype Collection: Swift.Collection where Collection.Element: Differentiable

    /// The collection of element in the section.
    var elements: Collection { get }

    /// Creates a new section reproducing the given source section with replacing the elements.
    ///
    /// - Parameters:
    ///   - source: A source section to reproduce.
    ///   - elements: The collection of elements for the new section.
    init<C: Swift.Collection>(source: Self, elements: C) where C.Element == Collection.Element
}
```

```swift
public struct StagedChangeset<Collection: Swift.Collection> {
    ...
}



public extension UITableView {
    /// Applies multiple animated updates in stages using `StagedChangeset`.
    ///
    /// - Parameters:
    ///   - stagedChangeset: A staged set of changes.
    ///   - animation: An option to animate the updates.
    ///   - interrupt: A closure that takes an changeset as its argument and returns `true` if the animated
    ///                updates should be stopped and performed reloadData. Default is nil.
    ///   - setData: A closure that takes the collection as a parameter.
    ///              The collection should be set to data-source of UITableView.
    func reload<C>(
        using stagedChangeset: StagedChangeset<C>,
        with animation: @autoclosure () -> RowAnimation,
        interrupt: ((Changeset<C>) -> Bool)? = nil,
        setData: (C) -> Void
    )
}
```

```swift
func configure(with viewModel: SettingsViewModel) {
        let changeSet = settingsViewDataSource.changeSet(for: viewModel.tableView)
        settingsTableView.reload(
            using: changeSet,
            with: UITableView.RowAnimation.automatic
        ) { viewModel in
            settingsViewDataSource.update(viewModel)
        }
}
```

```swift
func changeSet(for targetViewModel: SettingsTableViewModel) -> StagedChangeset<SettingsTableViewModel> {
    return StagedChangeset<SettingsTableViewModel>(source: self.viewModel, target: targetViewModel)
}
```

```swift
func update(_ viewModel: SettingsTableViewModel) {
    self.viewModel = viewModel
 }
```

Data driven data source - DenisPoifol.github.io

DifferenceKit

Playground for this talk

FABERNOVEL

THANK YOU

@DenisPoifol

denispoifol.github.io/

github.com/denisPoifol/