# Application Coordinator в iOS приложениях

Павел Гуров
pegurov@avito.ru

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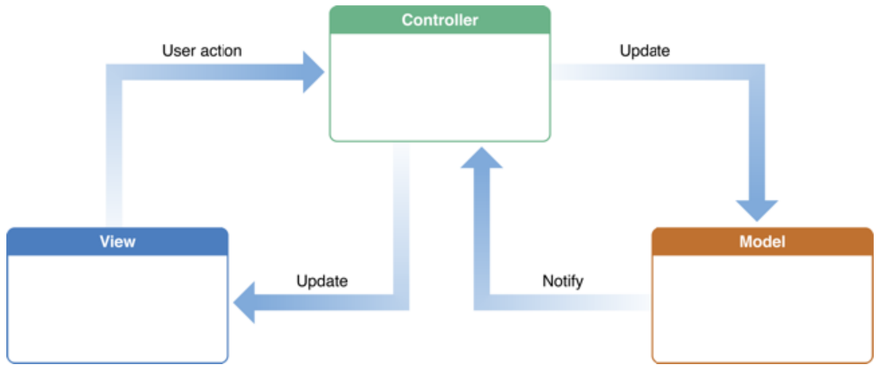
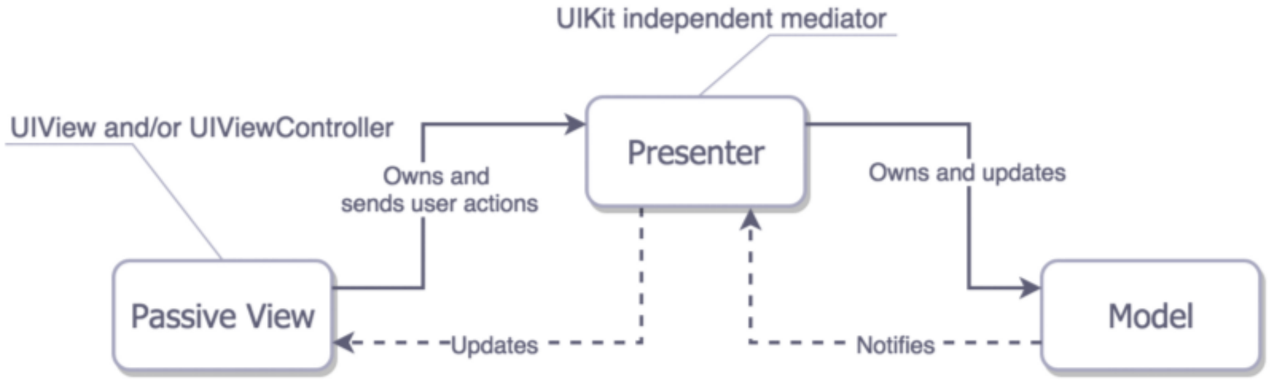
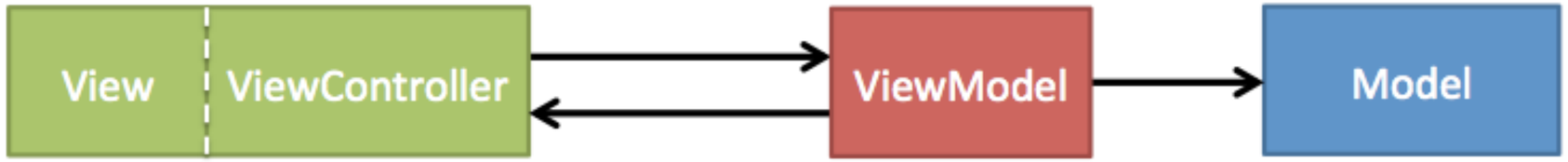
# MVx


Controller
User action
Update
View
Update
Notify
Model


UIKit independent mediator
UIView and/or UIViewController
Presenter
Owns and
sends user actions
Owns and updates
Passive View
Updates
Notifies
Model


View
ViewController
ViewModel
Model

# UIStoryboard + segues

UIStoryboard + segues

UINavigationController

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UIStoryboard + segues

UINavigationController

present(_:animated:completion:)

UIStoryboard + segues

UINavigationController

present(_:animated:completion:)

# UIStoryboard + segues

```
self.performSegue(withIdentifier: "", sender: self)
```

# UINavigationController

```
self.navigationController
```

# present(_:animated:completion:)

```
self.present(next, animated: true, completion: nil)
```

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```
/*
// MARK: - Navigation

// In a storyboard-based application,
you will often want to do a little
preparation before navigation

override func prepare(
    for segue: UIStoryboardSegue,
    sender: Any?) {

    // Get the new view controller using
    // segue.destinationViewController.
    // Pass the selected object to the
    // new view controller.
}
*/
```

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```

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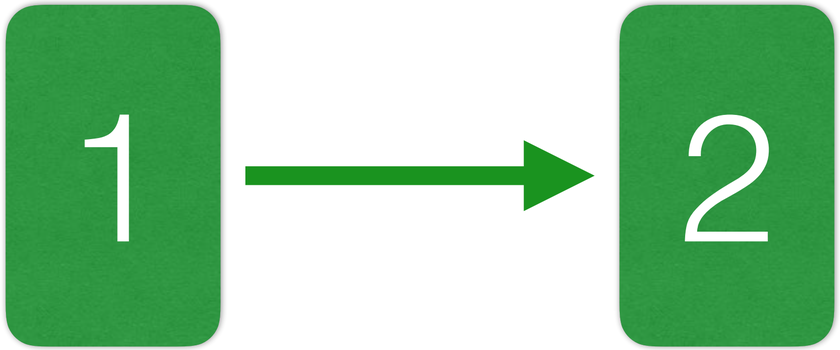
# Жесткая связанность

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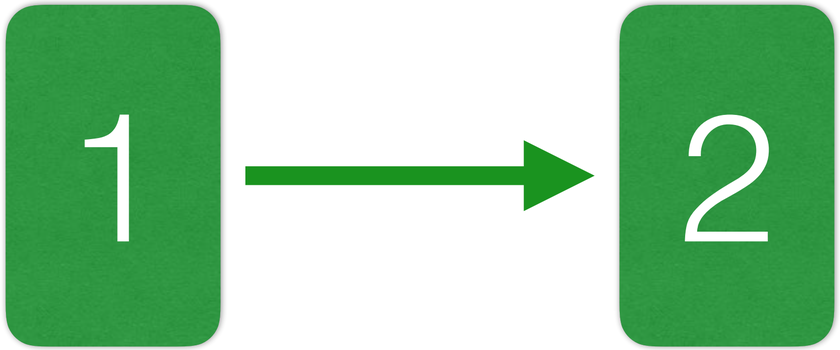
# Жесткая связанность

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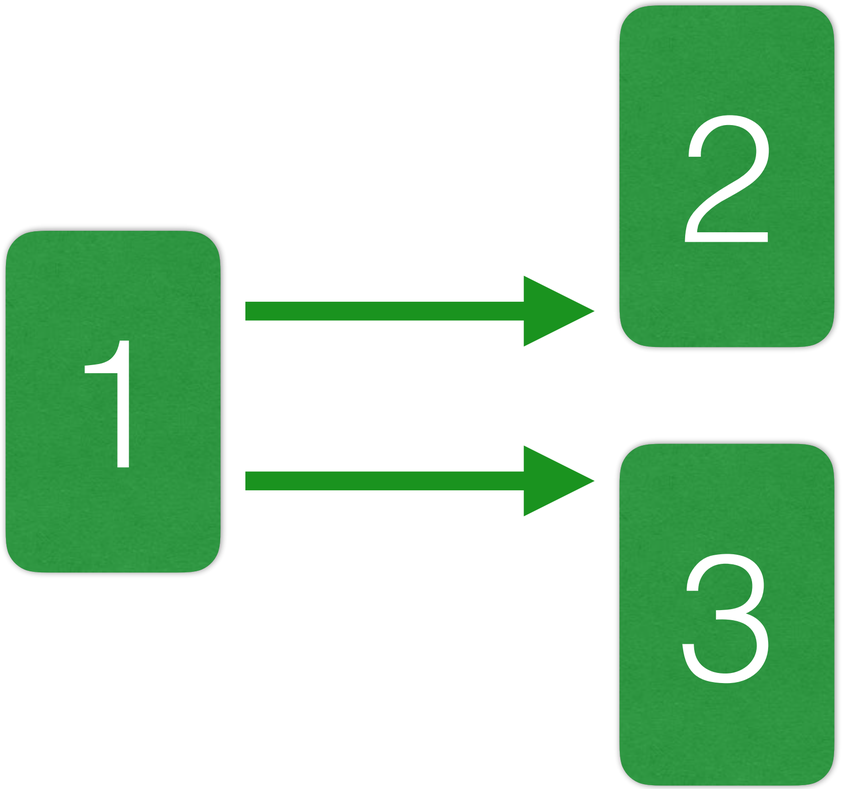


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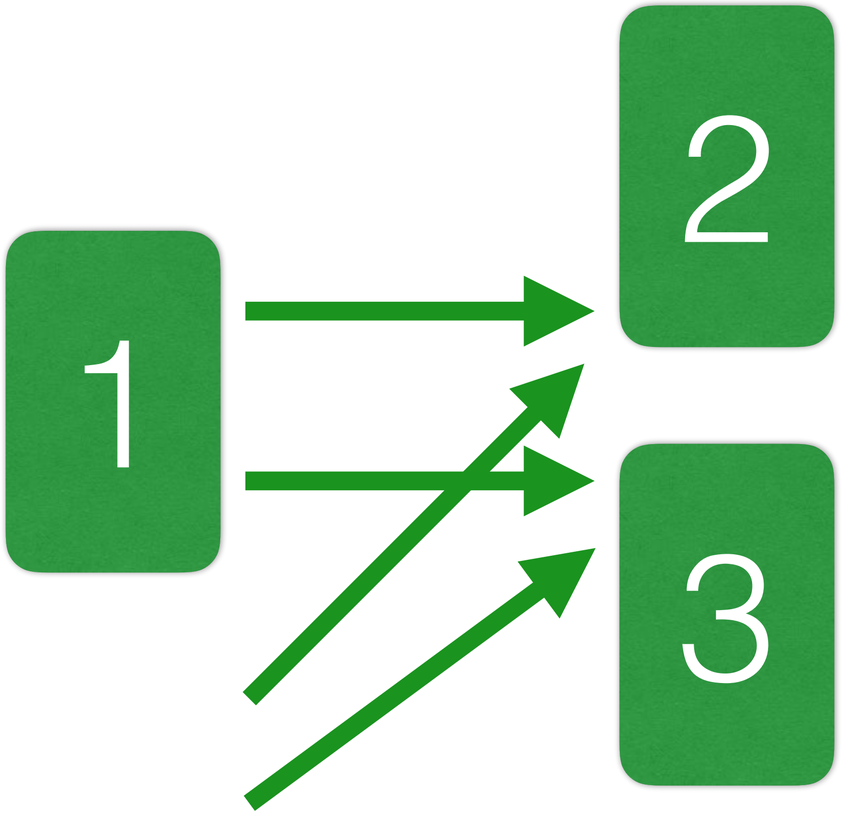
# Жесткая связанность

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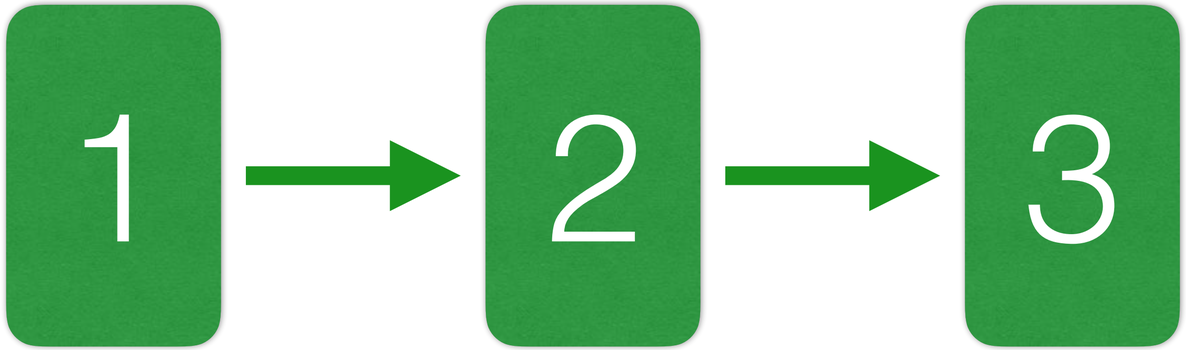
# Порядок

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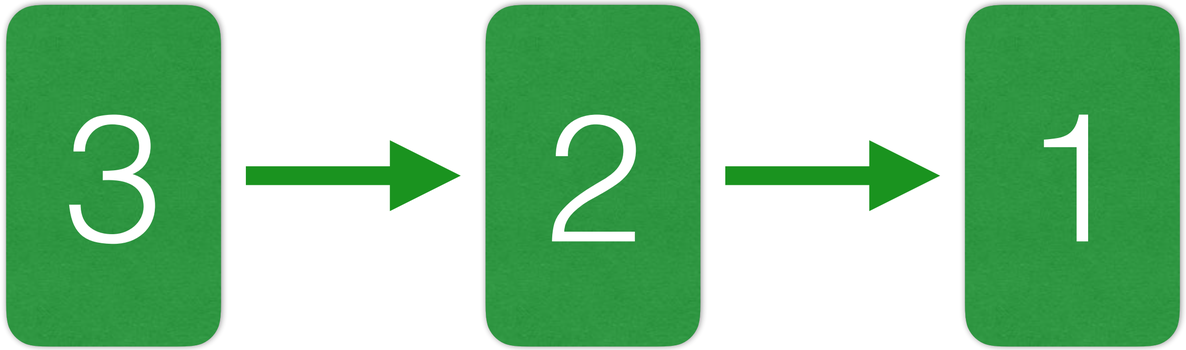


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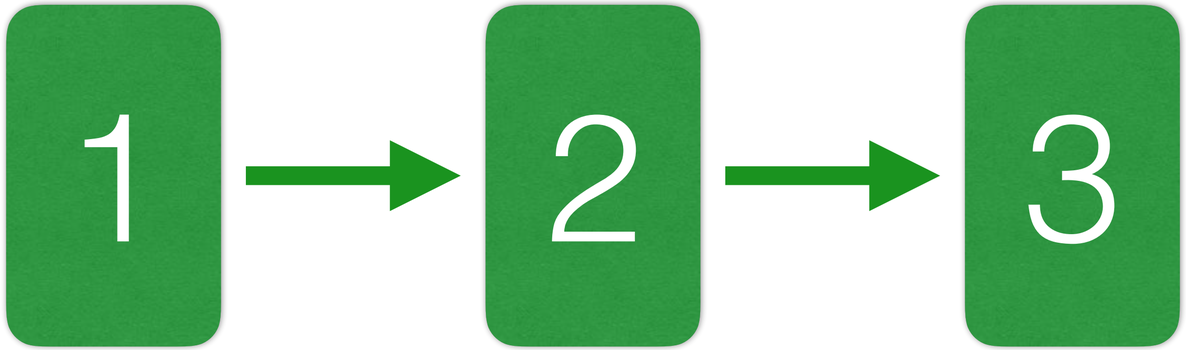
# Передача данных

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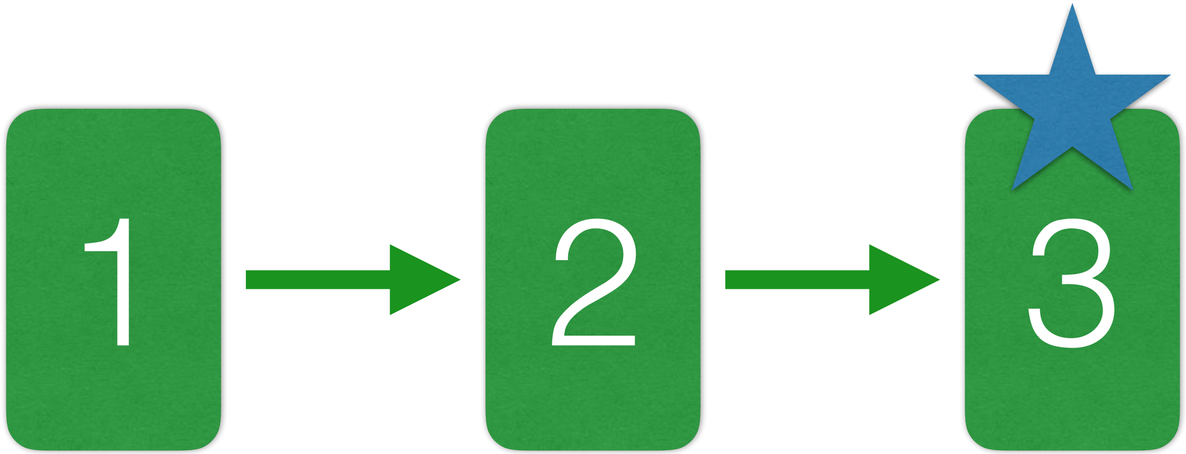

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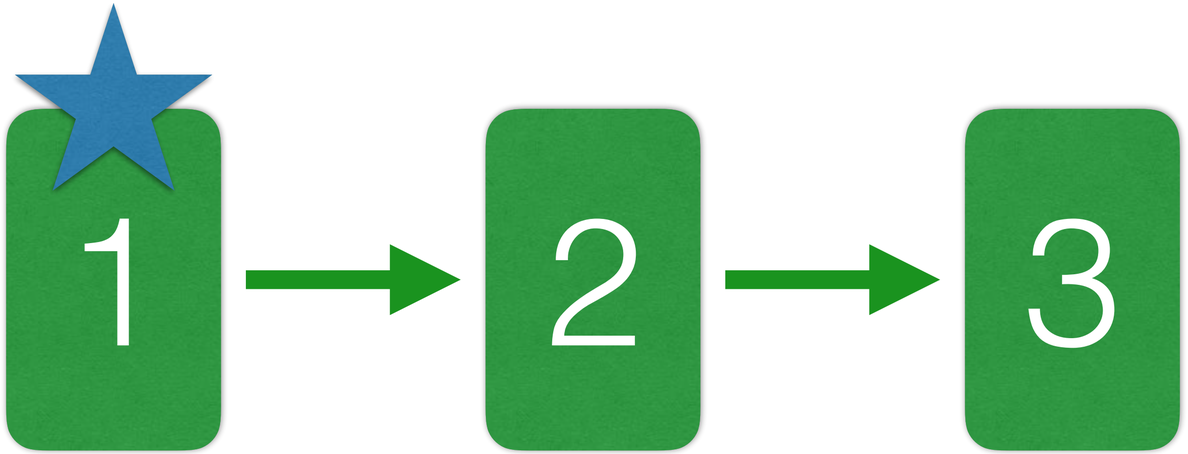

# Выбор города

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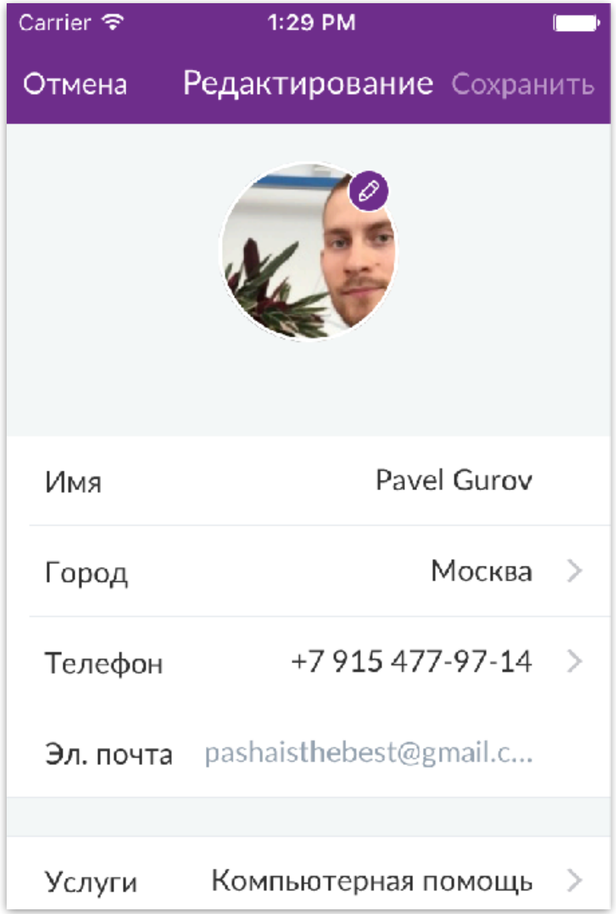

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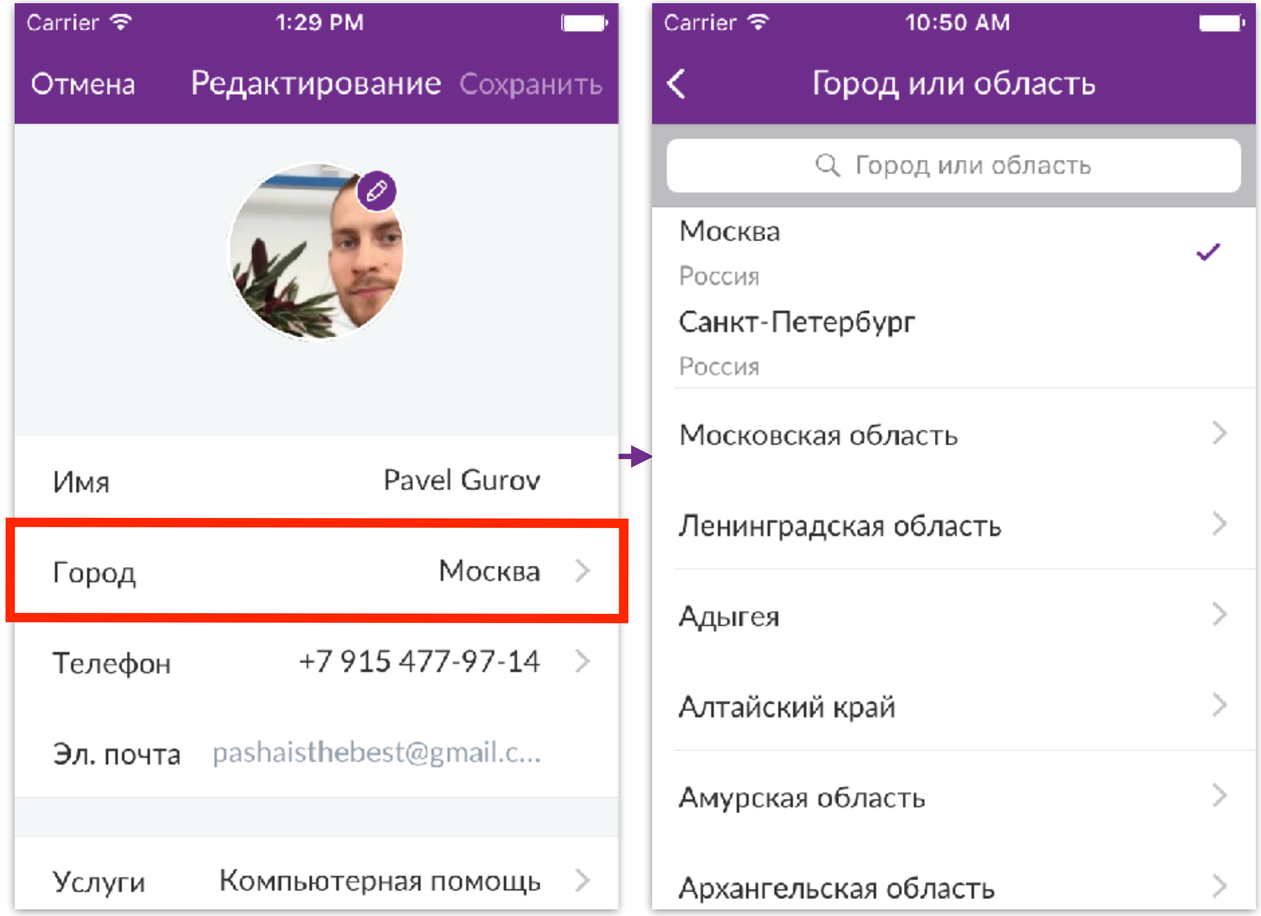

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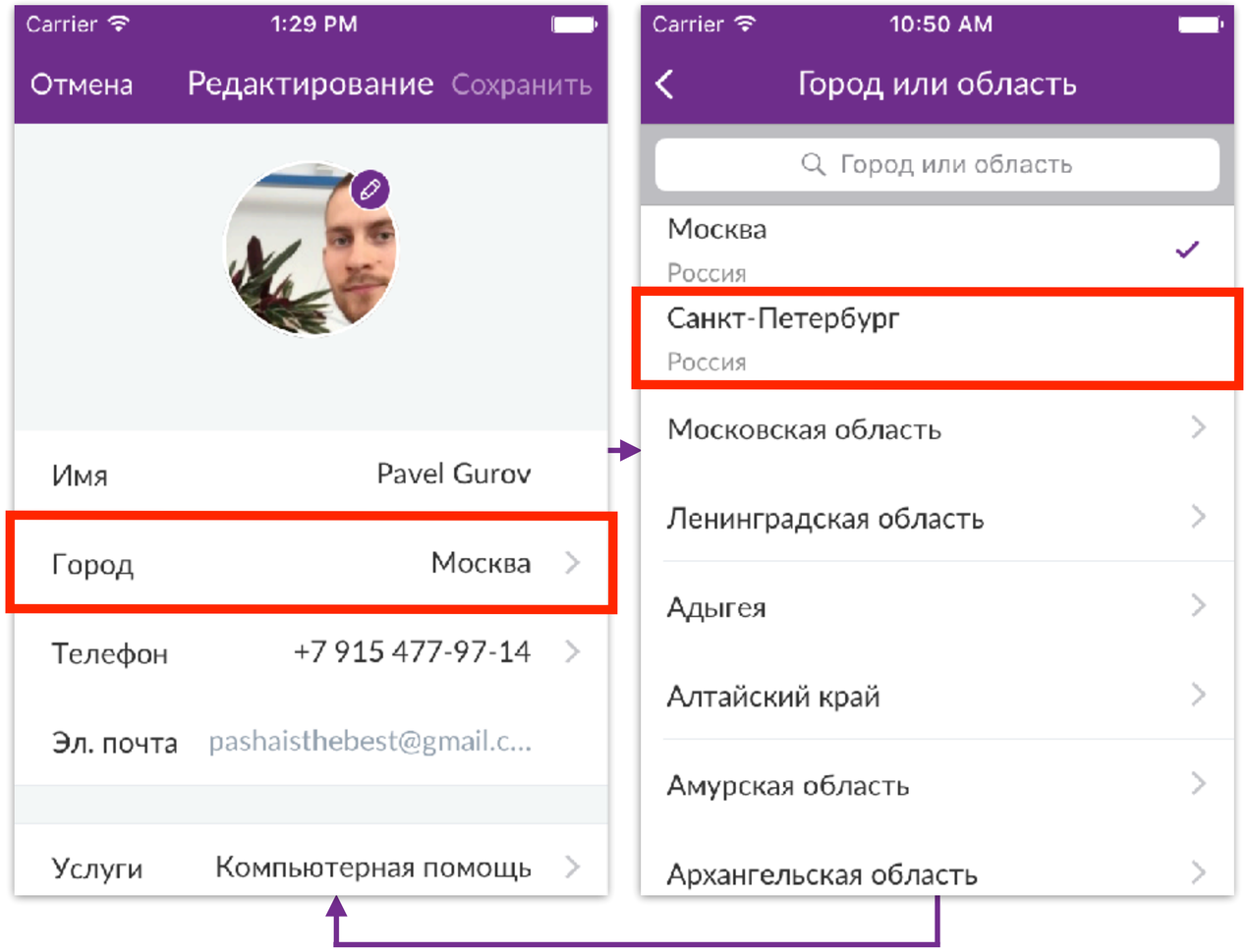

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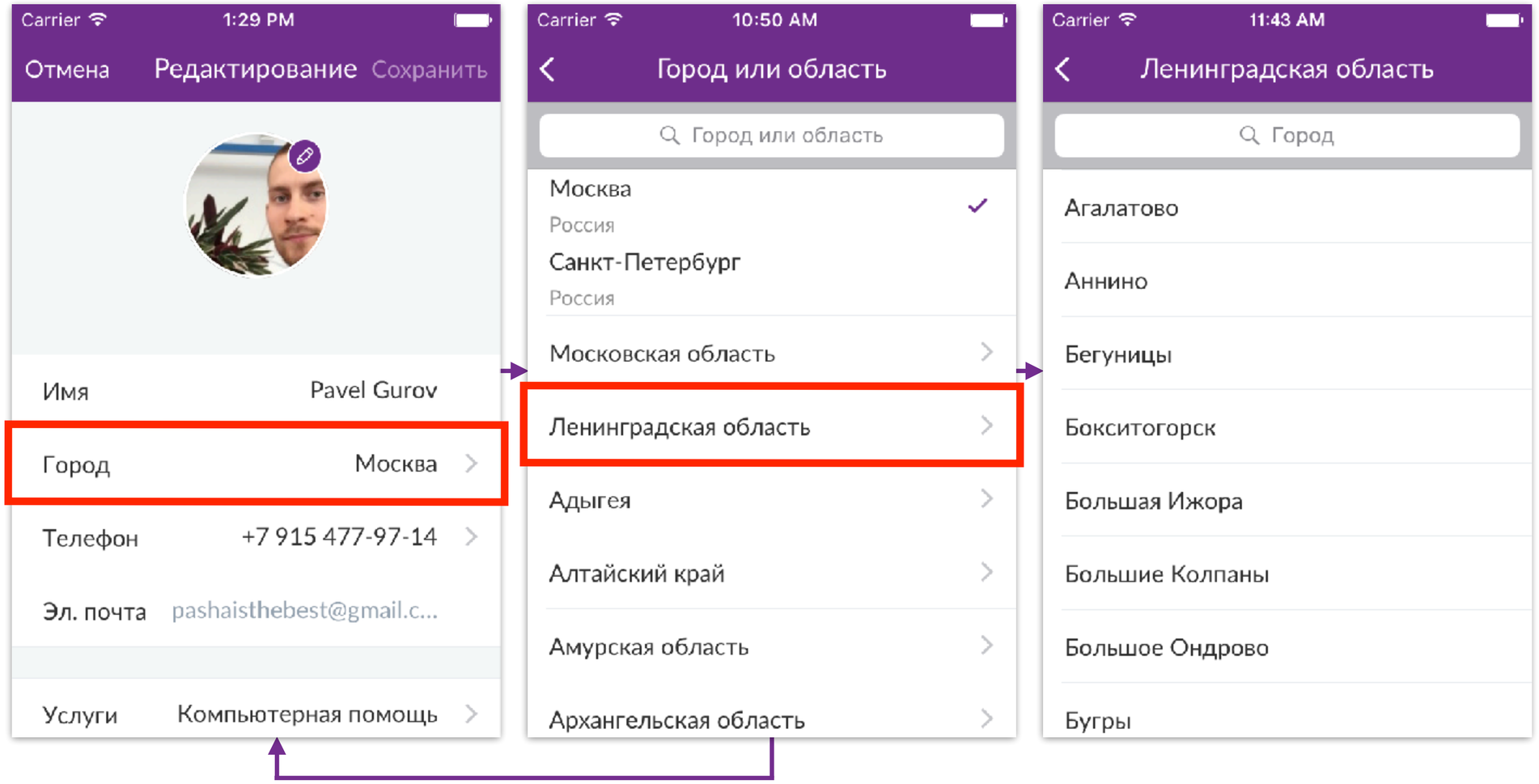
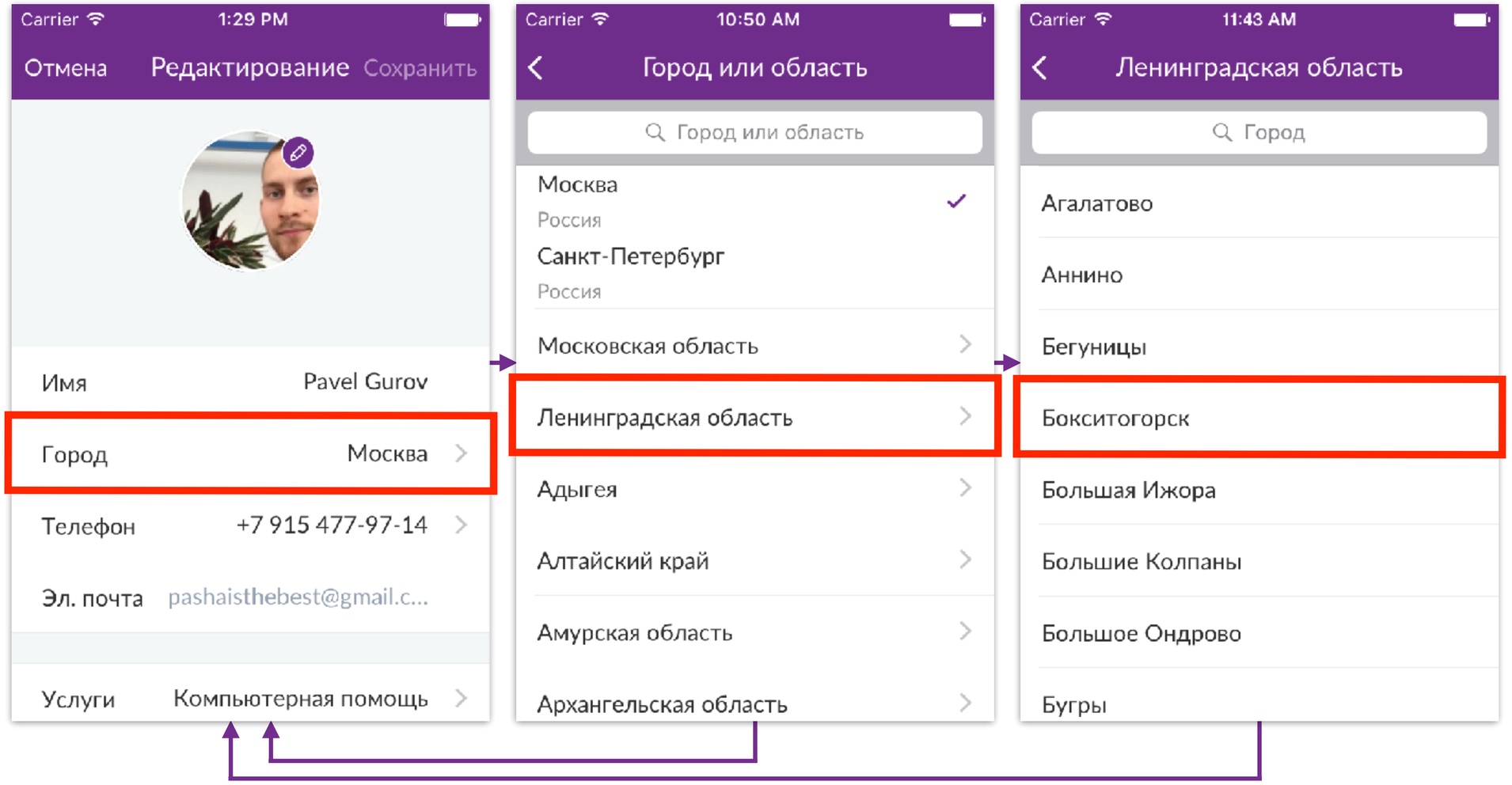
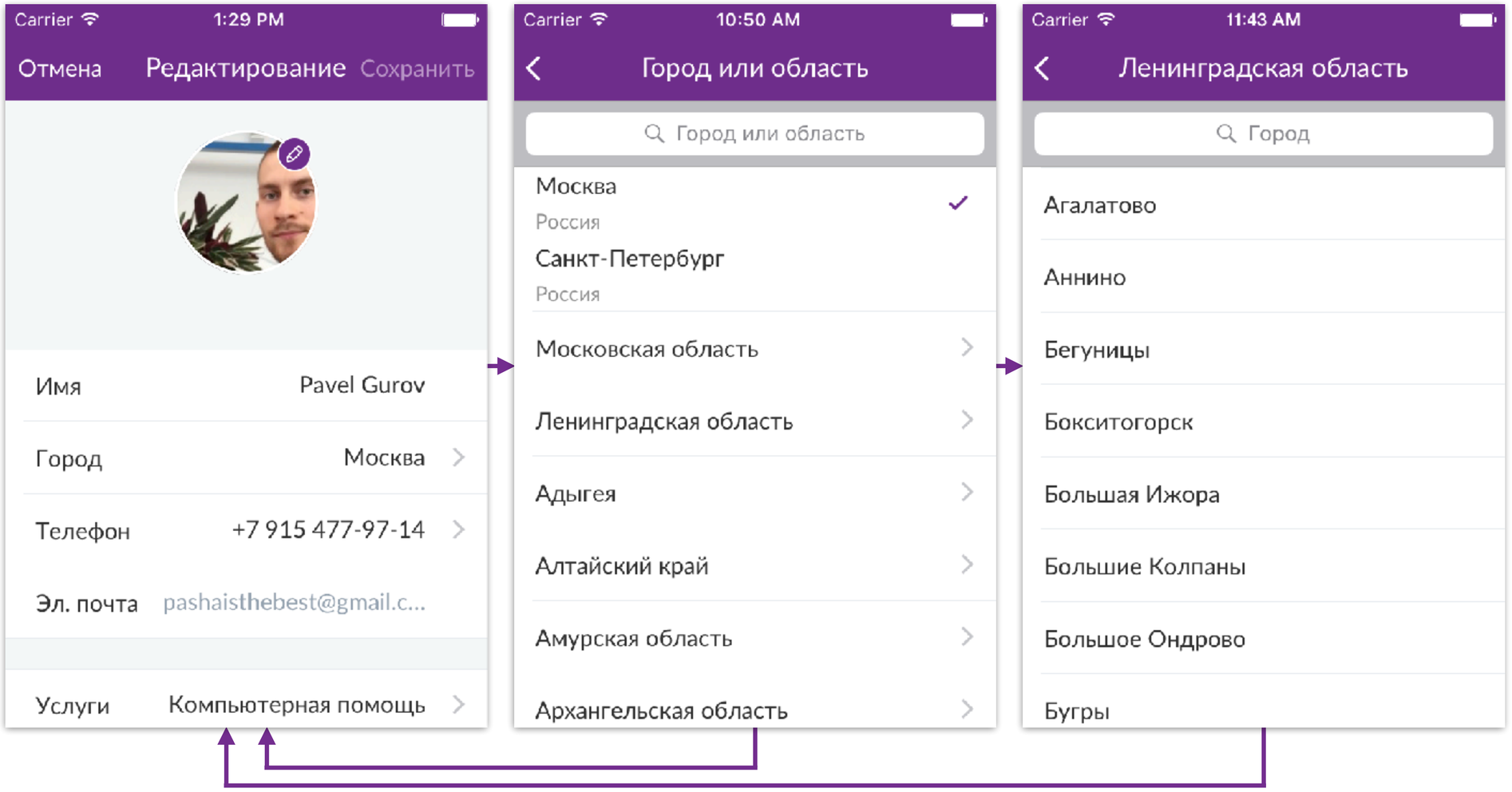
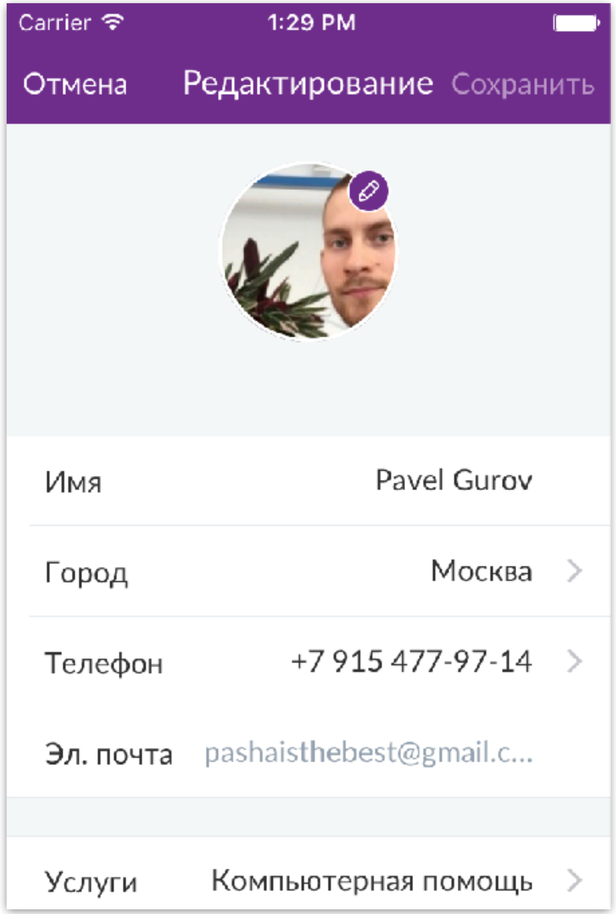
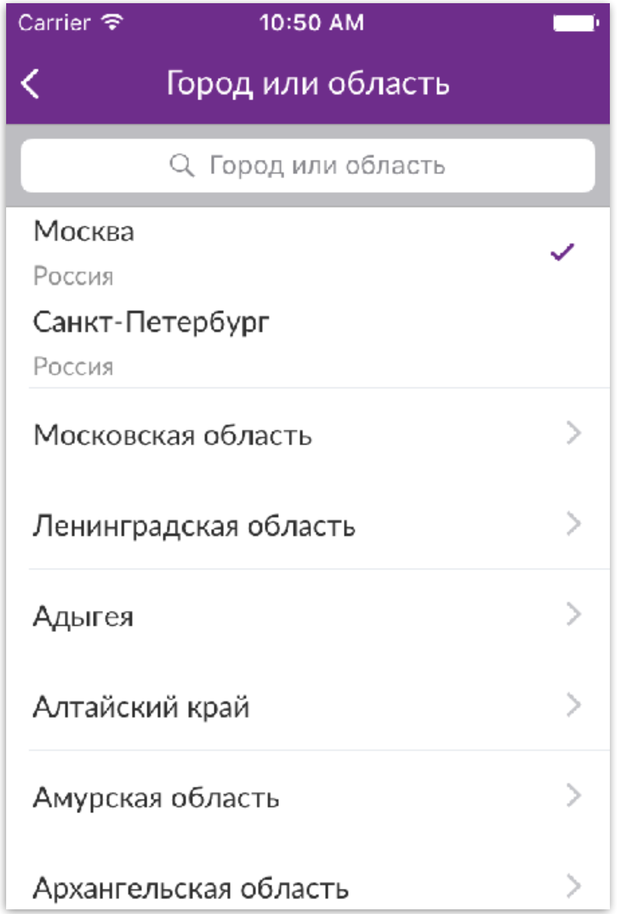


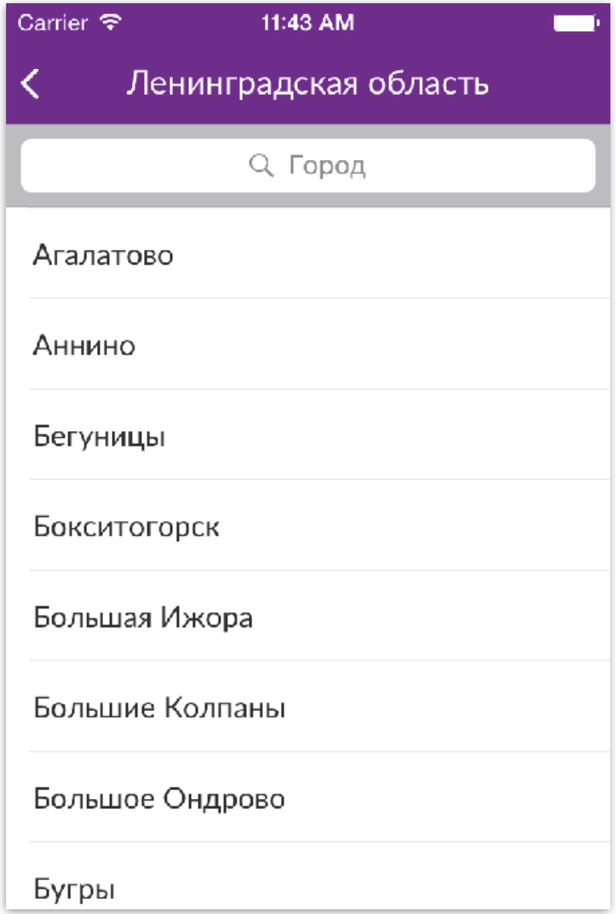
# Выбор города




Carrier 1:29 PM
Отмена
Редактирование
Сохранить
Имя
Pavel Gurov
Город
Москва
Телефон
+7 915 477-97-14
Эл. почта
pashaisthebest@gmail.c...
Услуги
Компьютерная помощь
Carrier 10:50 AM
Город или область
Город или область
Москва
Россия
Санкт-Петербург
Россия
Московская область
Ленинградская область
Адыгея
Алтайский край
Амурская область
Архангельская область
Carrier 11:43 AM
Ленинградская область
Город
Агалатово
Аннино
Бегуницы
Бокситогорск
Большая Ижора
Большие Колпаны
Большое Ондрово
Бугры

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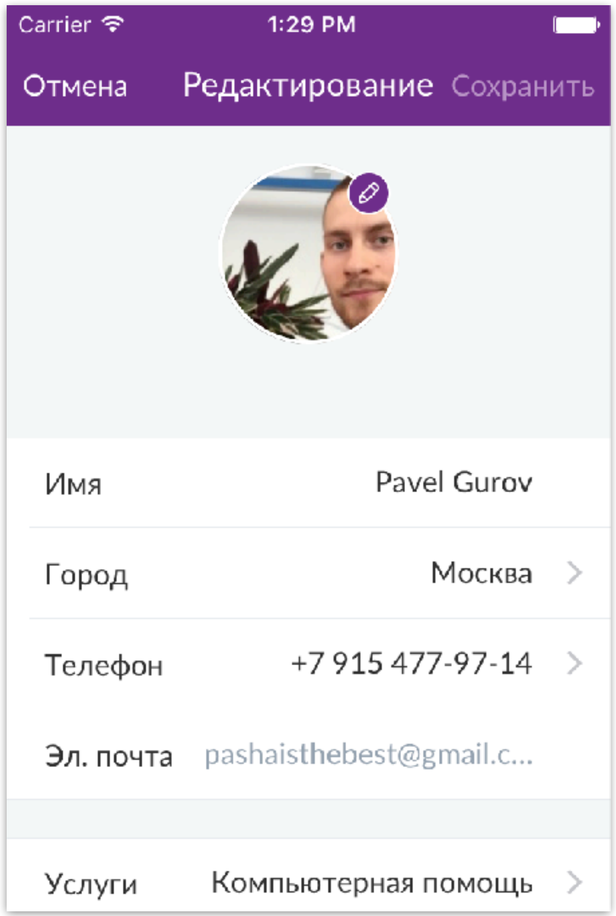
```
self.navigationController
self.tabBarController
```

```
performSegue(
    withIdentifier: "next",
    sender: self
)
prepare(
    for segue: UIStoryboardSegue,
    sender: Any?
)
```

```
let next = CitiesViewController()
next.city = City(name: "Moscow")
```

# Coordinator



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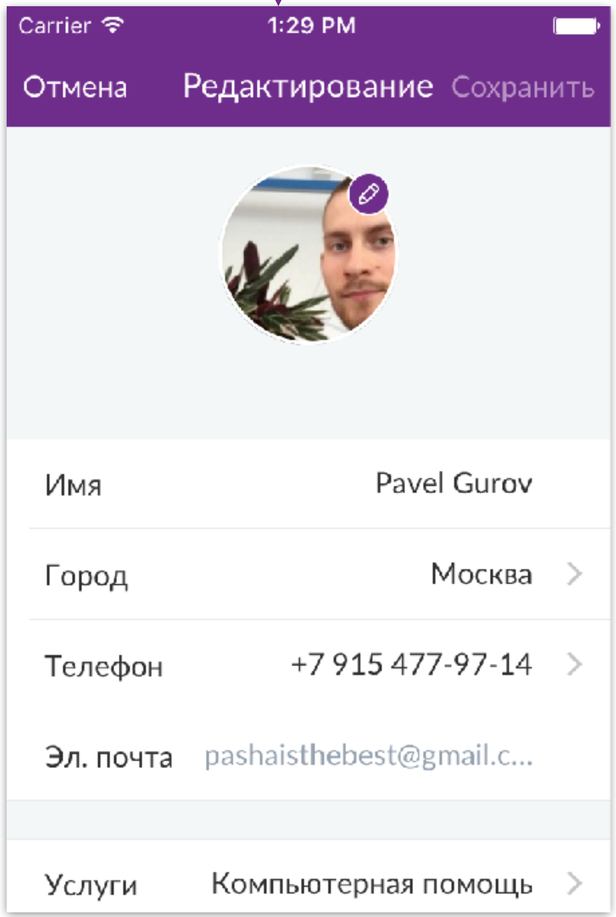

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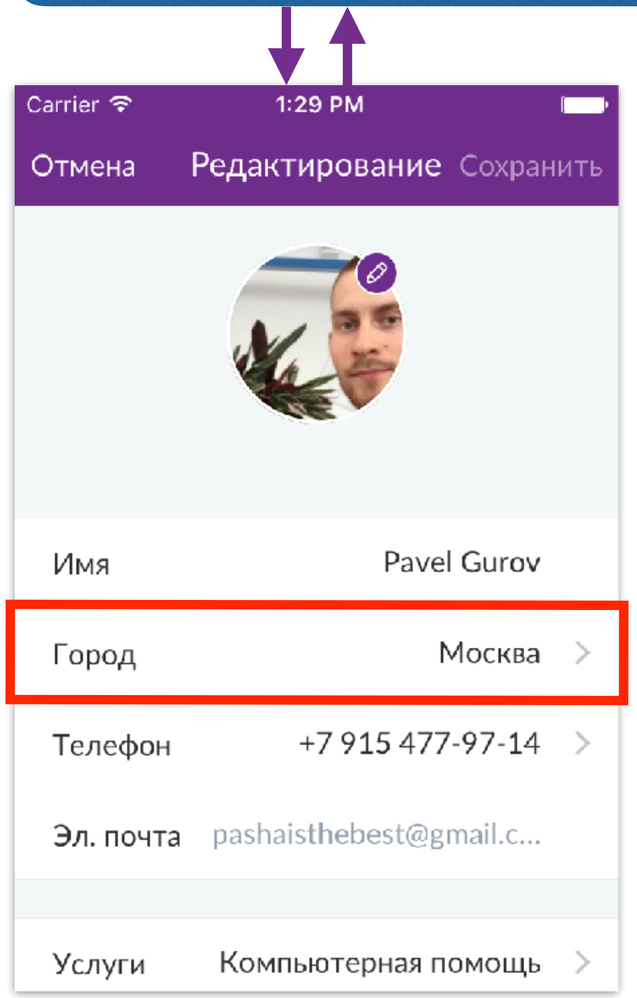


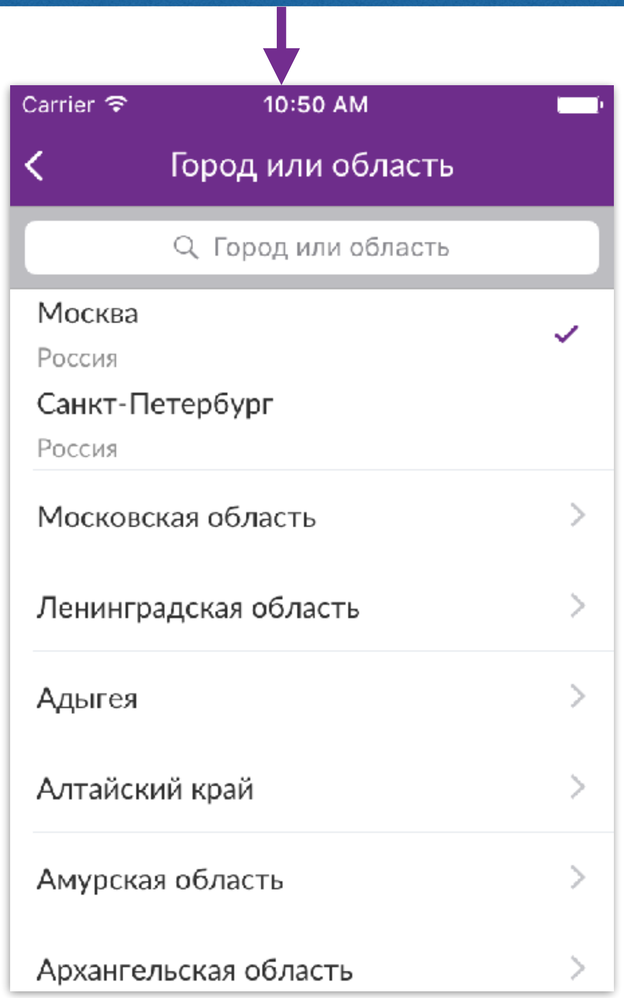


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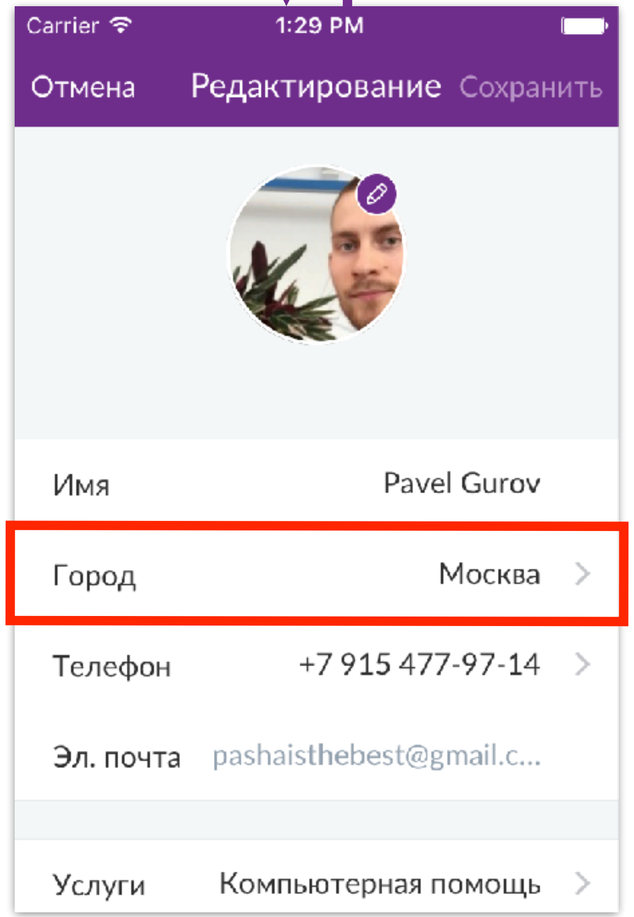


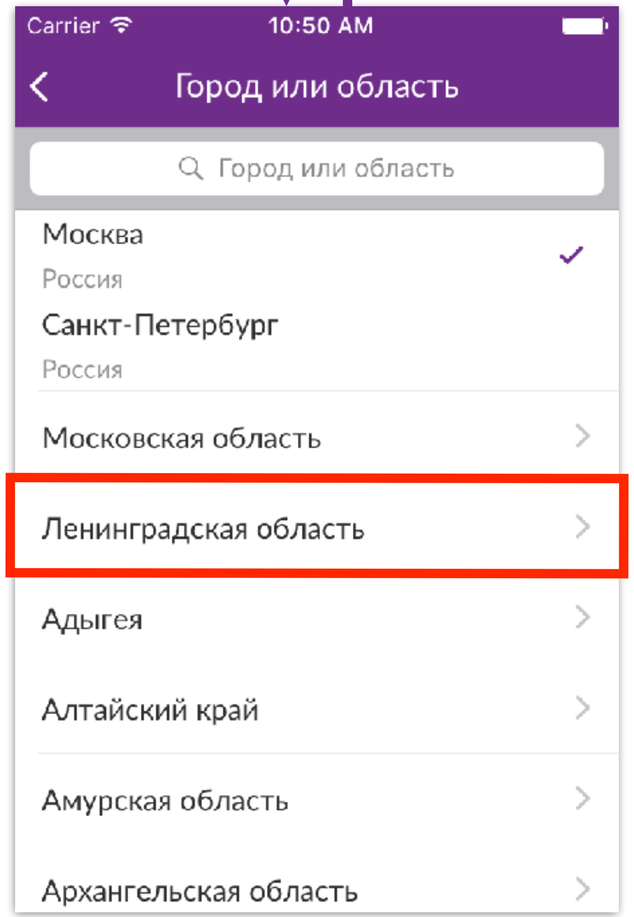


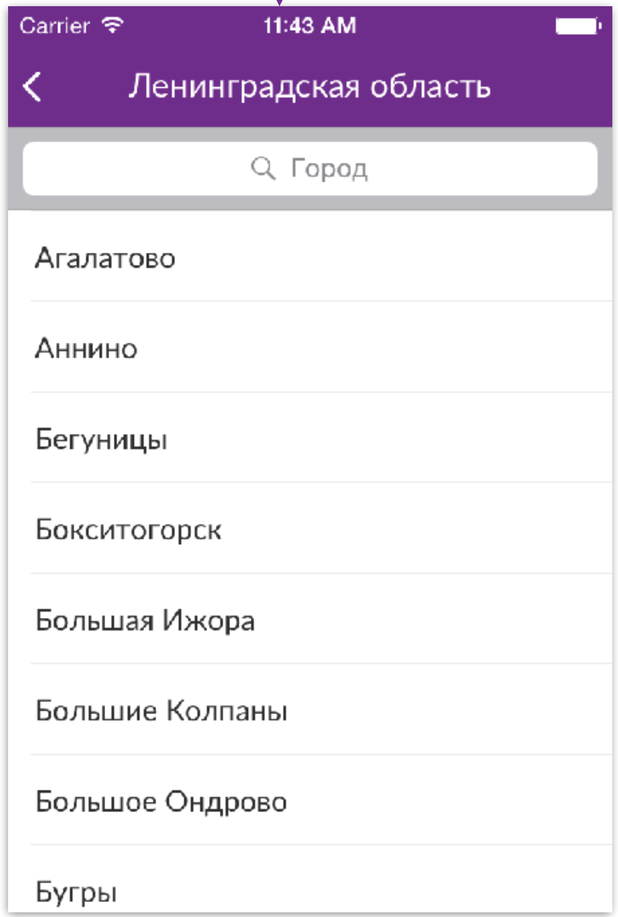


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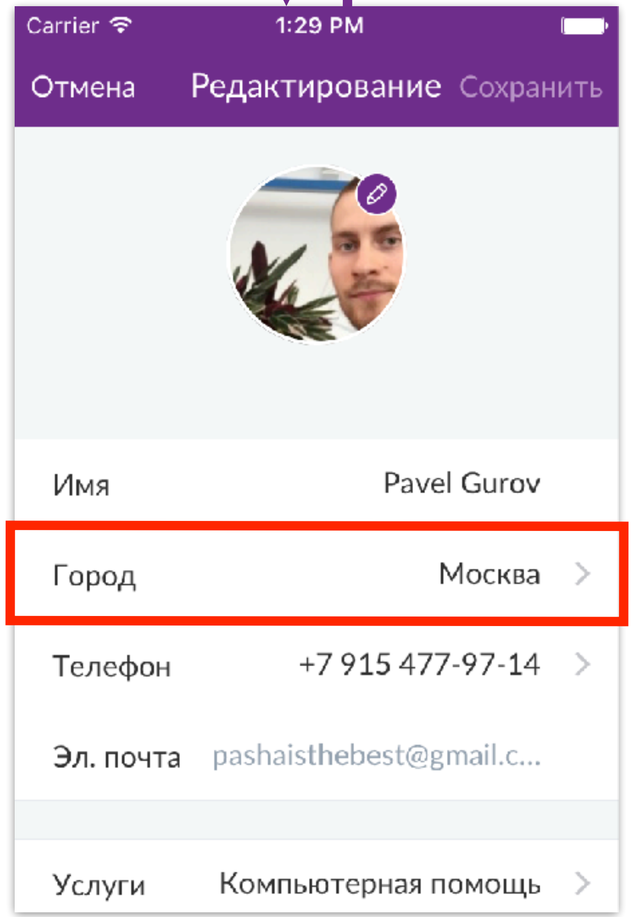


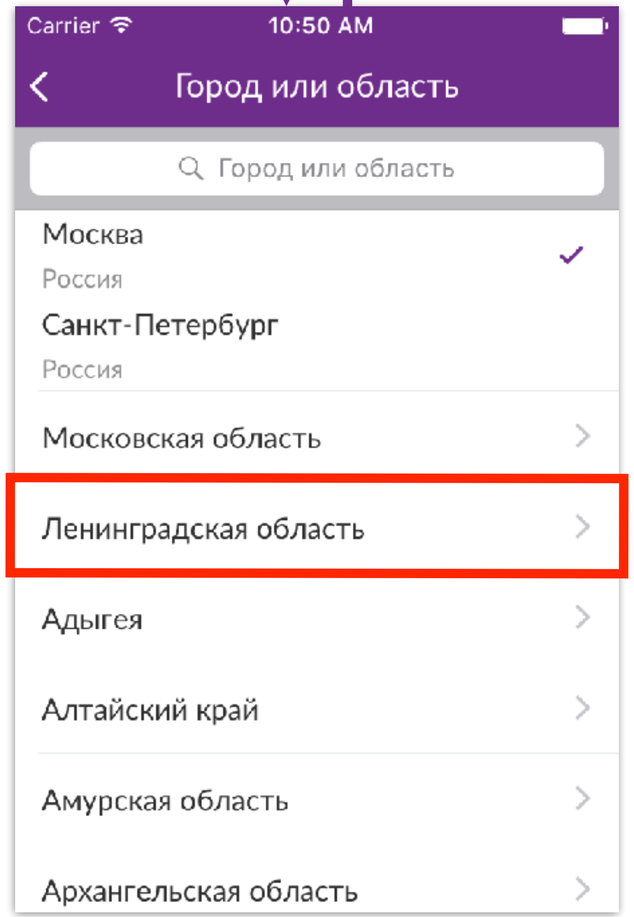


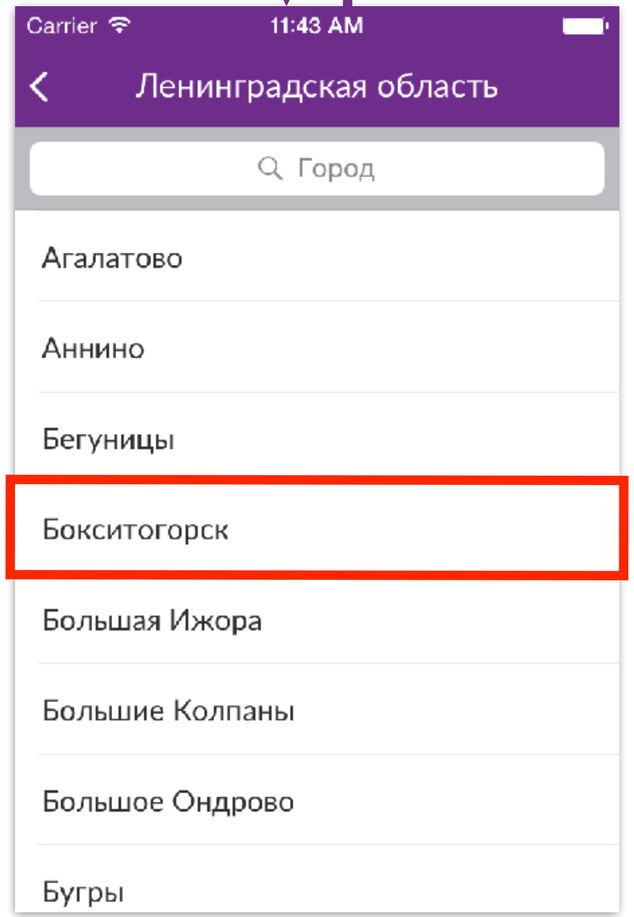


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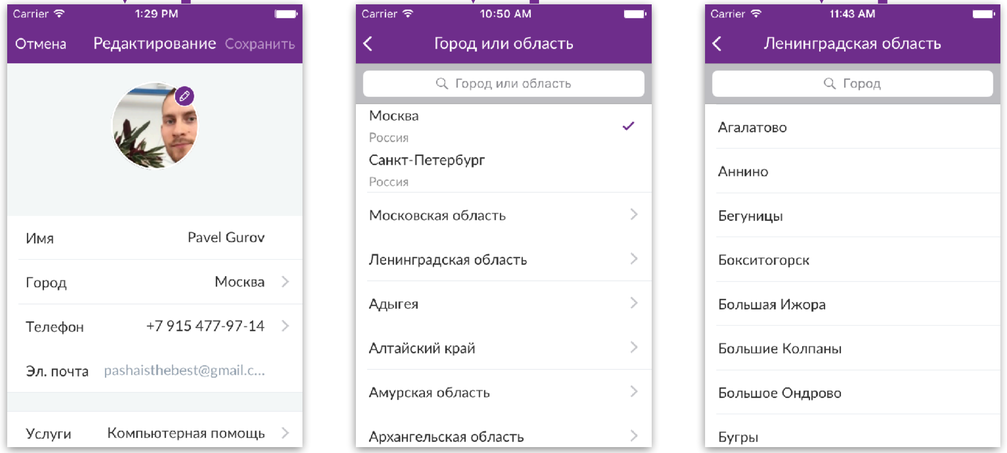


Data

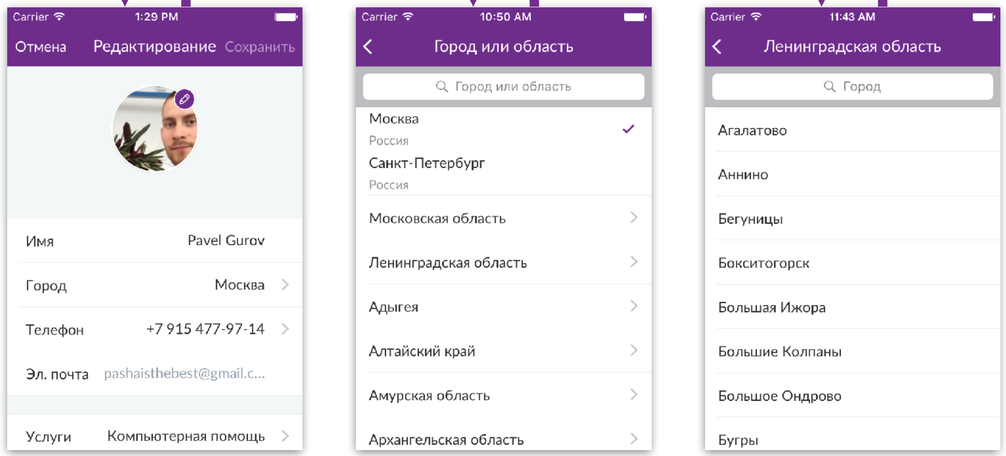
Database

Storage

Logic

Coordinator

Presentation

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# Demo

# Inputs and outputs

```
class UserEditViewController: UIViewController {

    // MARK: - Input -
    var user: User? { didSet { updateView() } }

    // MARK: - Output -
    var onSelectCity: (() -> Void)?
}


class CitiesViewController: UITableViewController {

    // MARK: - Output -
    var onCitySelected: ((City) -> Void)?
}
```

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```
protocol CitiesOutput {
    var onCitySelected: ((City) -> Void)? {
        get set
    }
}
```

| ***“interface” CitiesOutput*** |
| --- |
| + onCitySelected: (City)->() |

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protocol CitiesOutput {
    var onCitySelected: ((City) -> Void)? {
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    }
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class CitiesViewController: CitiesOutput {
    var onCitySelected: ((City) -> Void)?
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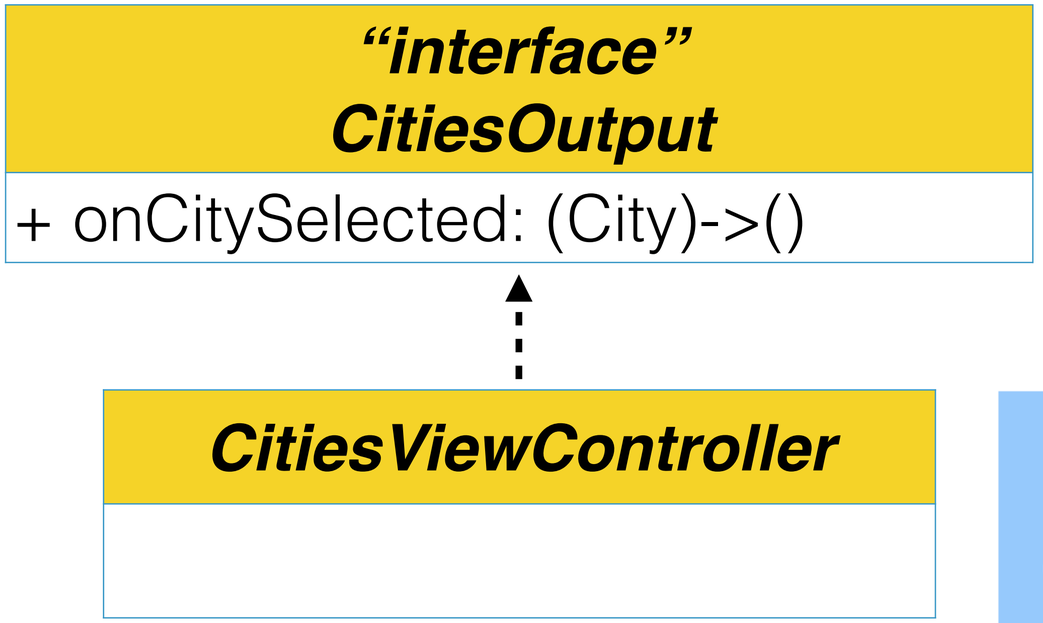


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| ***UserEditCoordinator*** |
| --- |
| + start() |
| + controllerFactory: ControllerFactory |

```
protocol CitiesOutput {
    var onCitySelected: ((City) -> Void)? {
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    }
}


class CitiesViewController: CitiesOutput {
    var onCitySelected: ((City) -> Void)?
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| ***“interface” CitiesOutput*** |
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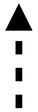

| ***CitiesViewController*** |
| --- |
| |

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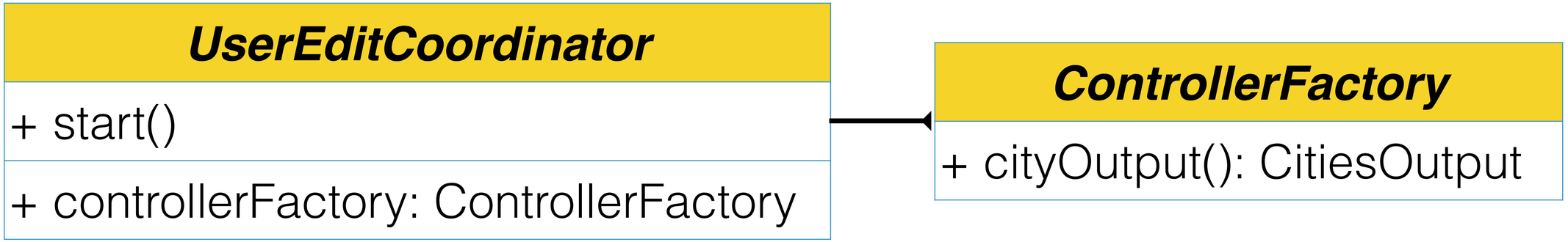


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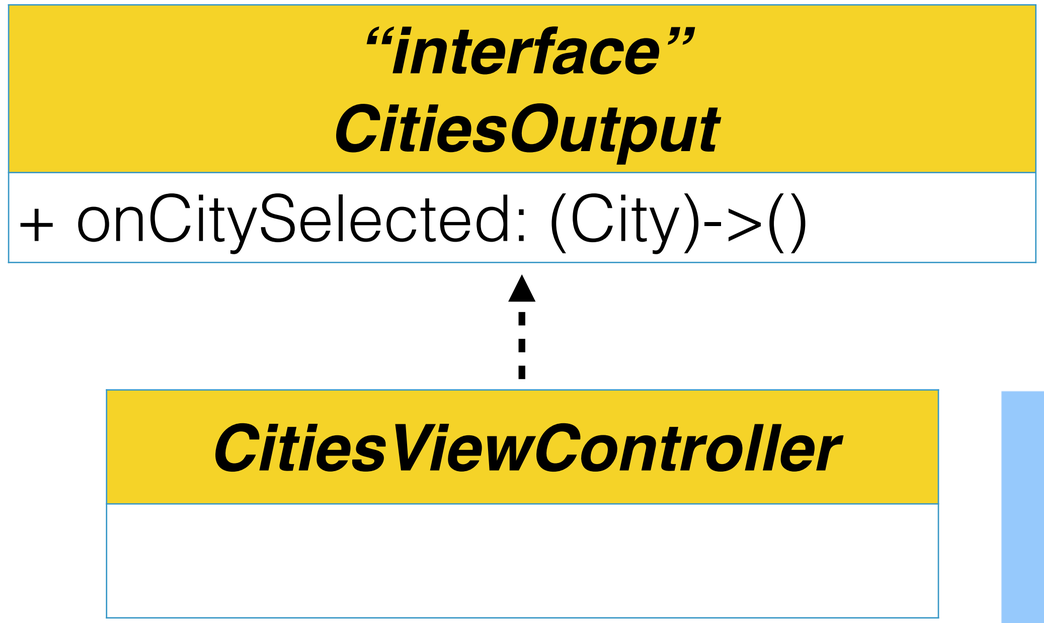


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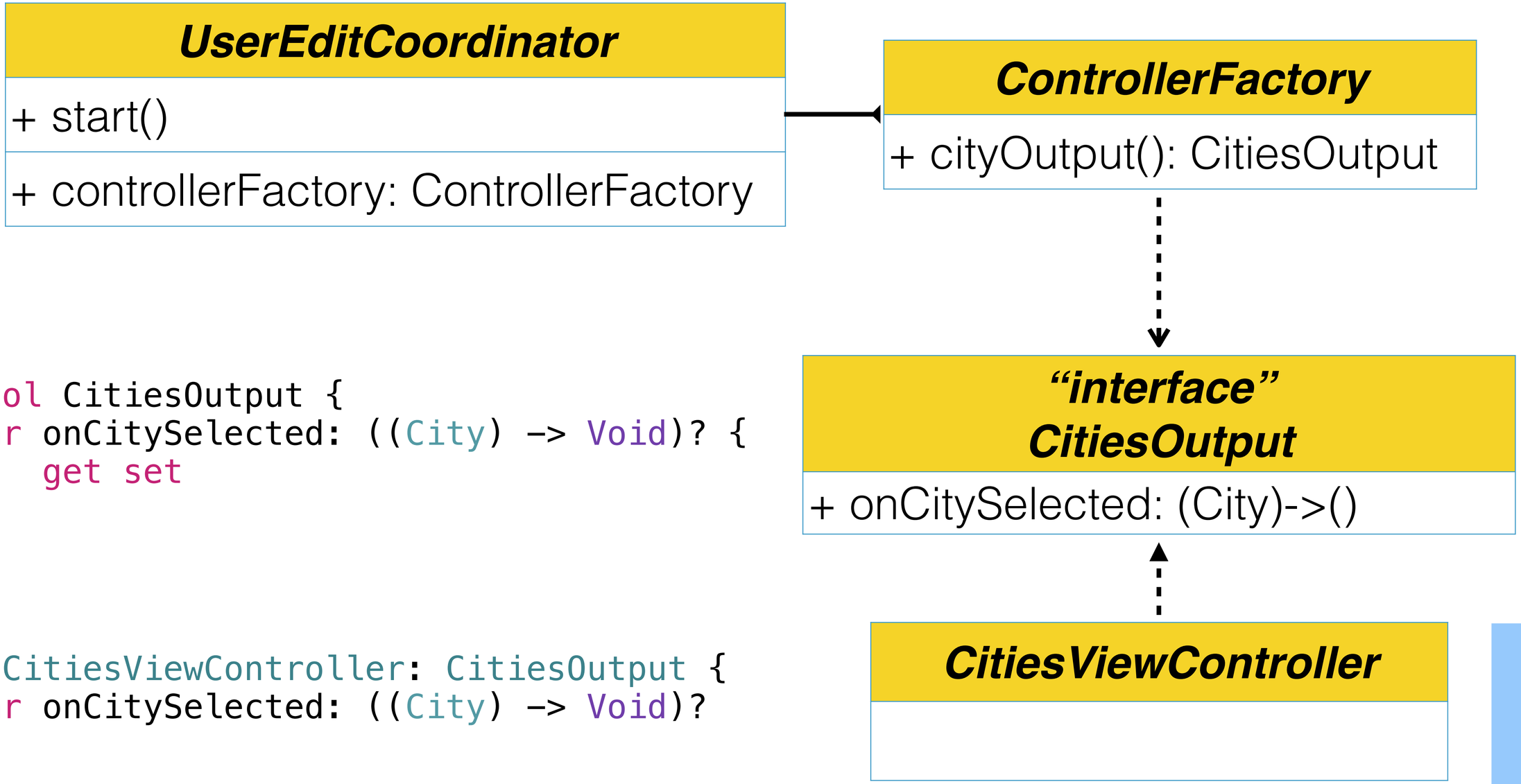


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```

```
class CitiesViewController: CitiesOutput {
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# Composition VS Inheritance

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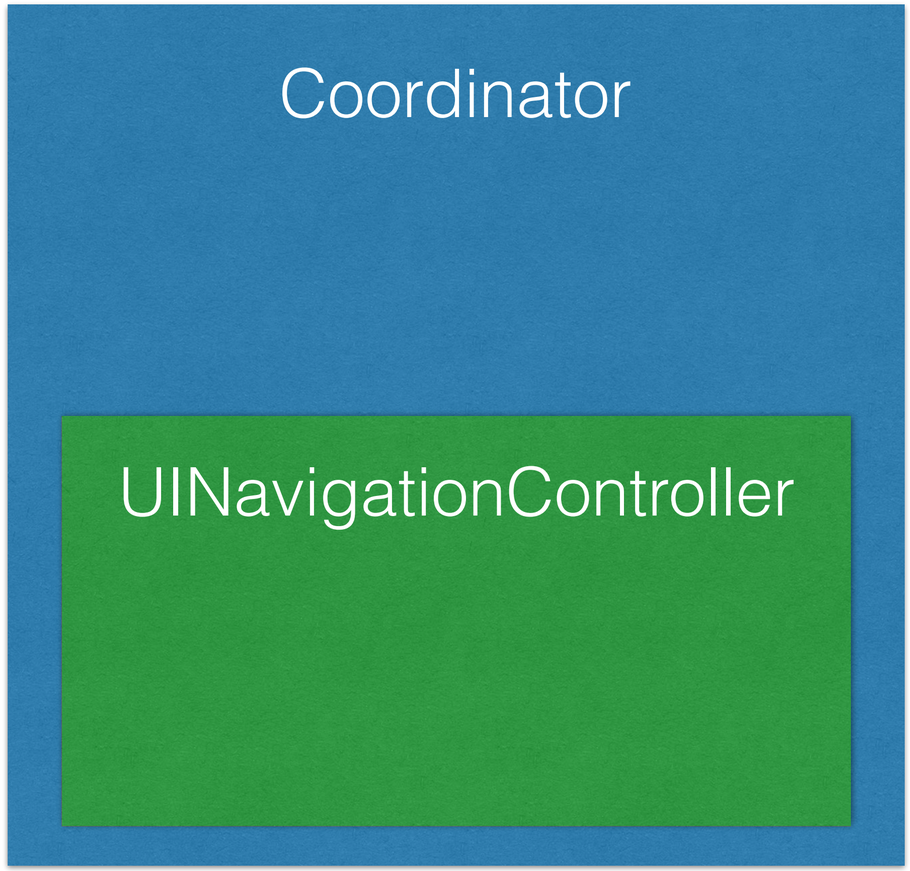


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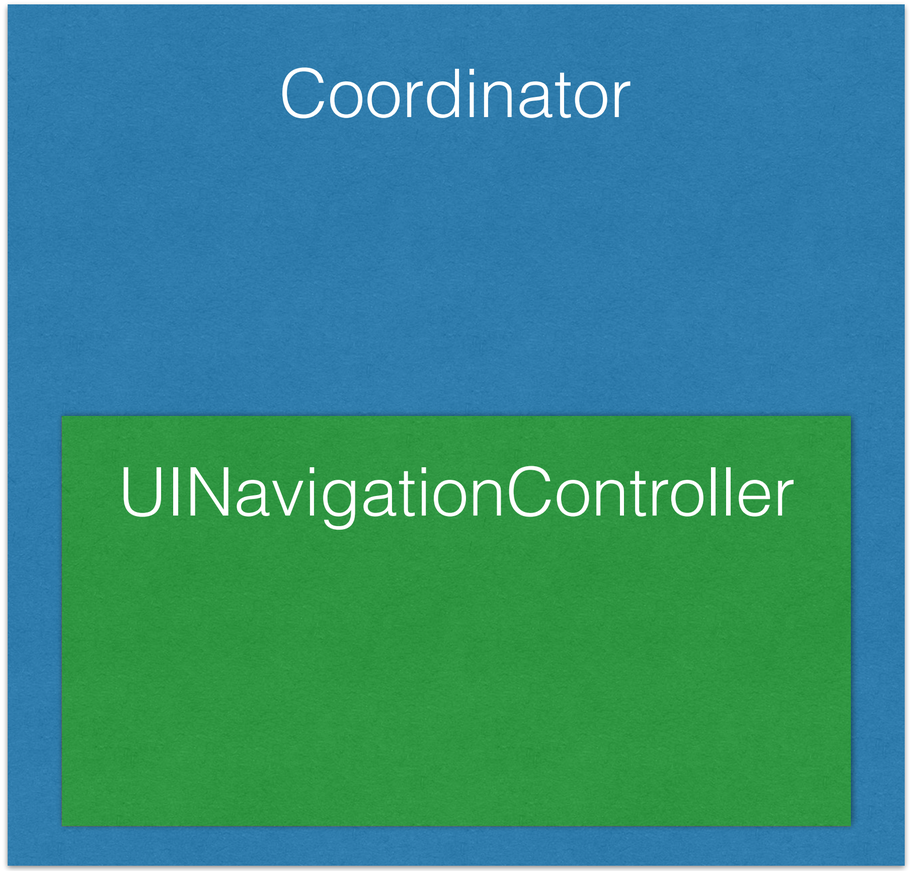
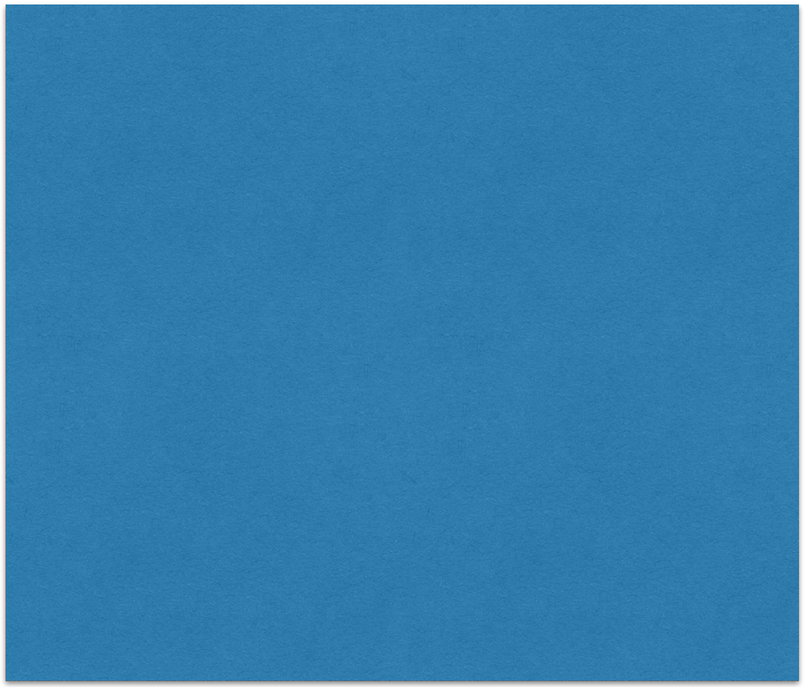
# Composition VS Inheritance




Coordinator: UINavigationController



# Storyboards

# Storyboards

```
class BaseViewController: UIViewController {

    var onPrepareForSegue: ((UIStoryboardSegue, Any?) -> ())?

    override func prepare(for segue: UIStoryboardSegue,
                          sender: Any?) {

        onPrepareForSegue?(segue, sender)
    }
}
```

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# Storyboards

```
class BaseViewController: UIViewController {

    var onPrepareForSegue: ((UIStoryboardSegue, Any?) -> ())?

    override func prepare(for segue: UIStoryboardSegue,
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        onPrepareForSegue?(segue, sender)
    }
}
```



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```
class StoryboardCoordinator<RootType: UIViewController> {

    let navigationController: UINavigationController
    let rootViewController: RootType

    init(storyboard: UIStoryboard) {
        navigationController = storyboard.initialNavigation
        rootViewController =
            navigationController!.topViewController as! RootType
    }
}

typealias UserEditCoordinator =
    StoryboardCoordinator<UserEditViewController>
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class StoryboardCoordinator<RootType: UIViewController> {

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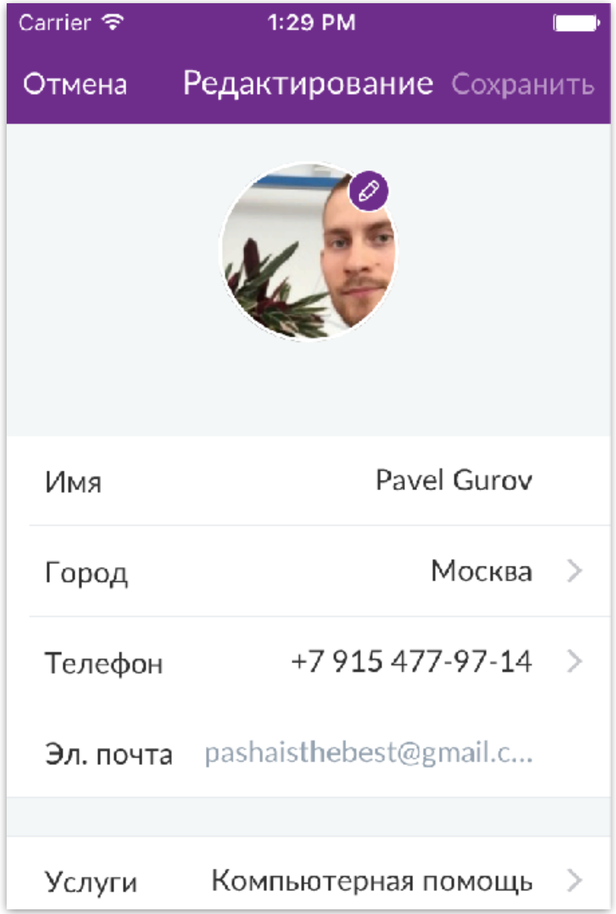
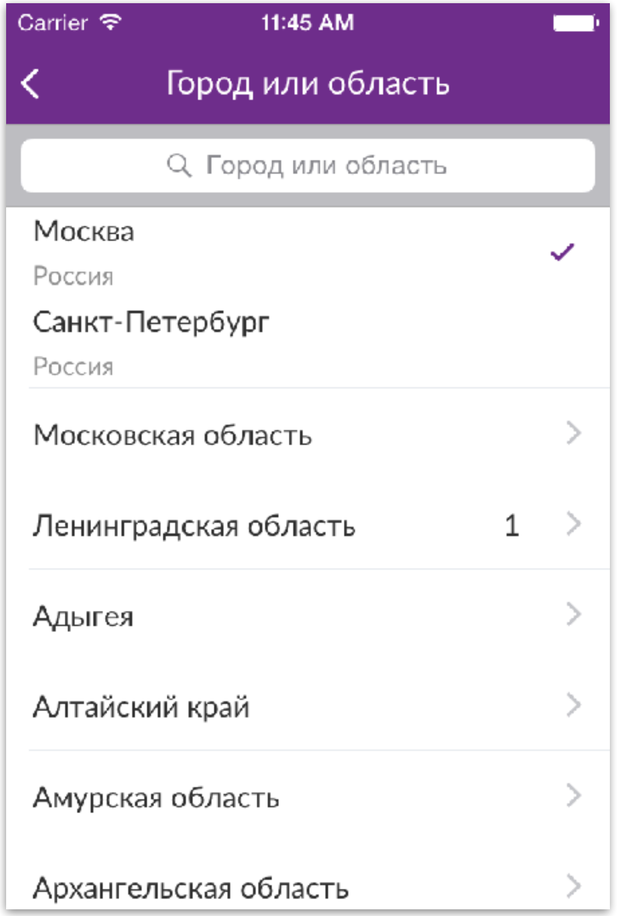
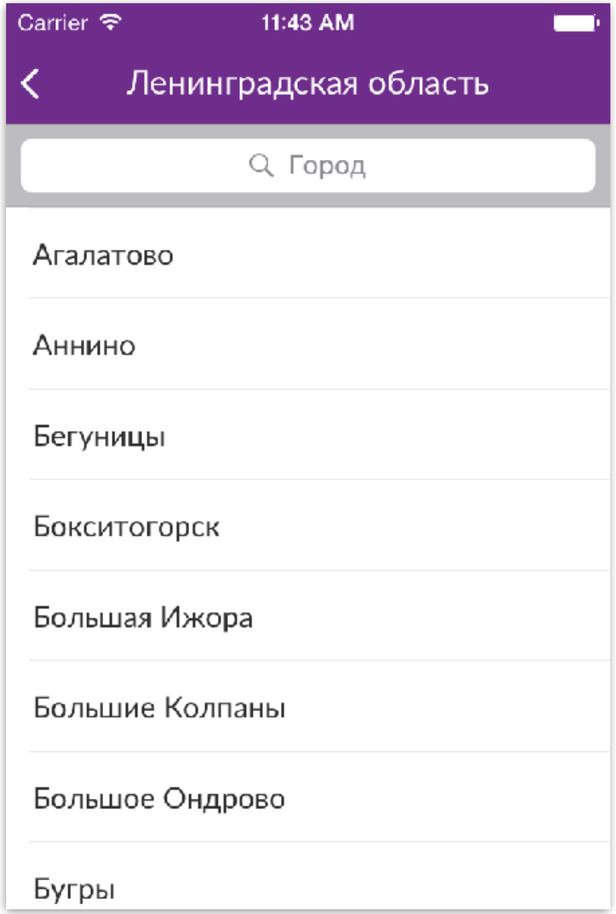
# Coordinator

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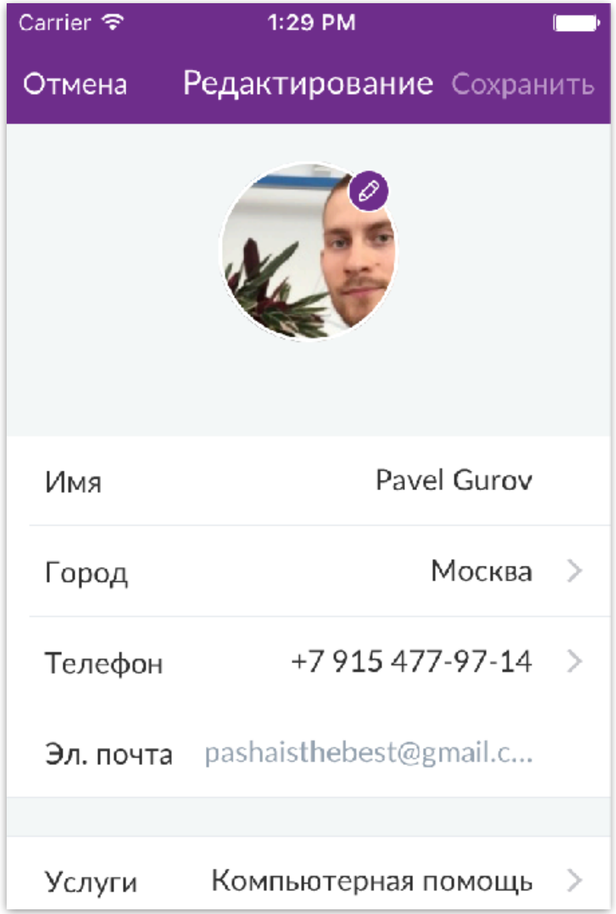
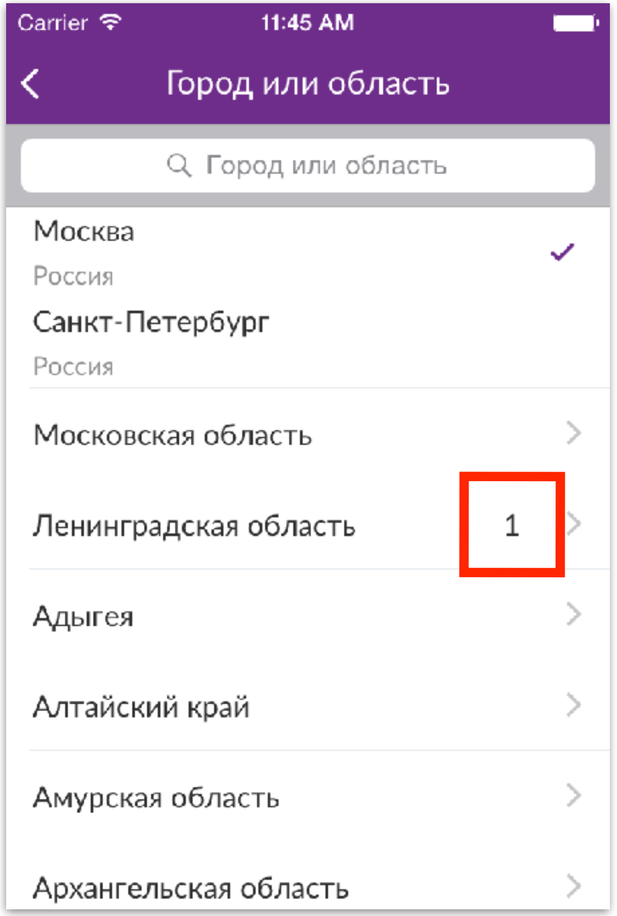
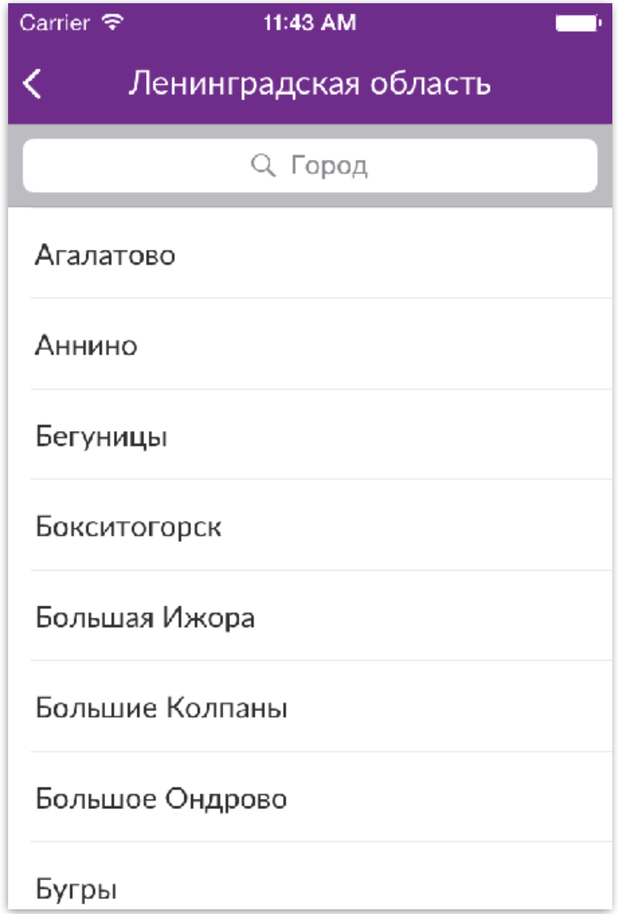
# Coordinator

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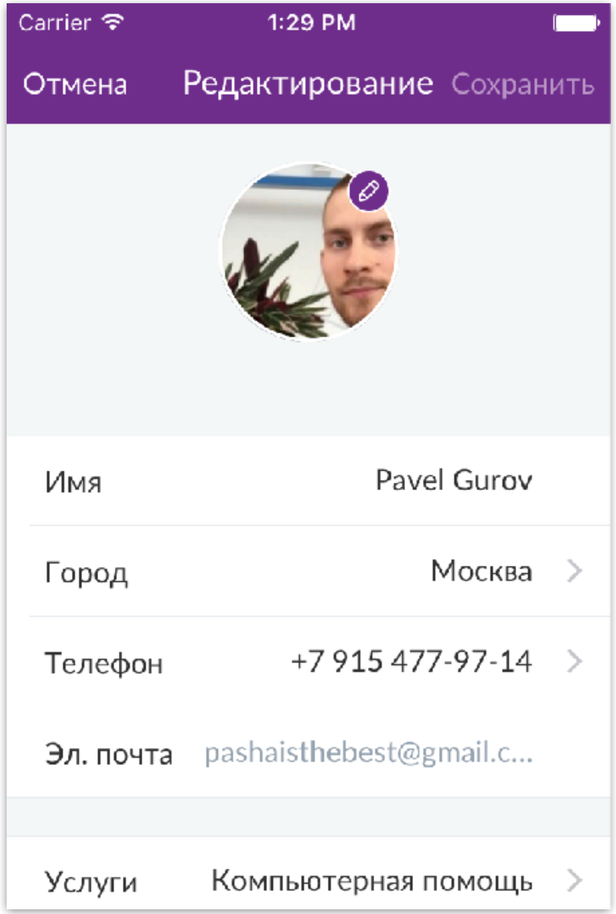
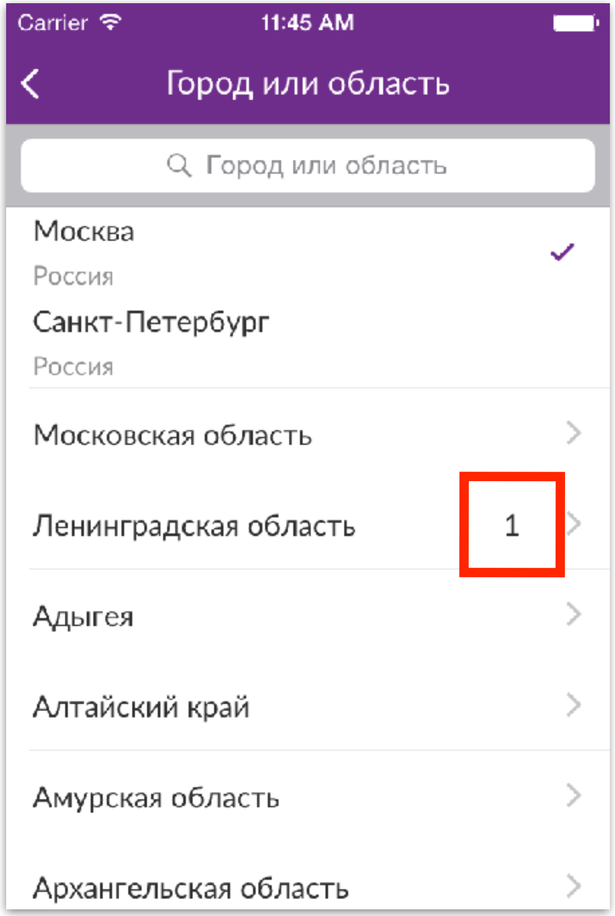
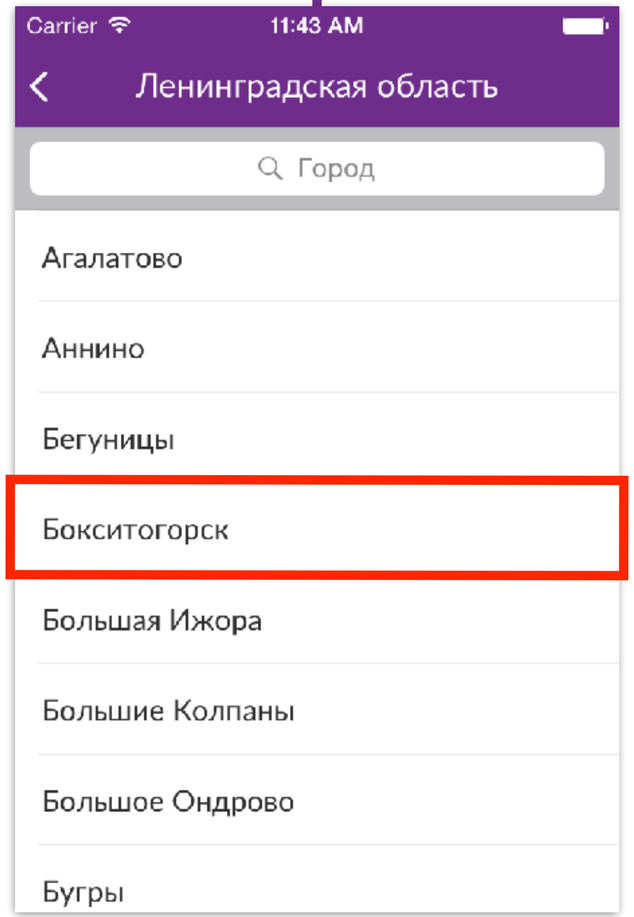
# Coordinator

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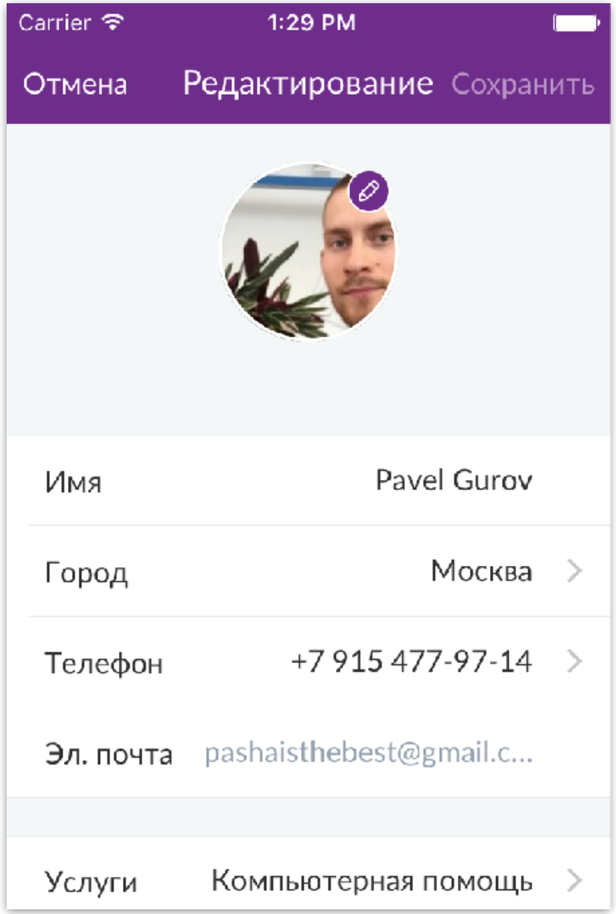


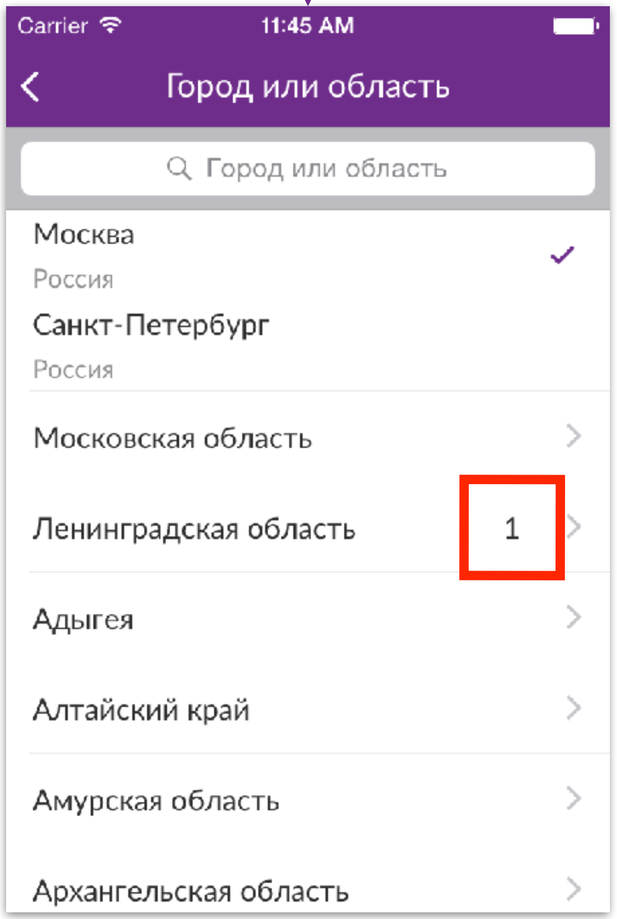


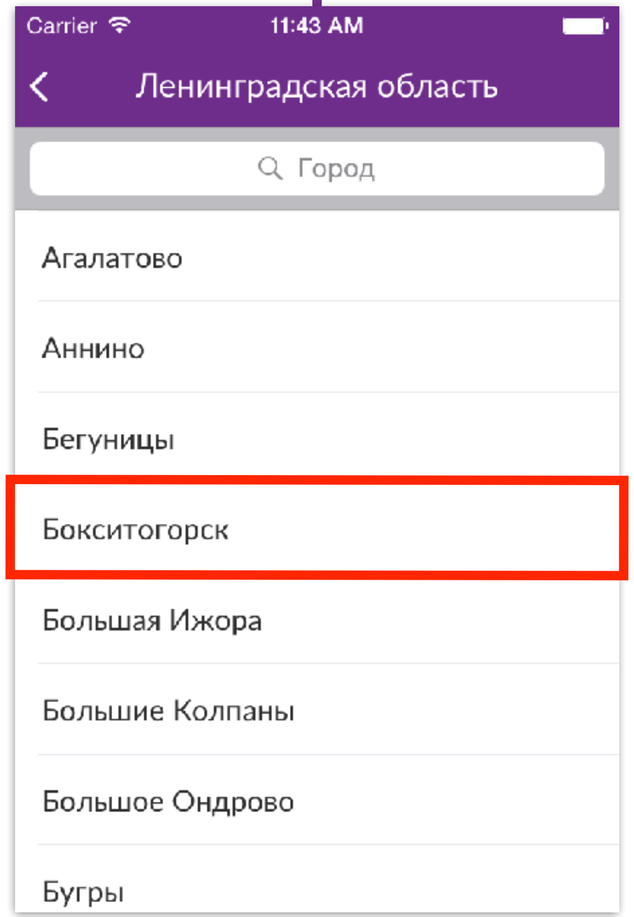


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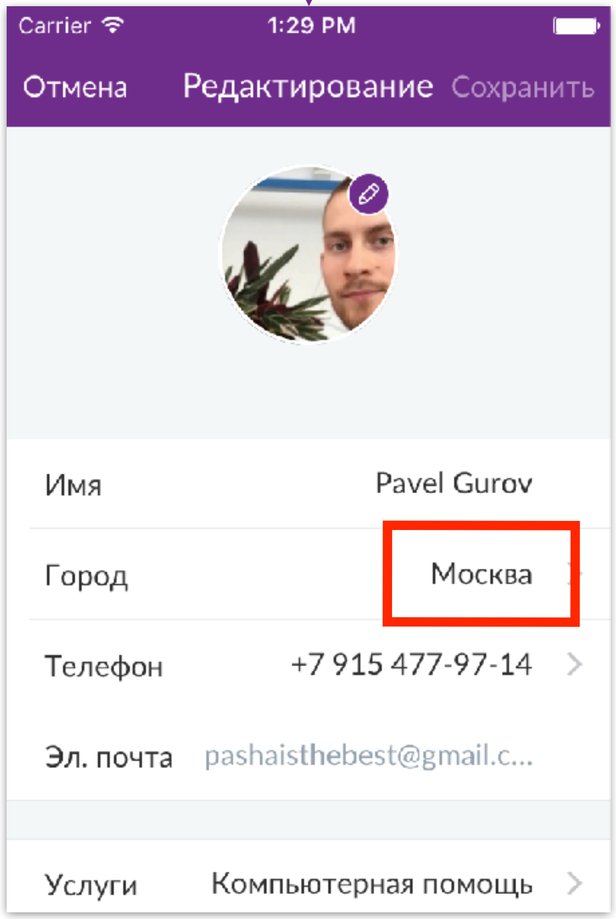
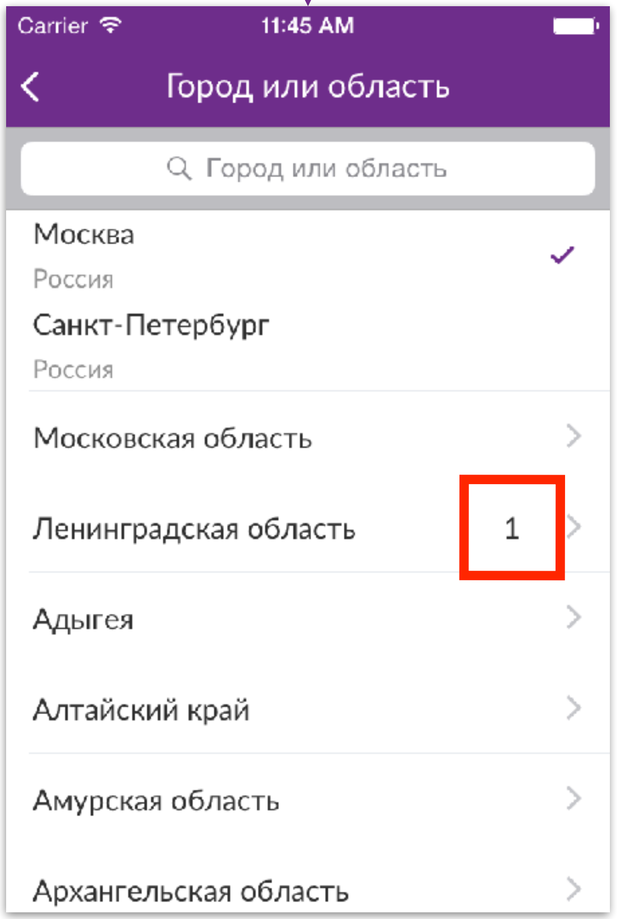
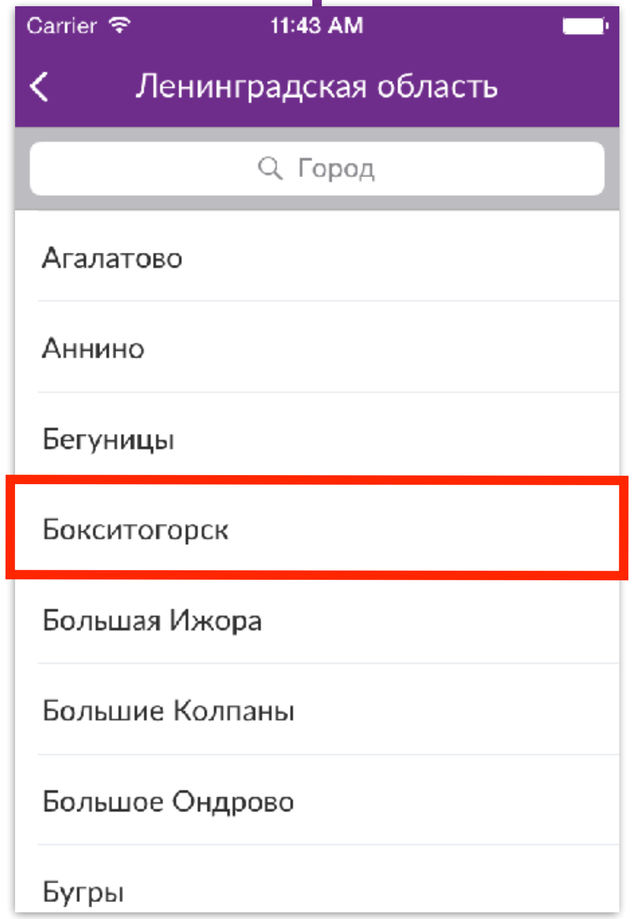
# Coordinator

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# Рефакторинг существующего кода

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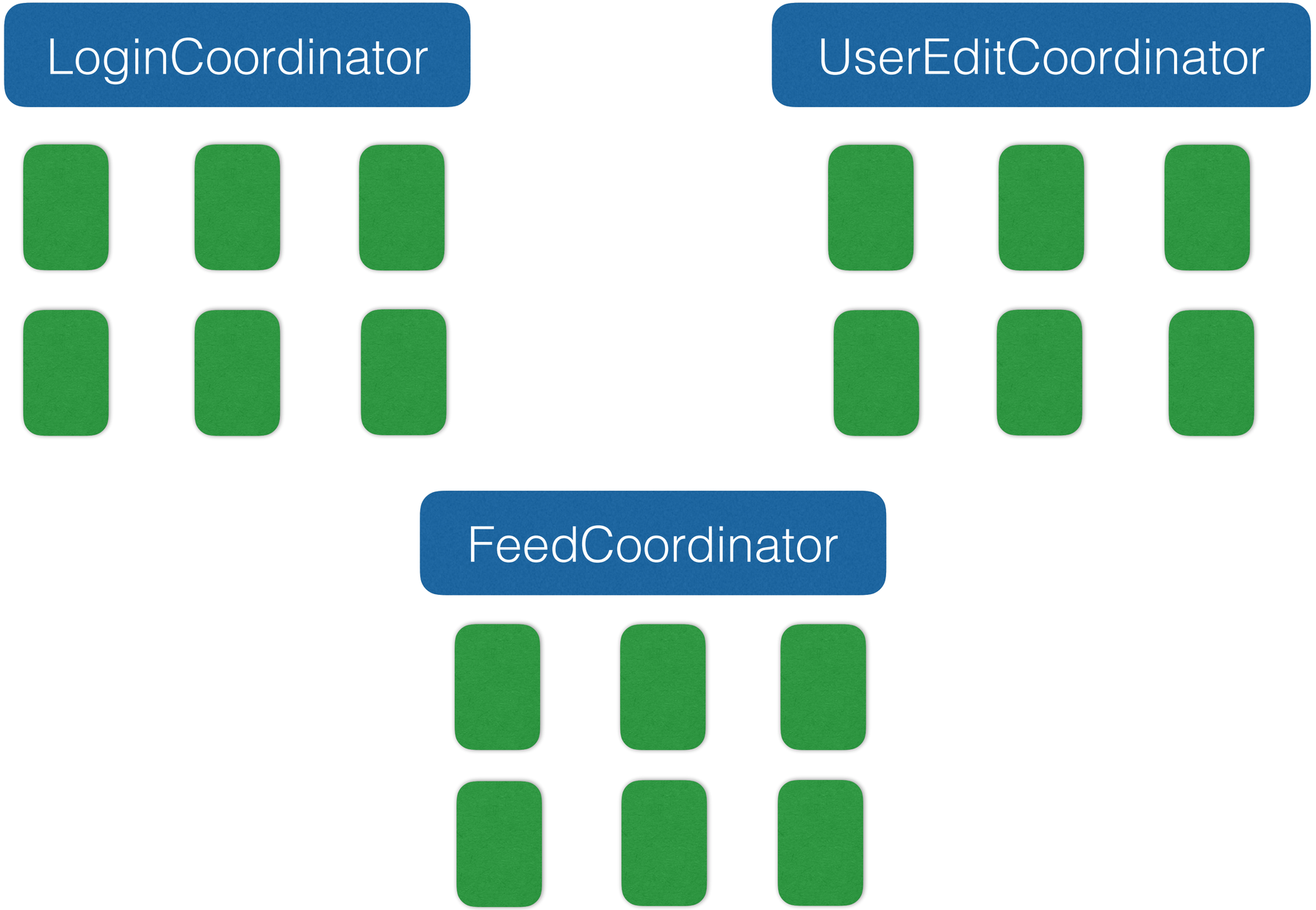


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LoginCoordinator

FeedCoordinator

UserEditCoordinator

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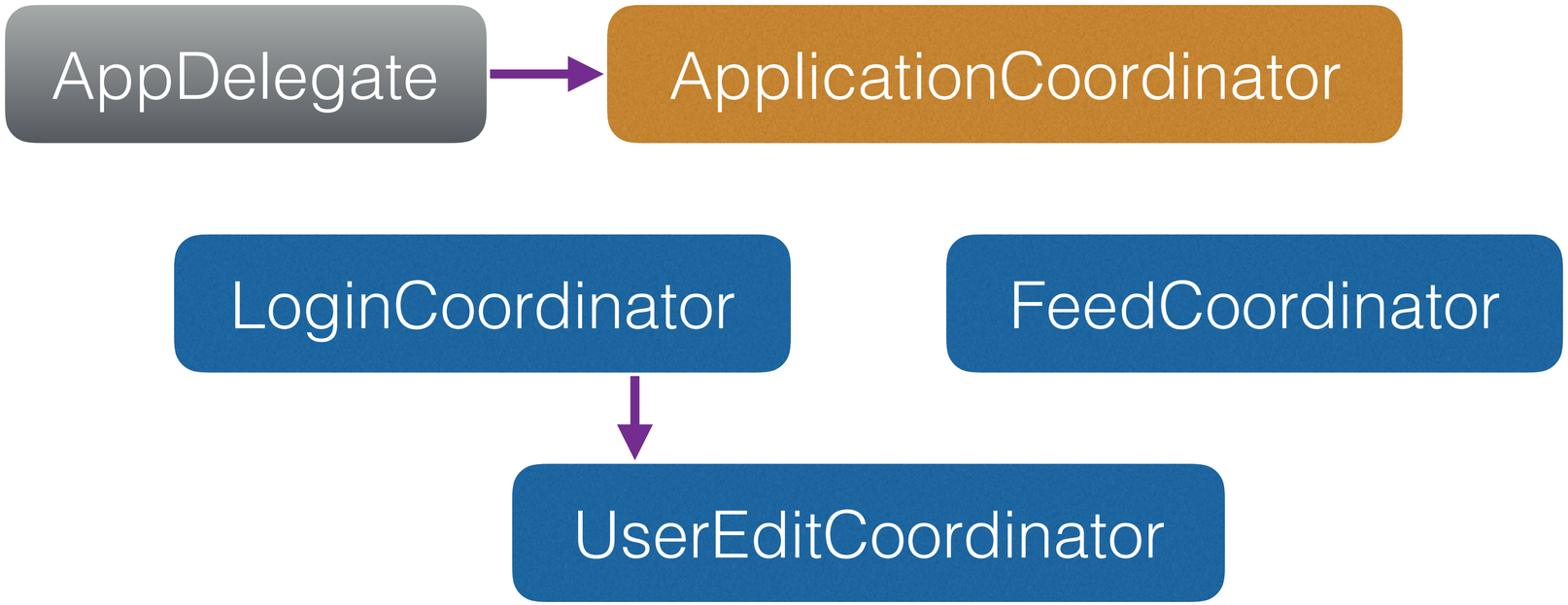


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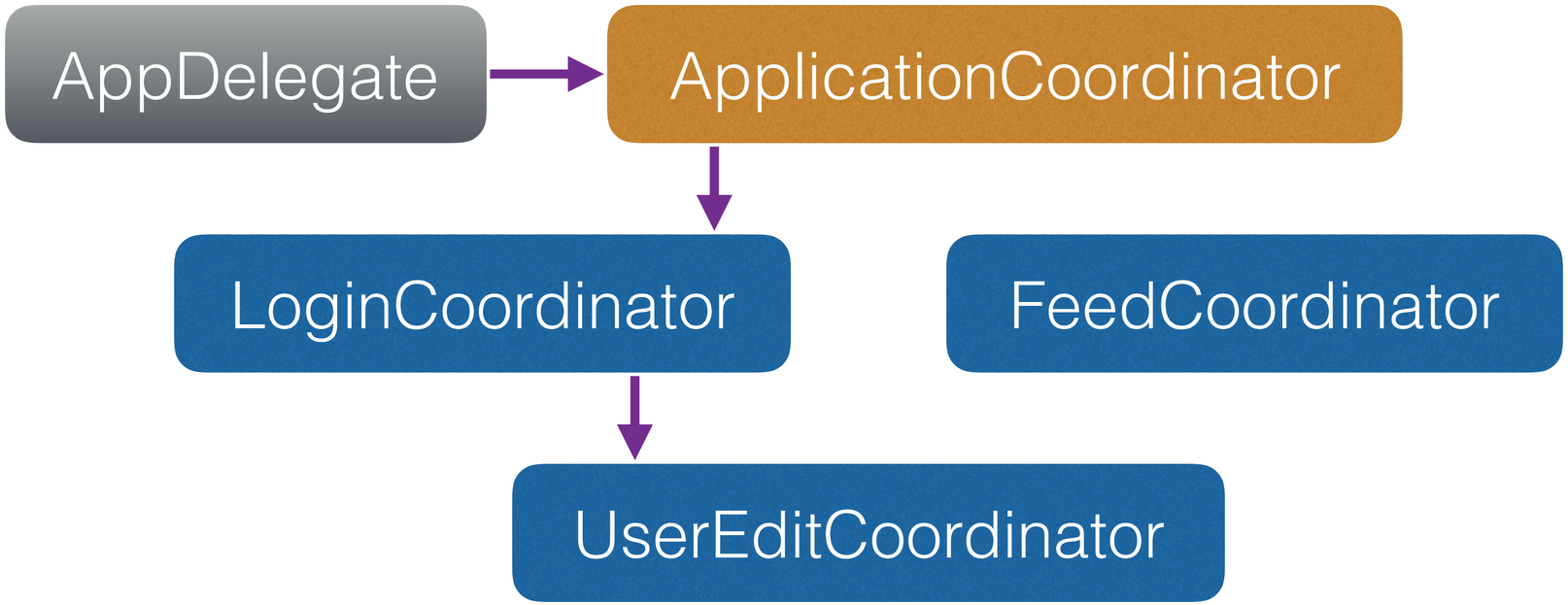


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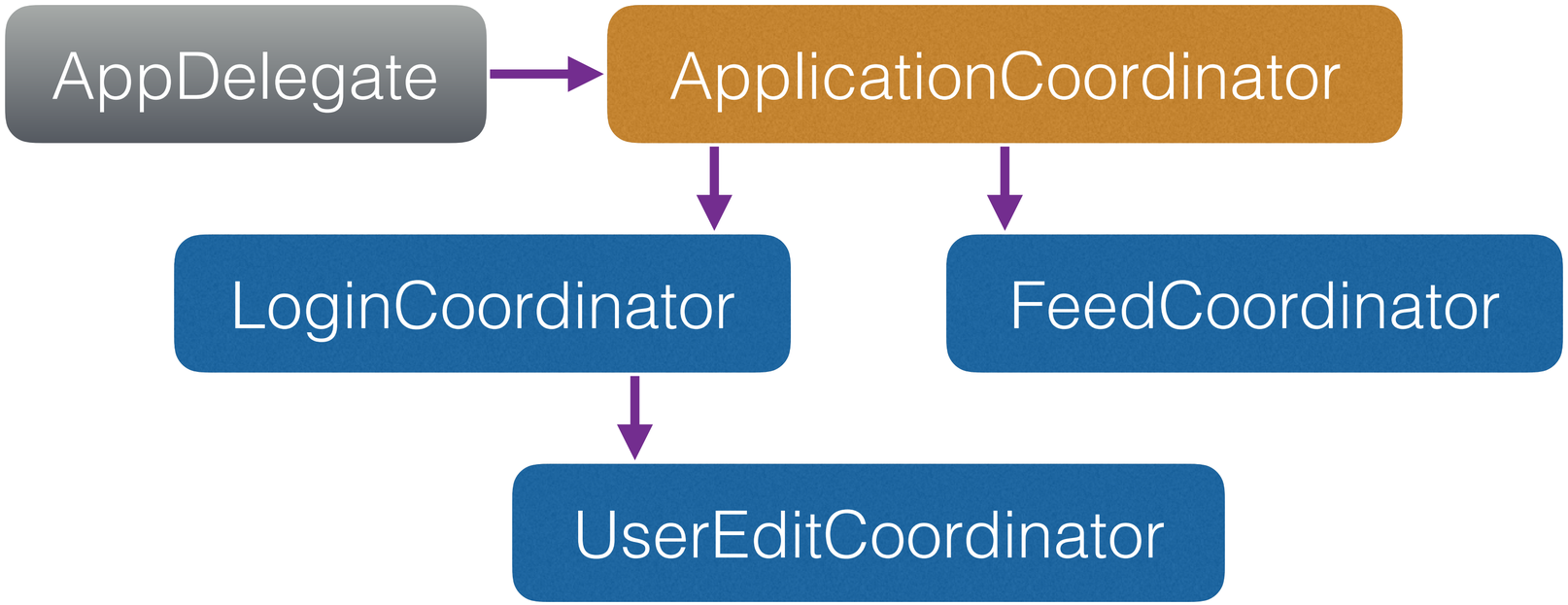


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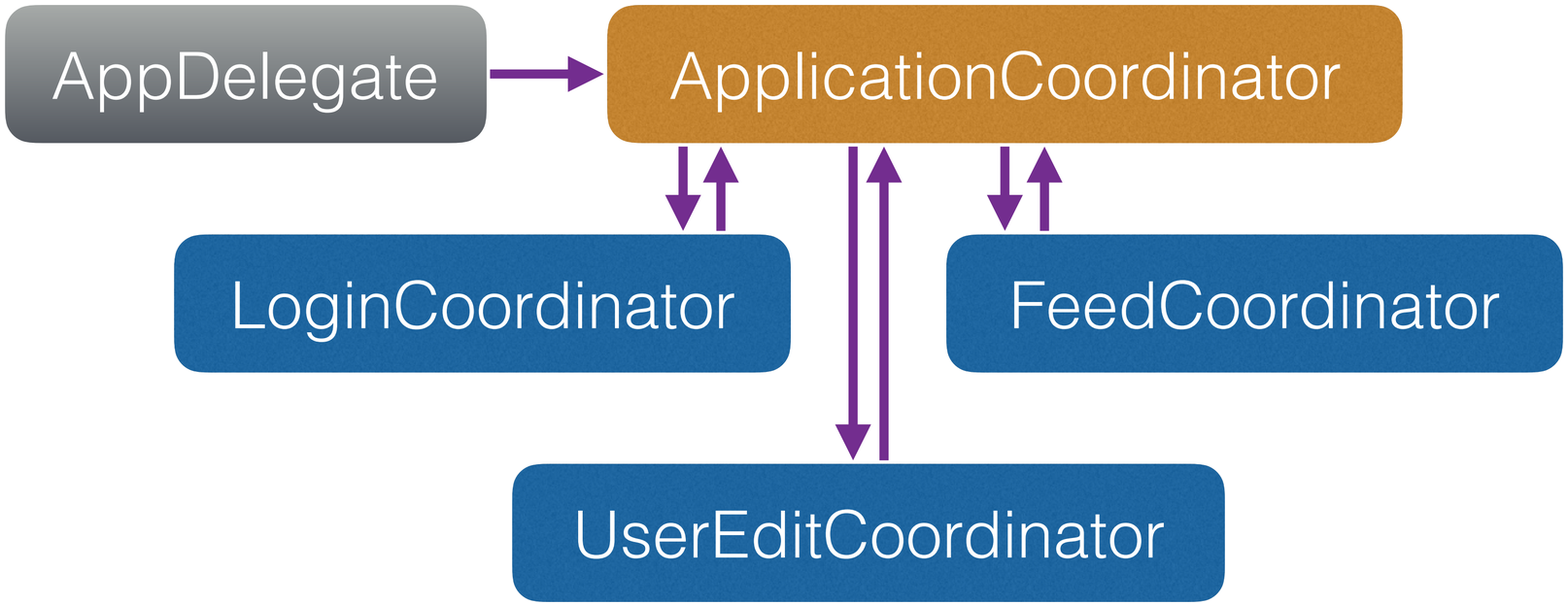


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# Временный старт Coordinator внутри UIViewController

```
class ViewController: UIViewController {

    var nextCoordinator: NextCoordinator?

    @IBAction func someAction(_ sender: UIButton) {
        nextCoordinator = NextCoordinator(
            navVC: navigationController
        )
        nextCoordinator?.start()
    }
}
```

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# Итог

# Итог

- Независимые экраны и сценарии

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# Итог

- Независимые экраны и сценарии
- Легко менять порядок

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- Независимые экраны и сценарии
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github.com/pegurov/CoordinatorsDemo

pegurov@avito.ru

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