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Phil Tang, Engineer @ Spring

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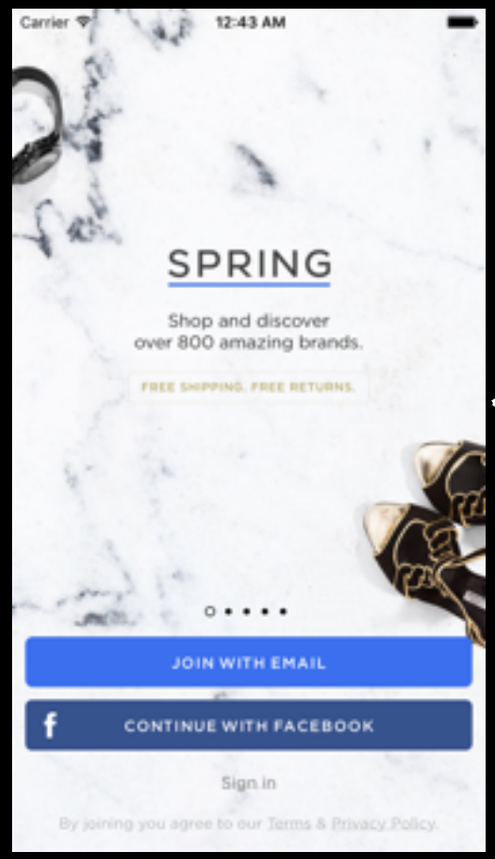
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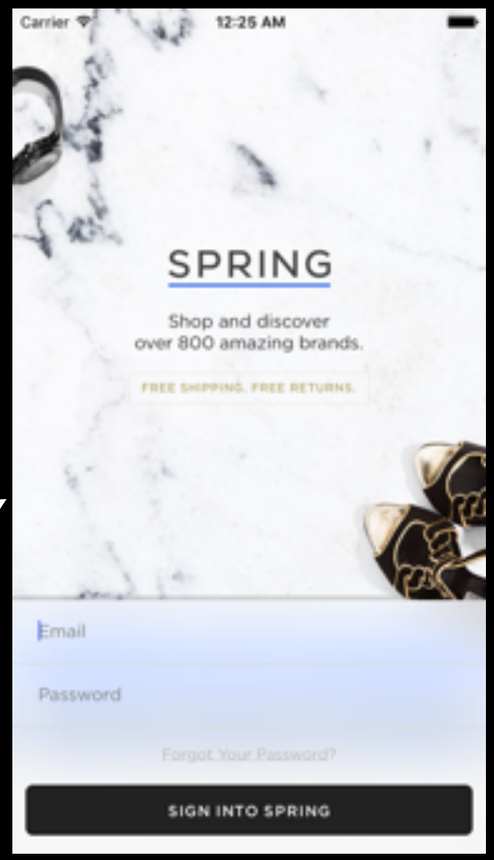
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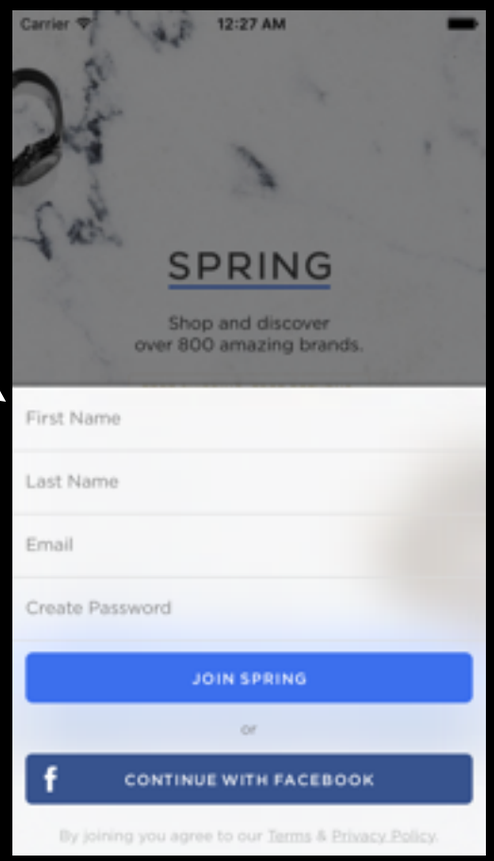
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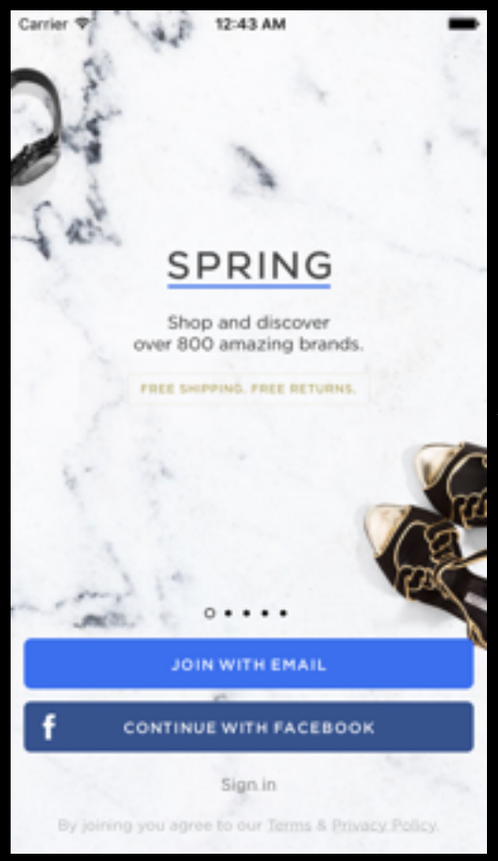
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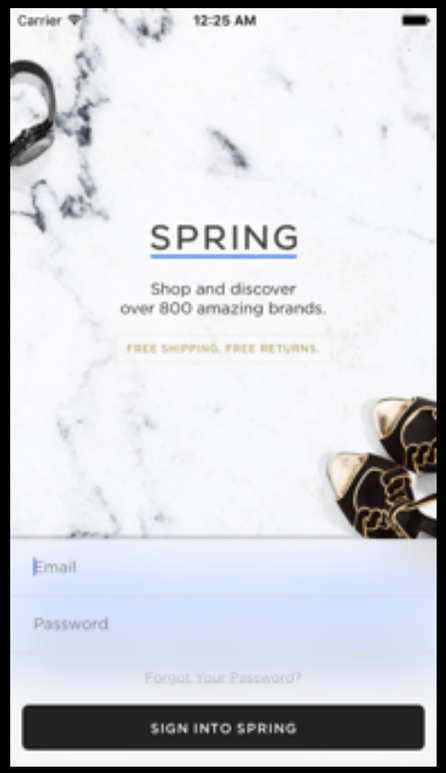
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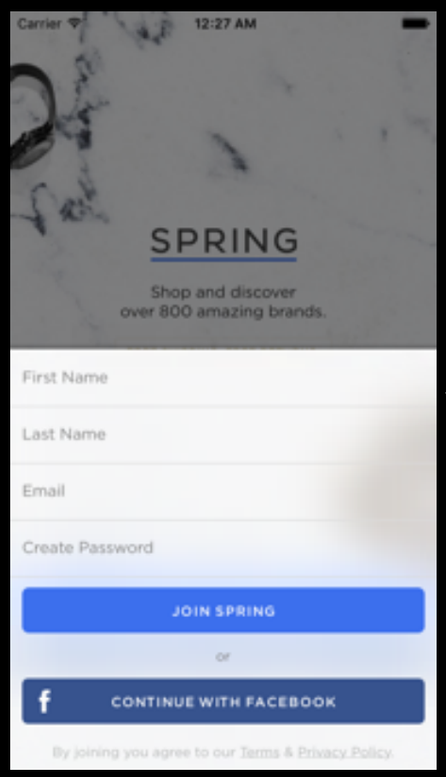
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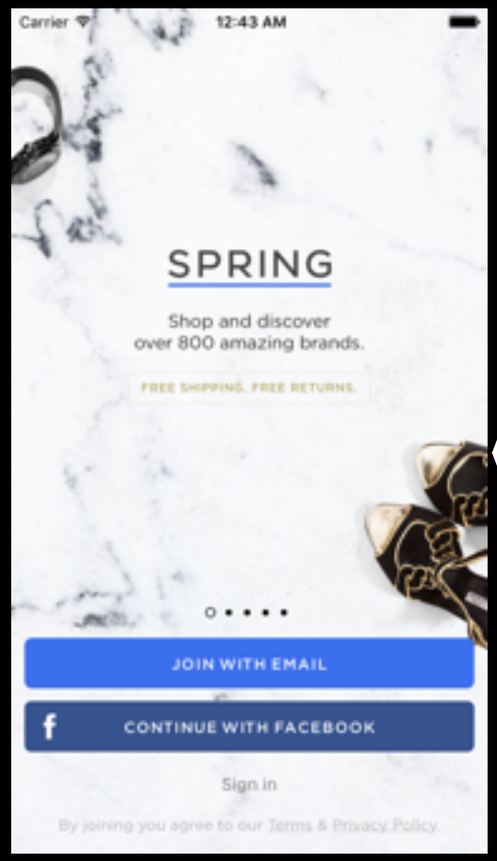
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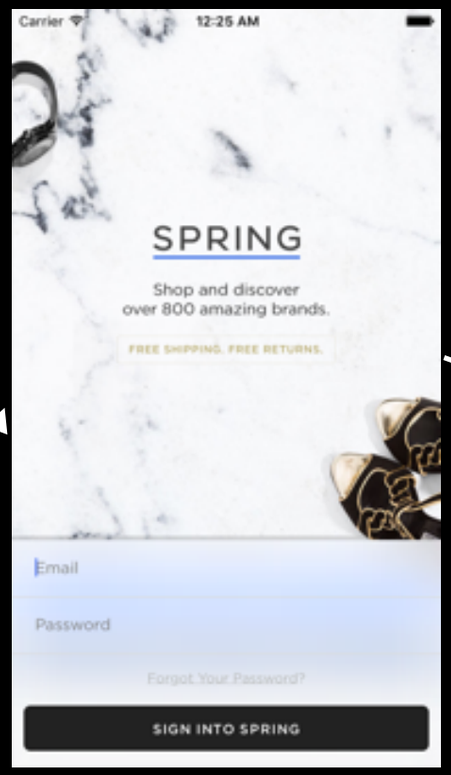
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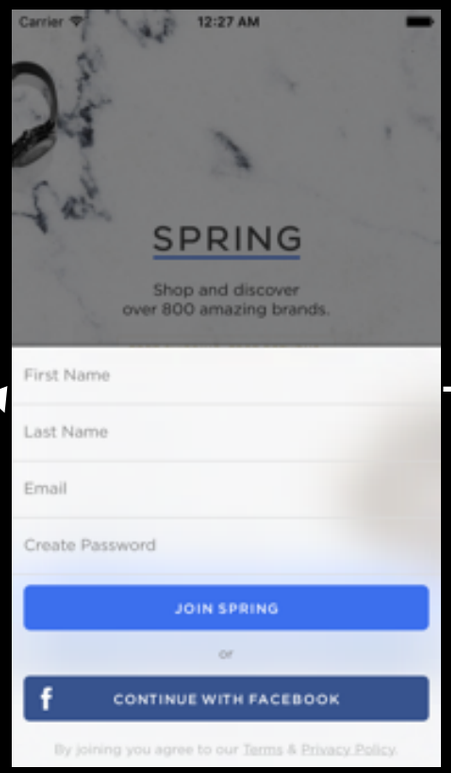
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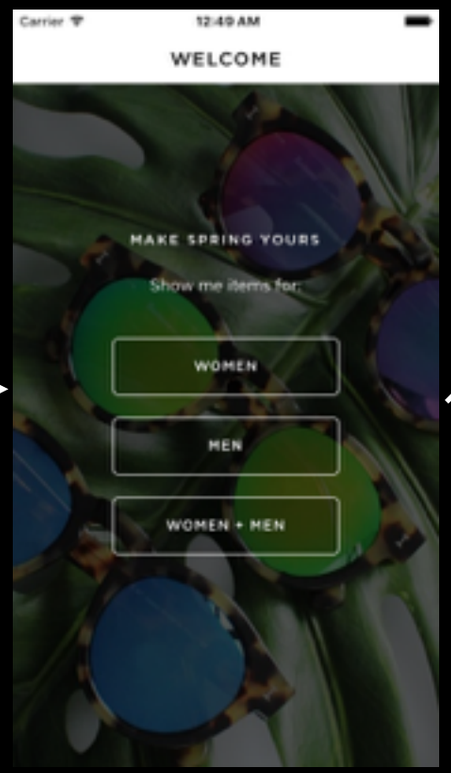
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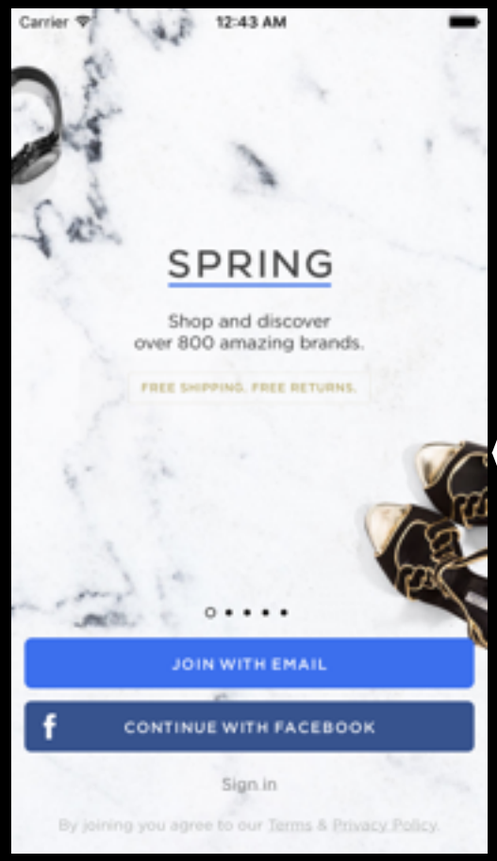
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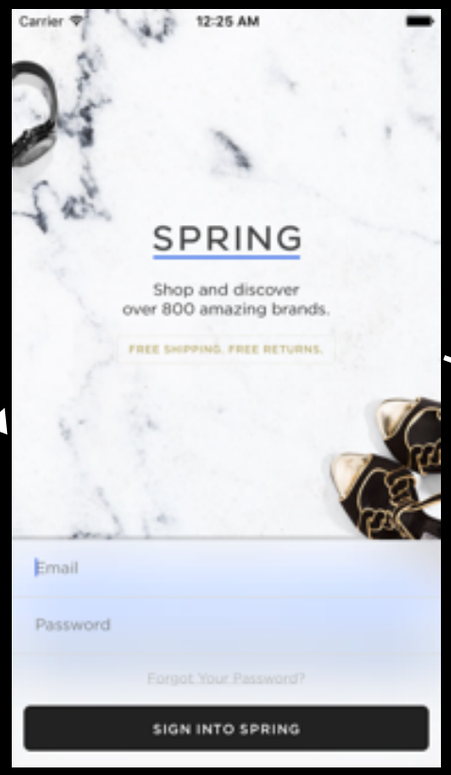
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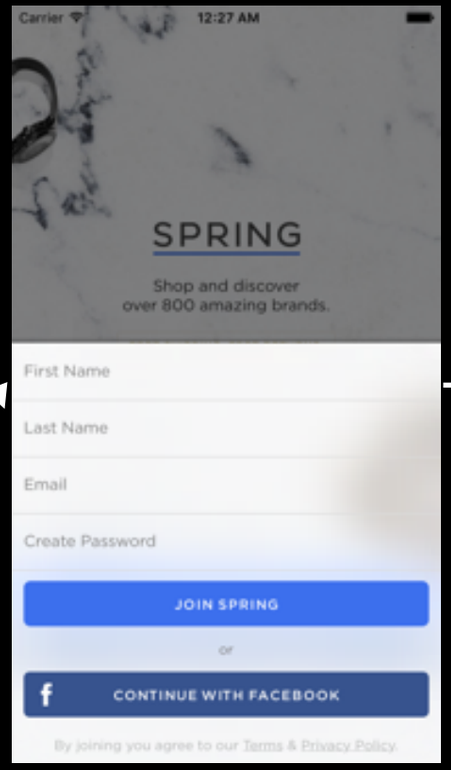
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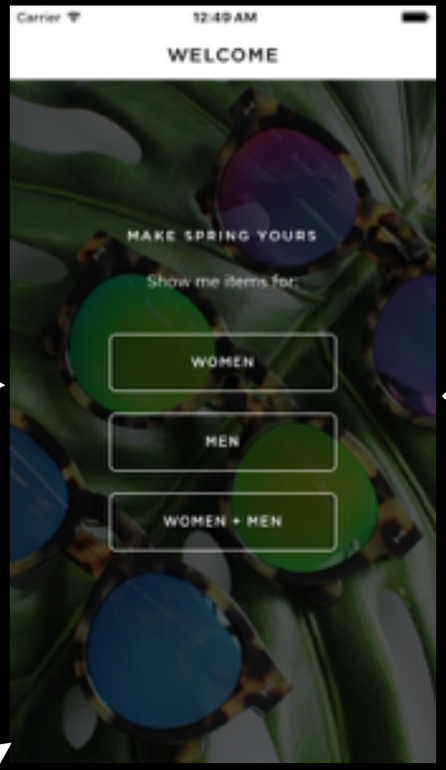
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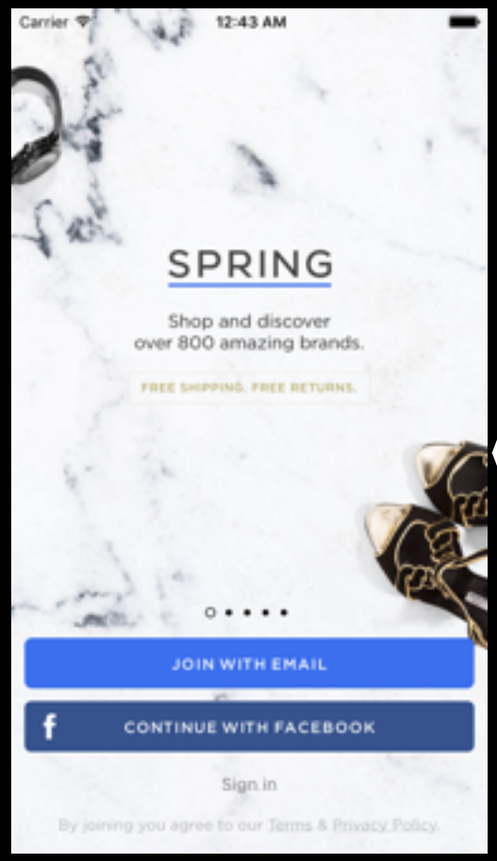
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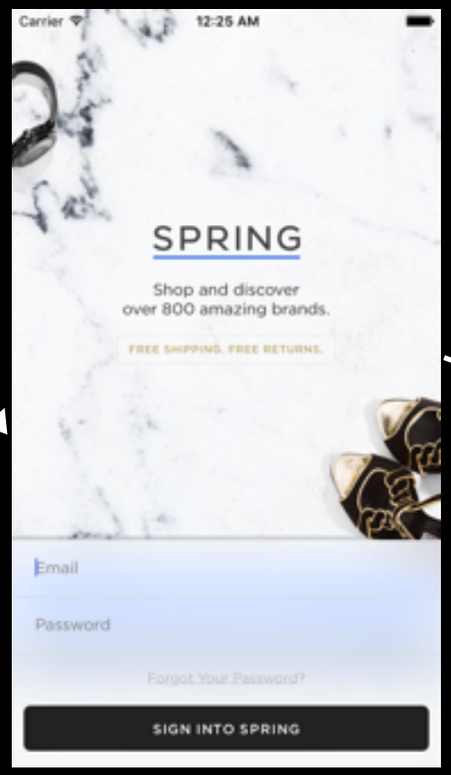
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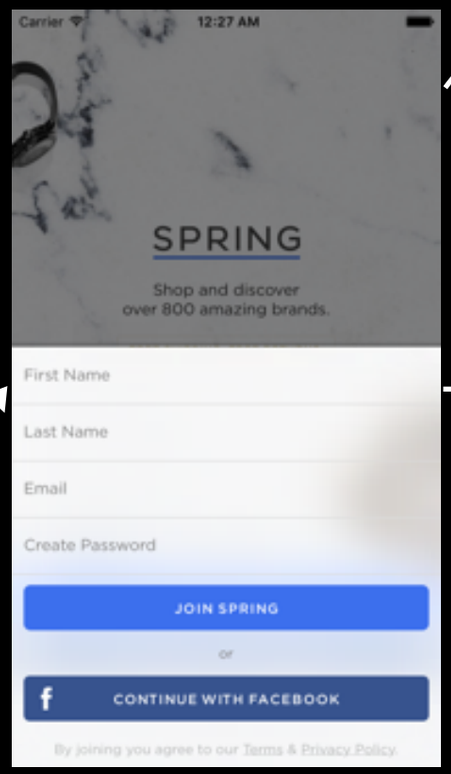
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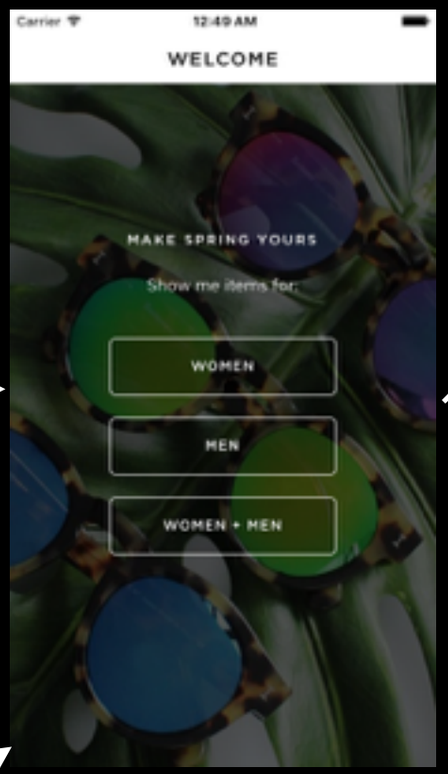
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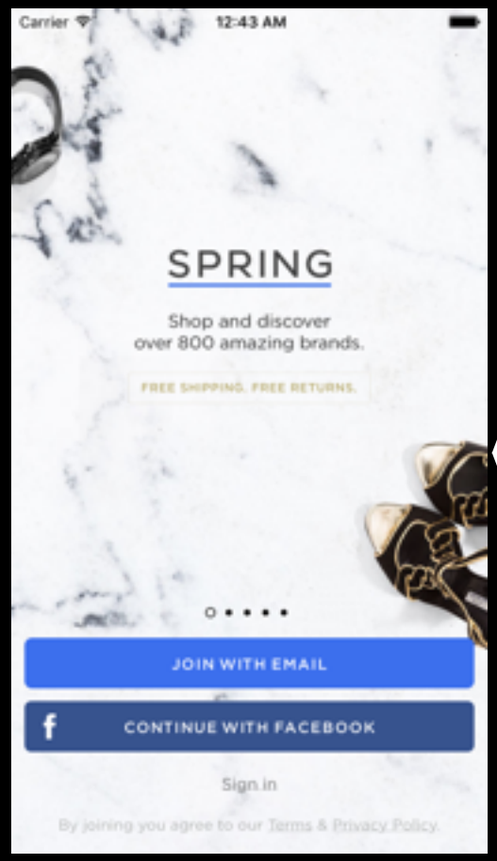
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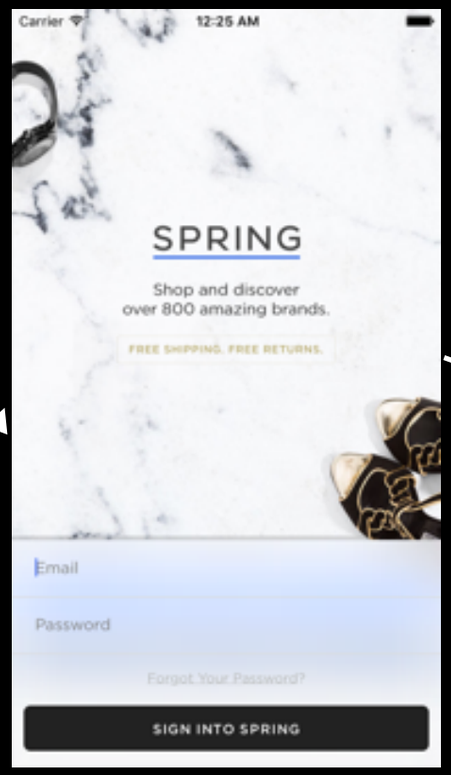
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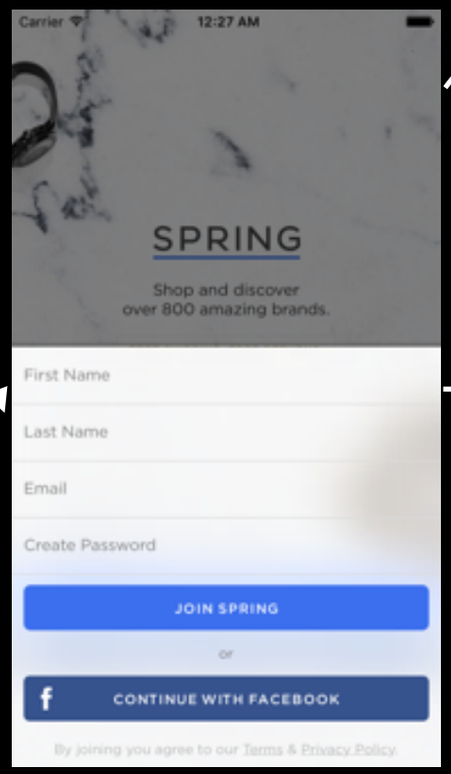
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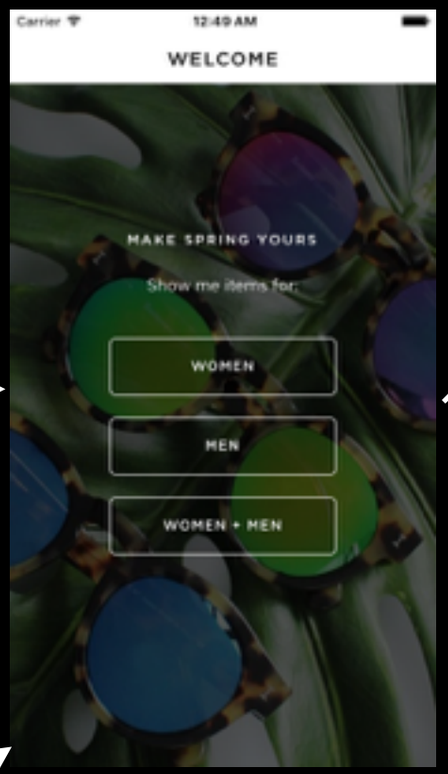
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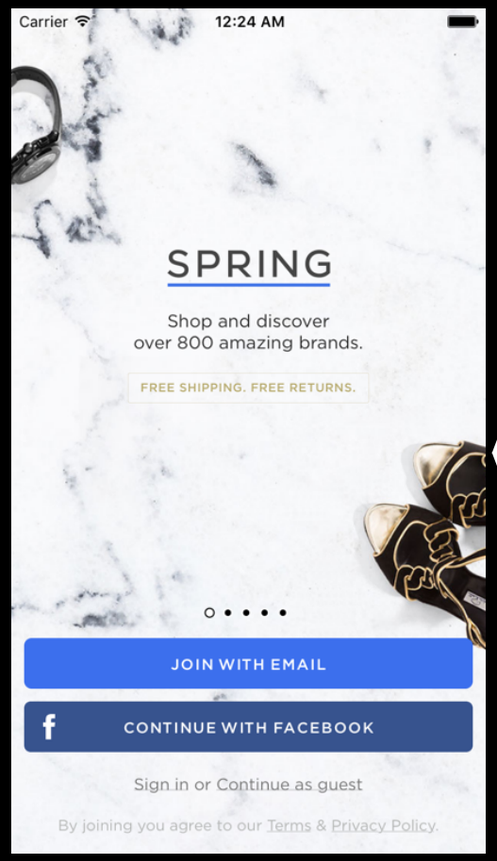
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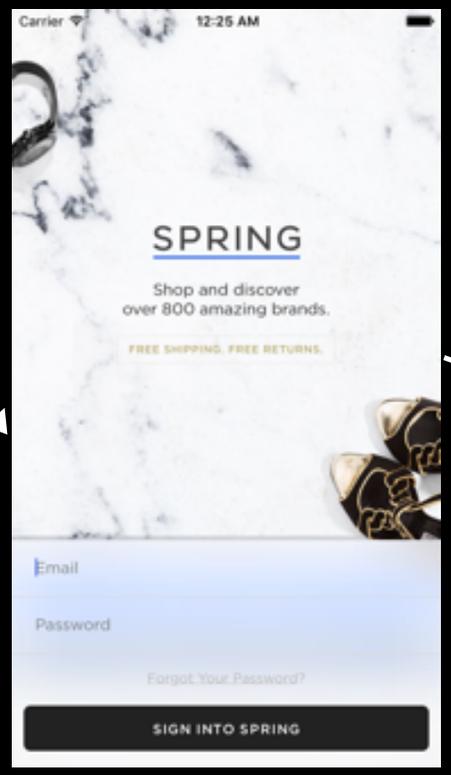
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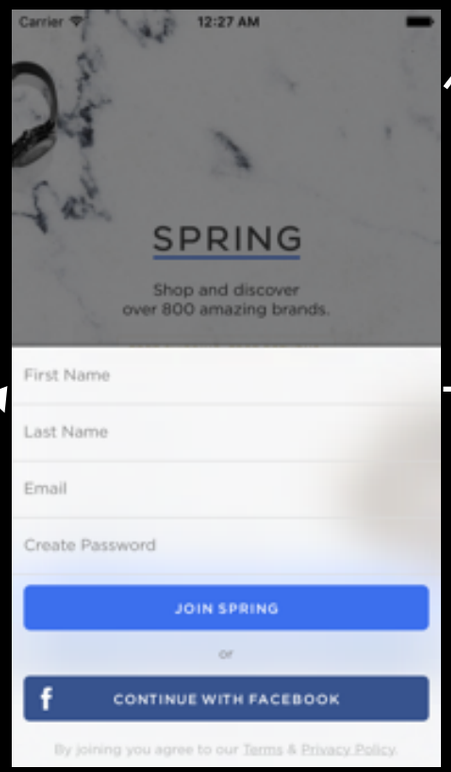
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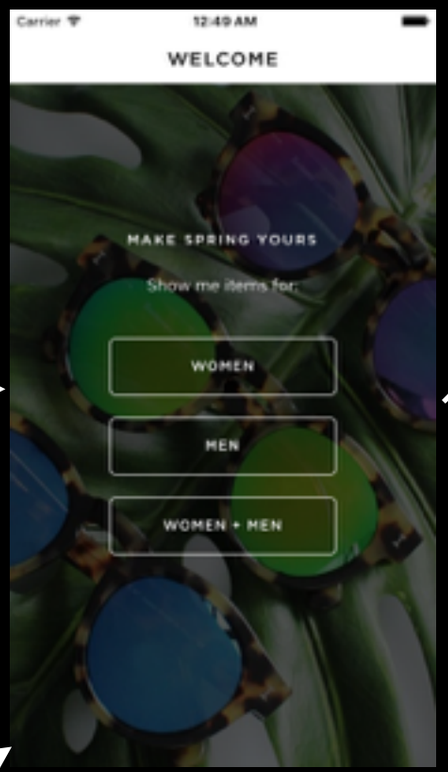
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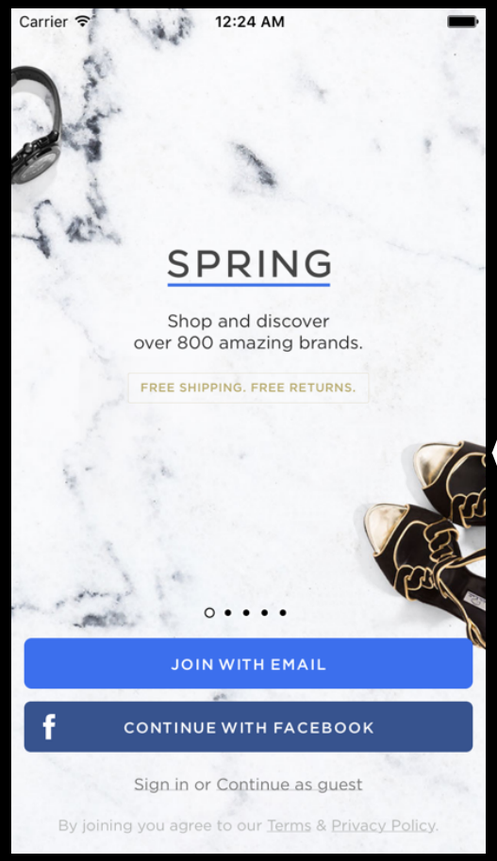
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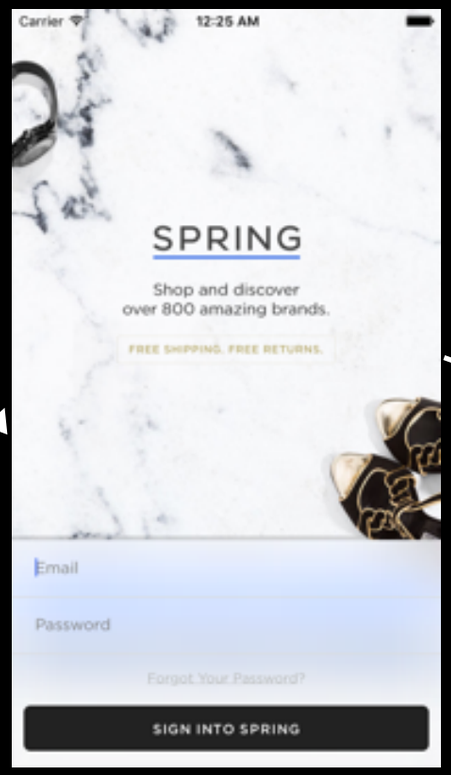
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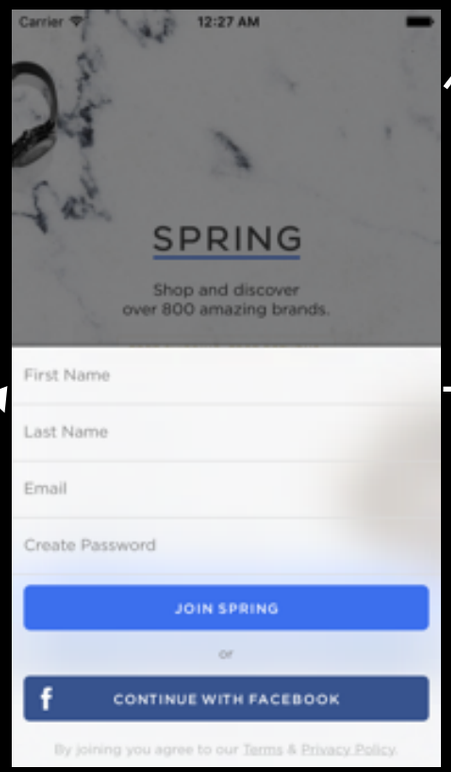
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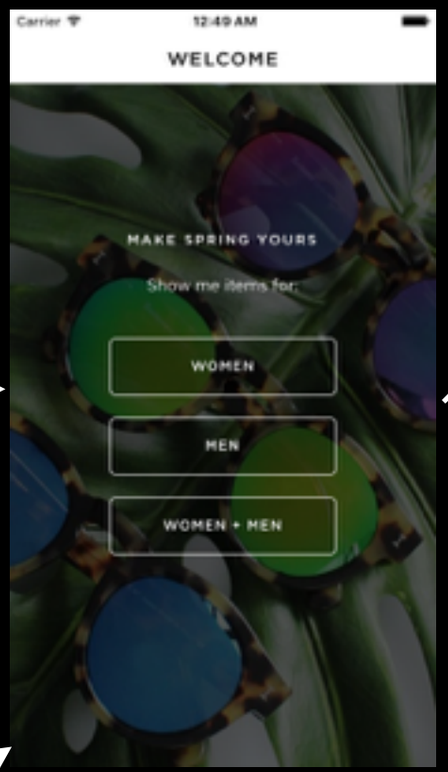
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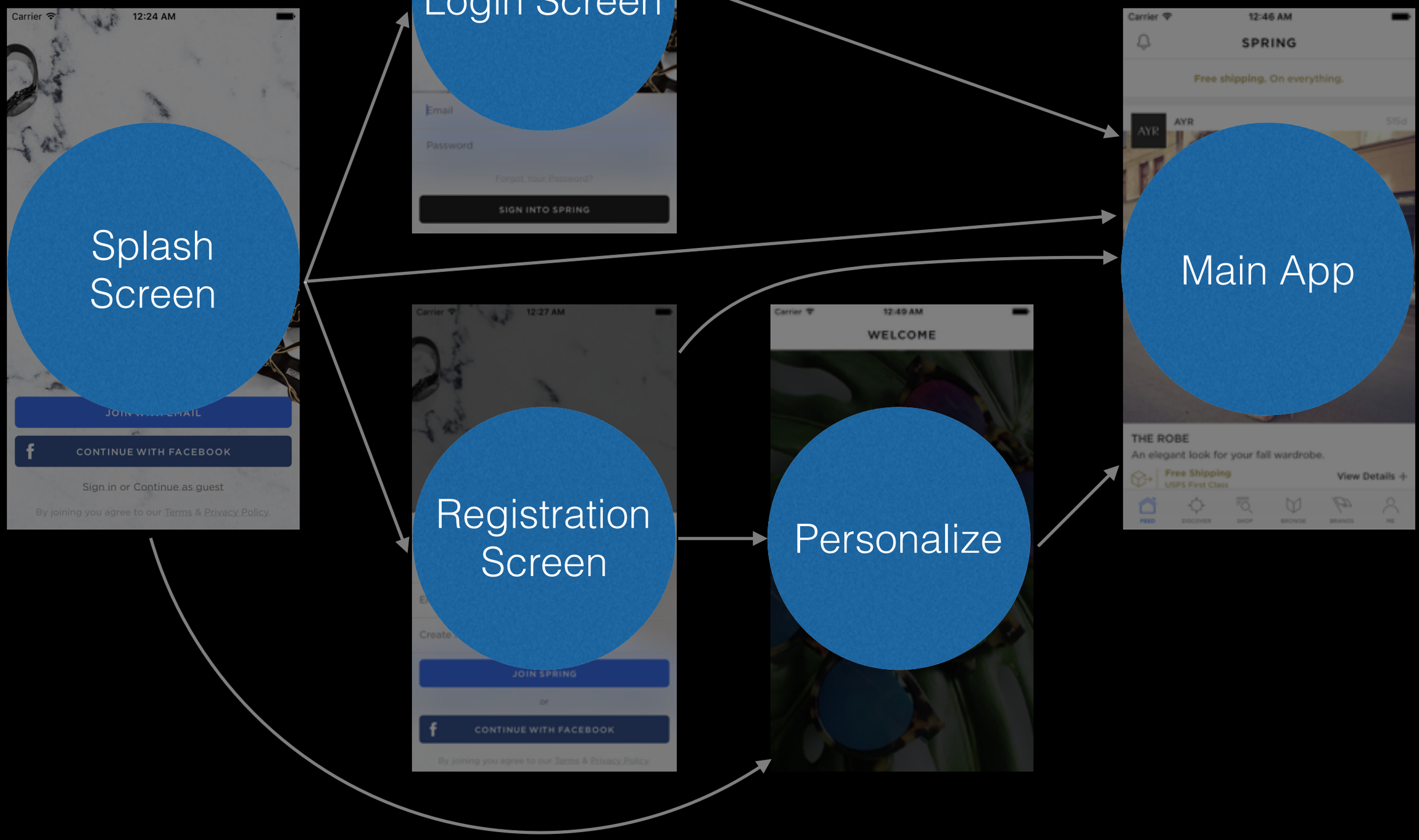
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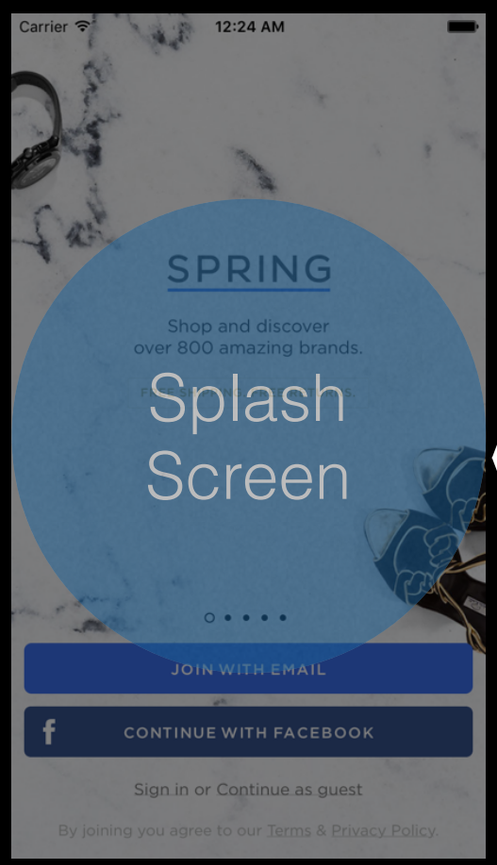
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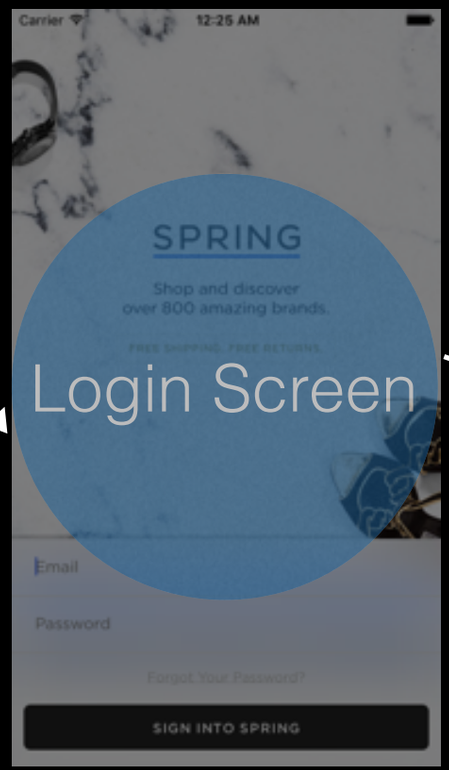
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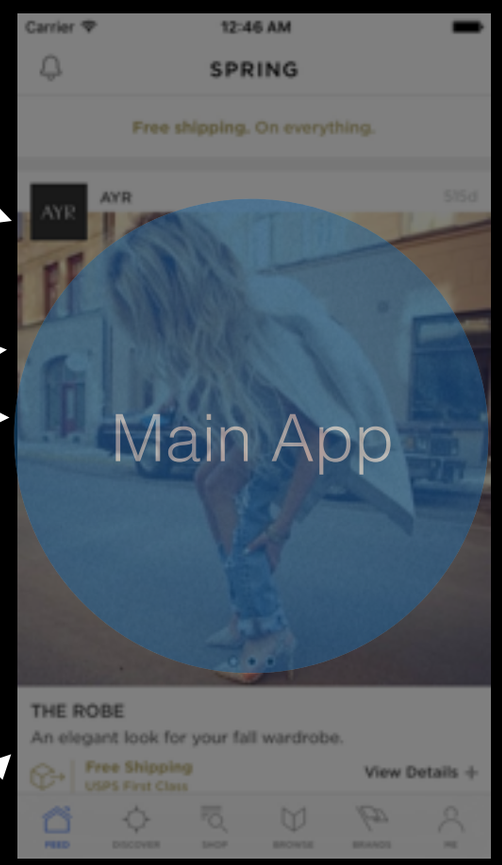
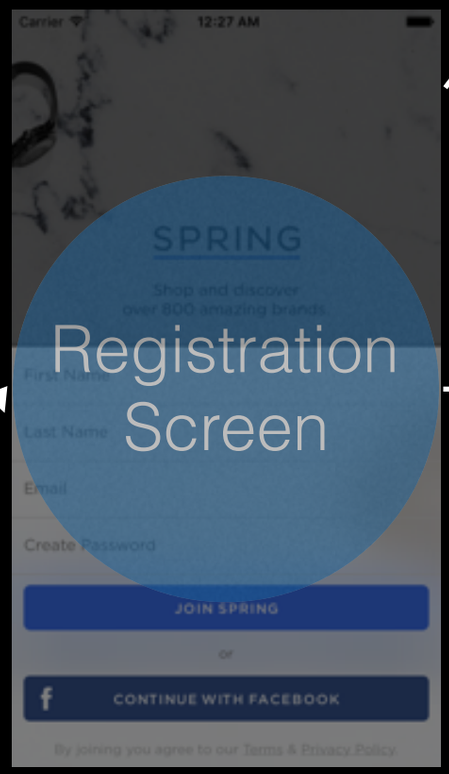
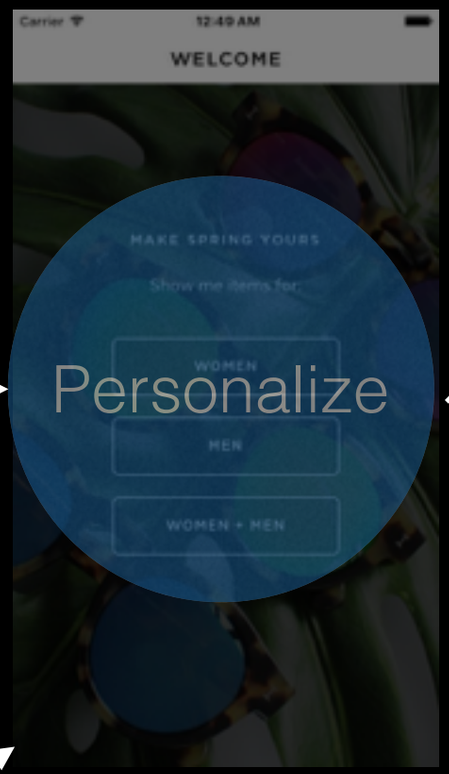
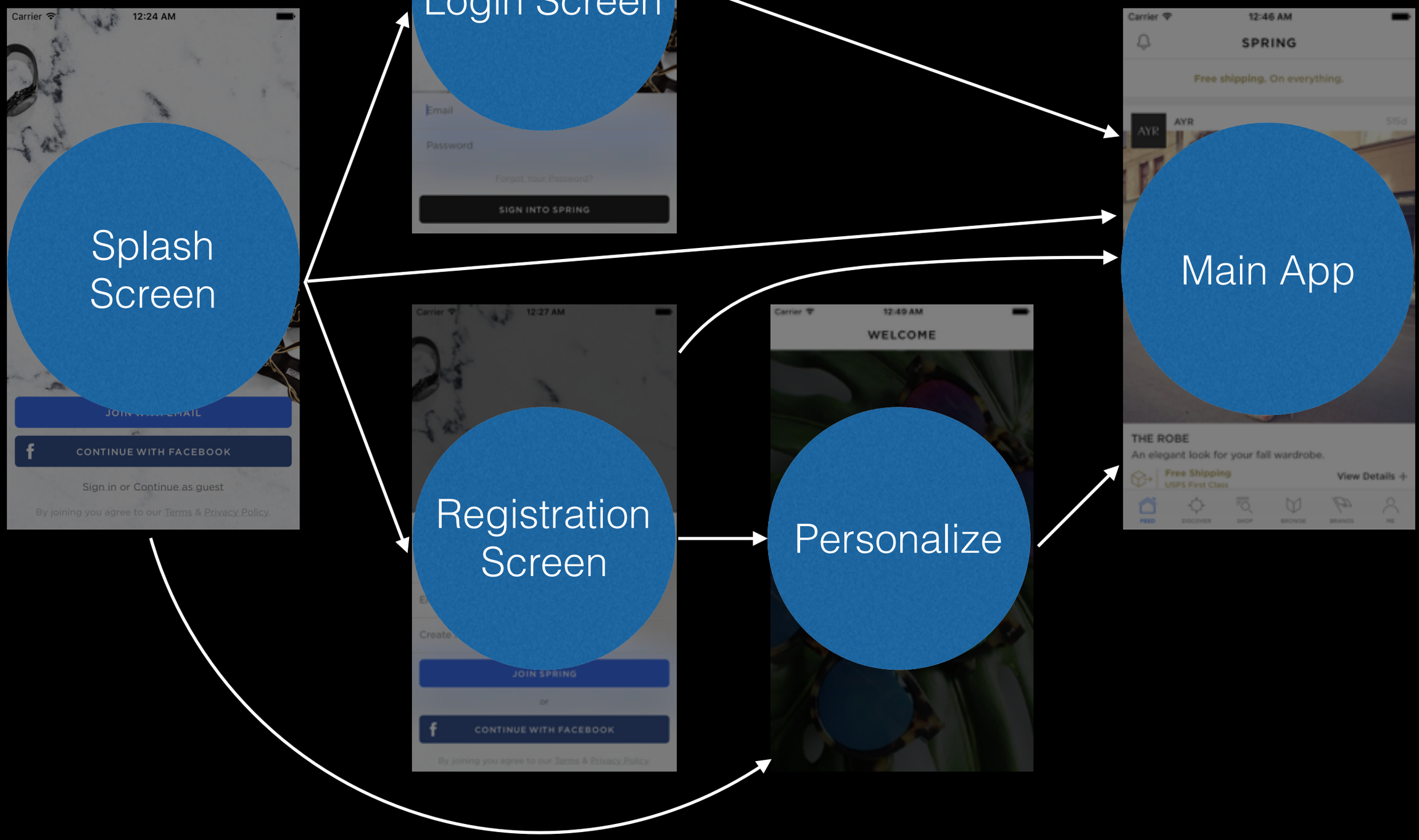

Carrier
12:46 AM
SPRING
Free shipping. On everything.
AYR
Main App
THE ROBE
An elegant look for your fall wardrobe.
Free Shipping
USPS First Class
View Details


Carrier
12:27 AM
SPRING
Registration
Screen
Email
Create Password
JOIN SPRING
or
CONTINUE WITH FACEBOOK
By joining you agree to our Terms & Privacy Policy


Carrier
12:49 AM
WELCOME
MAKE SPRING YOURS
Show me items for:
Personalize
WOMEN
MEN
WOMEN + MEN


Carrier
12:24 AM
CONTINUE WITH FACEBOOK
Sign in or Continue as guest
By joining you agree to our Terms & Privacy Policy.
Splash Screen
Carrier
12:25 AM
Email
Password
Forgot Your Password?
SIGN INTO SPRING
Login Screen
Carrier
12:27 AM
JOIN SPRING
or
CONTINUE WITH FACEBOOK
By joining you agree to our Terms & Privacy Policy.
Registration Screen
Carrier
12:49 AM
WELCOME
Personalize
Carrier
12:46 AM
SPRING
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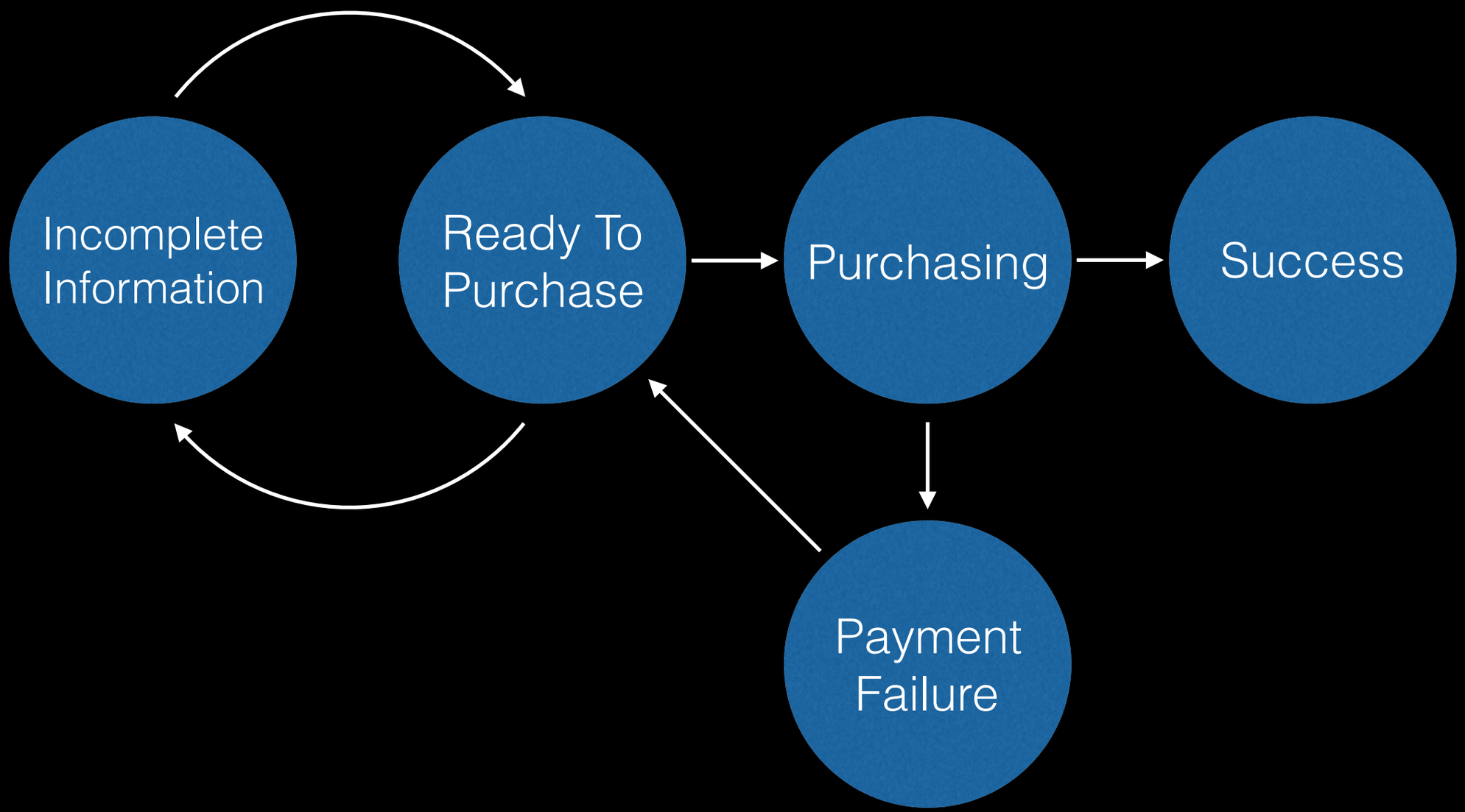
Main App

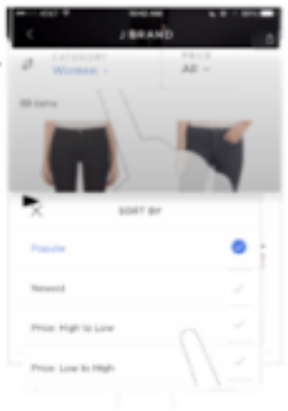

Incomplete Information
Ready To Purchase
Purchasing
Success
Payment Failure


A
WOMEN
NOTES:
1. Top Nav = Category, Price, Brand
2. Category "All" matches top level (ie. Women)
3. If user taps into category they see Women selected
B
Refine
WOMEN
MEN
KIDS
BEAUTY
LIFESTYLE
Clothing
Shoes
Accessories
Jewelry
SHOW RESULTS
NOTES:
1. Side nav reflects top nav
2. When user enters and no L2 selected, show all L2 (M/W/B/LIK); expose L2 for L1
3. If user changes L1, update L2
4. User cannot deselect L1 (cannot be in no top level cat).
C
Refine
RESET
WOMEN
Clothing
Tops
Blazers & Vest
Bottoms
Intimates
Sleep & Loungewear
Outerwear
Swimwear
Activewear
Maternity
SHOW RESULTS
NOTES:
1. Once user taps into L2, expose L3 (ie. L+1)
2. Reset moves user back to A clears all filters.
3. Tapping 'x' closes refine, forgets any changes.
4. User can submit at any time (show results all active).
D
Refine
WOMEN
Clothing
Activewear
Active Accessories
Tops
Jackets & hoodies
Outerwear
Pants & Capries
Shorts
Socks & Underwear
Sports Bras
SHOW RESULTS
NOTES:
1. Continue down all 5 levels.
E
Refine
WOMEN
Clothing
Activewear
Outerwear
SHOW RESULTS
NOTES:
1. Once user is at bottom of branch, no more sub-cats.
2. Tapping 'x' at each level exposes Levels right below.
3. Tapping 'x' at top brings user back to A, same as reset.
F
WOMEN
Outerwear
NOTES:
1. Upon submission display lowest level refinement on top nav.
2. Exception: if user has no L2 selected, show "All" and user is filtered to top nav.

Note: Hero is pulled down when user lands on this page.
Include share button in phase #1.

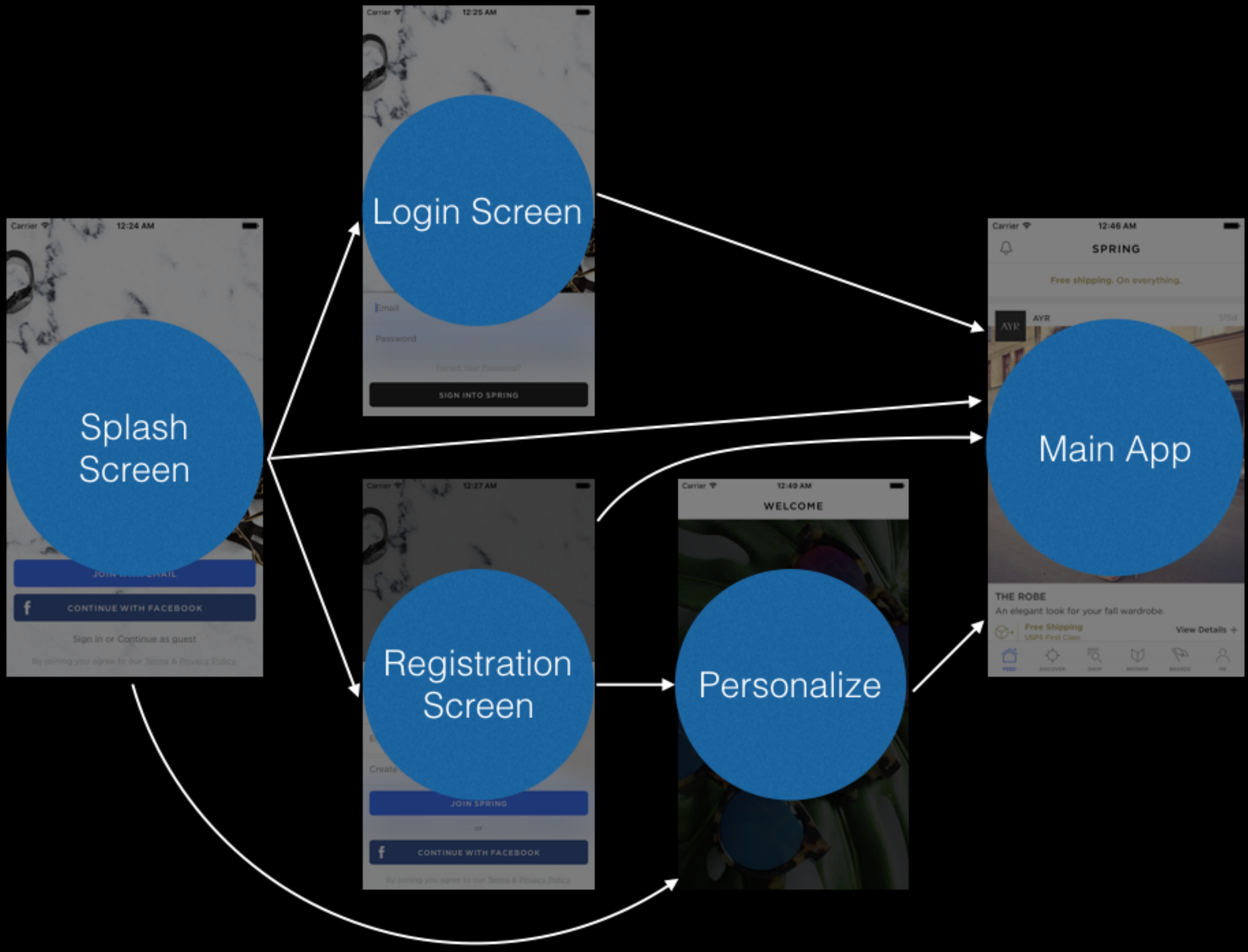
Note:
Tapping on shop by category brings user to product category page.
L1 category should be active. Top Nav options in Brand: Category, Price.

Note:
Categories on Brand Page: Category, Price.
Ideal: Detect L1, L2, L3, L4, L5 from page prior, expose taxonomy on for what this brand has.
Interactions / behaviour should match browse.



Note:
Sort default to popular on brand page, like homepage.

TBD: header collapsing/open - depend on scroll?


Splash Screen
Login Screen
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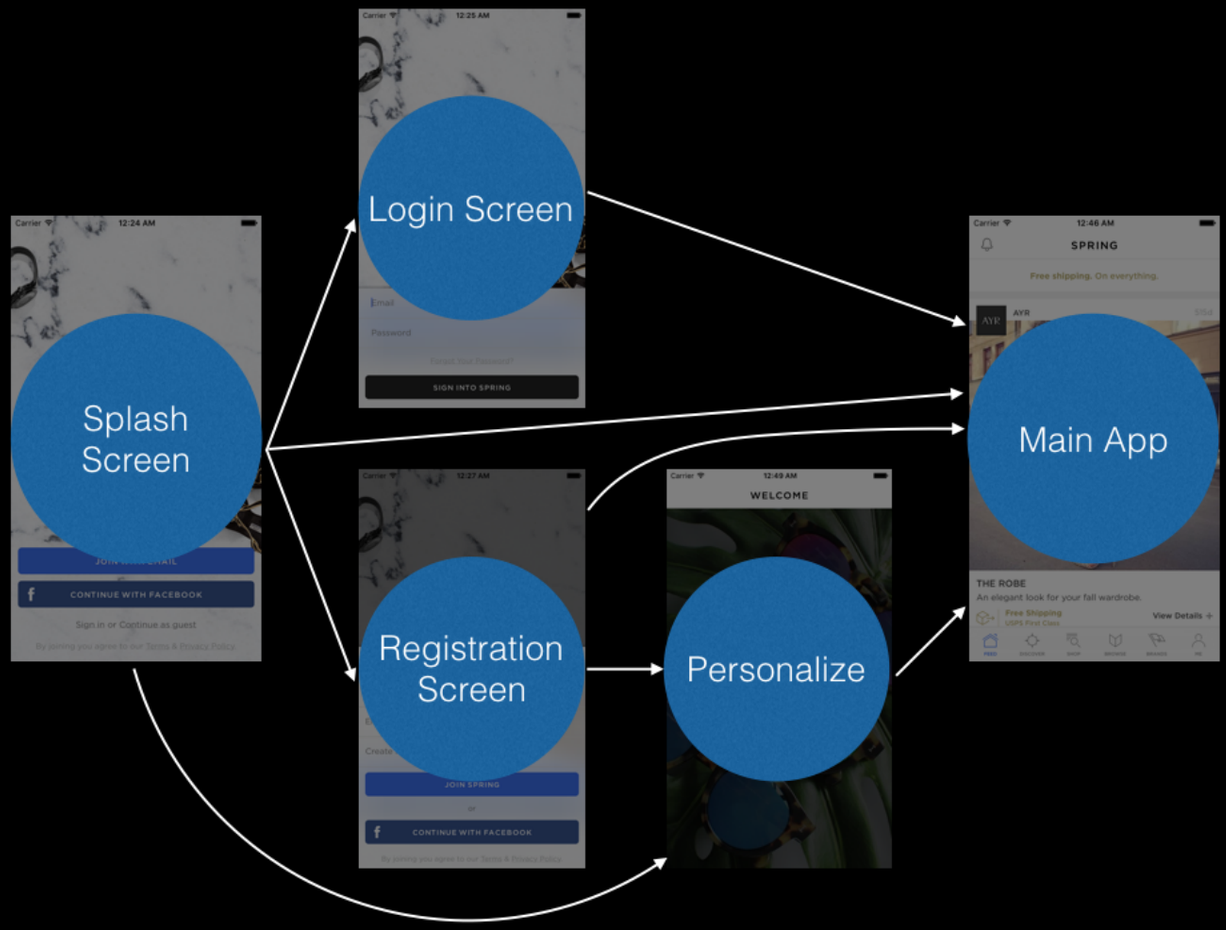
Flow Controller



```
class MyFlowController: UINavigationController {
    ...
}
```

```
let flowController = MyFlowController(completion: {
    self.dismissViewControllerAnimated(true, completion: nil)
});
self.presentViewController(flowController,
                           animated: true,
                           completion: nil)
```

```
@IBAction private func didTapLogin(sender: UIButton) {
    let loginController = LoginController()
    loginController.delegate = self
    self.presentViewController(loginController,
                               animated: true,
                               completion: nil)
}
```

```
@IBAction private func didTapLogin(sender: UIButton) {
    self.delegate.splashScreenControllerDidTapLogin(self)
}
```

So how do we code a state machine?

```
private enum OnboardingFlowStep {
    case SplashPage
    case LoginPage
    case RegistrationPage
    case PersonalizationPage(User)
    case Complete(User)
}
```

```
private enum OnboardingFlowStep {
    case SplashPage
    case LoginPage
    case RegistrationPage
    case PersonalizationPage(User)
    case Complete(User)
}
```

```
typedef NS_ENUM(NSInteger,OnboardingFlowStep) {
    OnboardingFlowStepSplashPage,
    OnboardingFlowStepLoginPage,
    OnboardingFlowStepRegistrationPage,
    OnboardingFlowStepPersonalizationPage,
    OnboardingFlowStepComplete,
};

@interface MyFlowController ()
@property(nonatomic, strong) User *card;
@end
```

```
private enum OnboardingFlowStep {
    case SplashPage
    case LoginPage
    case RegistrationPage
    case PersonalizationPage(User)
    case Complete(User)
}
```

```
func performStep(nextStep: OnboardingFlowStep)
{
    switch(nextStep) {
    case .SplashPage:
        …
    case .LoginPage:
        …
    case .RegistrationPage:
        …
    case .PersonalizationPage(let user):
        …
    case .Complete(let user):
        …
    }
}
```

```
func performStep(nextStep: OnboardingFlowStep) {
    switch(nextStep) {
    case .RegistrationPage:
        let c = RegistrationController()
        c.delegate = self
        self.presentViewController(c,
                                   animated: true,
                                   completion: nil)
    …
    }
}
```

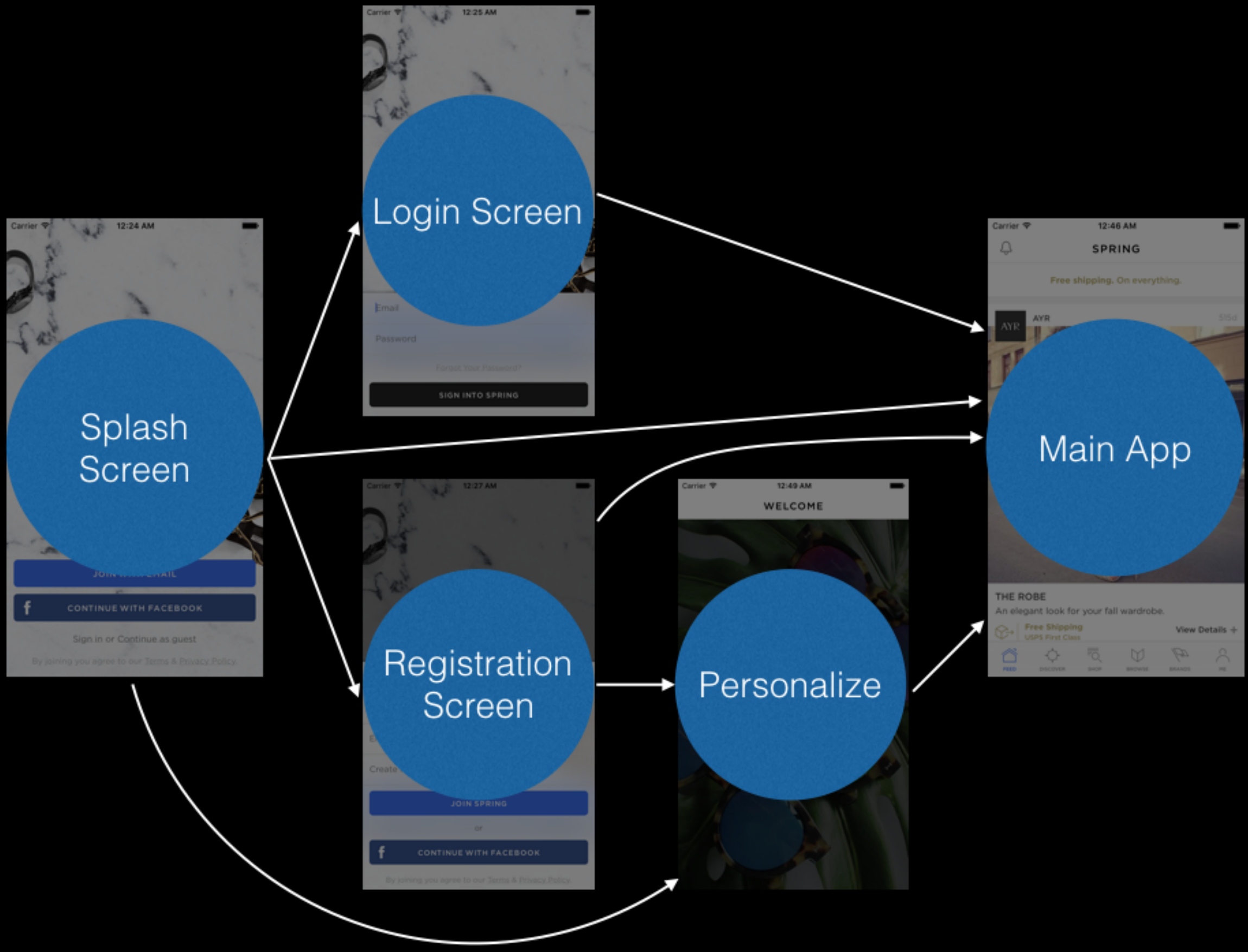
```
func regController(controller _: RegController,
                   didRegisterWithNew: Bool,
                   user: User)
{
    self.dismissViewControllerAnimated(true,
                                       completion: nil)
    if isNewUser {
        self.performStep(.PersonalizationPage(user))
    } else {
        self.performStep(.Complete(user))
    }
}
```

```
func performStep(nextStep: OnboardingFlowStep) {
    switch(nextStep) {
    case .RegistrationPage:
        let c = RegistrationController()
        c.delegate = self
        self.presentViewController(c,
                                   animated: true,
                                   completion: nil)
    …
    }
}
```

```
extension MyFlowController: RegistrationControllerDelegate {
    …
}
extension MyFlowController: LoginControllerDelegate {
    …
}
extension MyFlowController: SplashScreenControllerDelegate {
    …
}
extension MyFlowController: PersonalizationControllerDelegate {
    …
}
```

```
case .RegistrationPage:
    let c = RegController(completion: {user, isNewUser in
        self.dismissViewControllerAnimated(true, completion: nil)
        if isNewUser {
            self.performStep(.PersonalizationPage(user))
        } else {
            self.performStep(.Complete(user))
        }
    })
    self.presentViewController(c, animated: true, completion: nil)
```

```
    private func performStep(nextStep: OnboardingFlowStep) {
        switch(nextStep) {
        case .SplashPage:
            let splashPage = SplashPage(completion: {loginType in
                switch(loginType) {
                case .Login:
                    self.performStep(.LoginPage)
                case .Registration:
                    self.performStep(.RegistrationPage)
                case .LoggedIn(let user):
                    self.performStep(.Complete(user))
                case .Registered(let user):
                    self.performStep(.PersonalizationPage(user))
                }
            })
            self.pushViewController(splashPage, animated: true)
        case .RegistrationPage:
            let registrationController = RegistrationController(completion: {user, isNewUser in
                self.dismissViewControllerAnimated(true, completion: nil)
                if isNewUser {
                    self.performStep(.PersonalizationPage(user))
                } else {
                    self.performStep(.Complete(user))
                }
            })
            self.presentViewController(registrationController, animated: true, completion: nil)
        case .LoginPage:
            let loginController = LoginController(completion: {user in
                self.dismissViewControllerAnimated(true, completion: nil)
                self.performStep(.Complete(user))
            })
            self.presentViewController(loginController, animated: true, completion: nil)
        case .PersonalizationPage(let user):
            let personalizationController = PersonalizationController(user: user, completion: {user in
                self.performStep(.Complete(user))
            })
            self.pushViewController(personalizationController, animated: true)
        case .Complete(let user):
            completion(user)
        }
    }
```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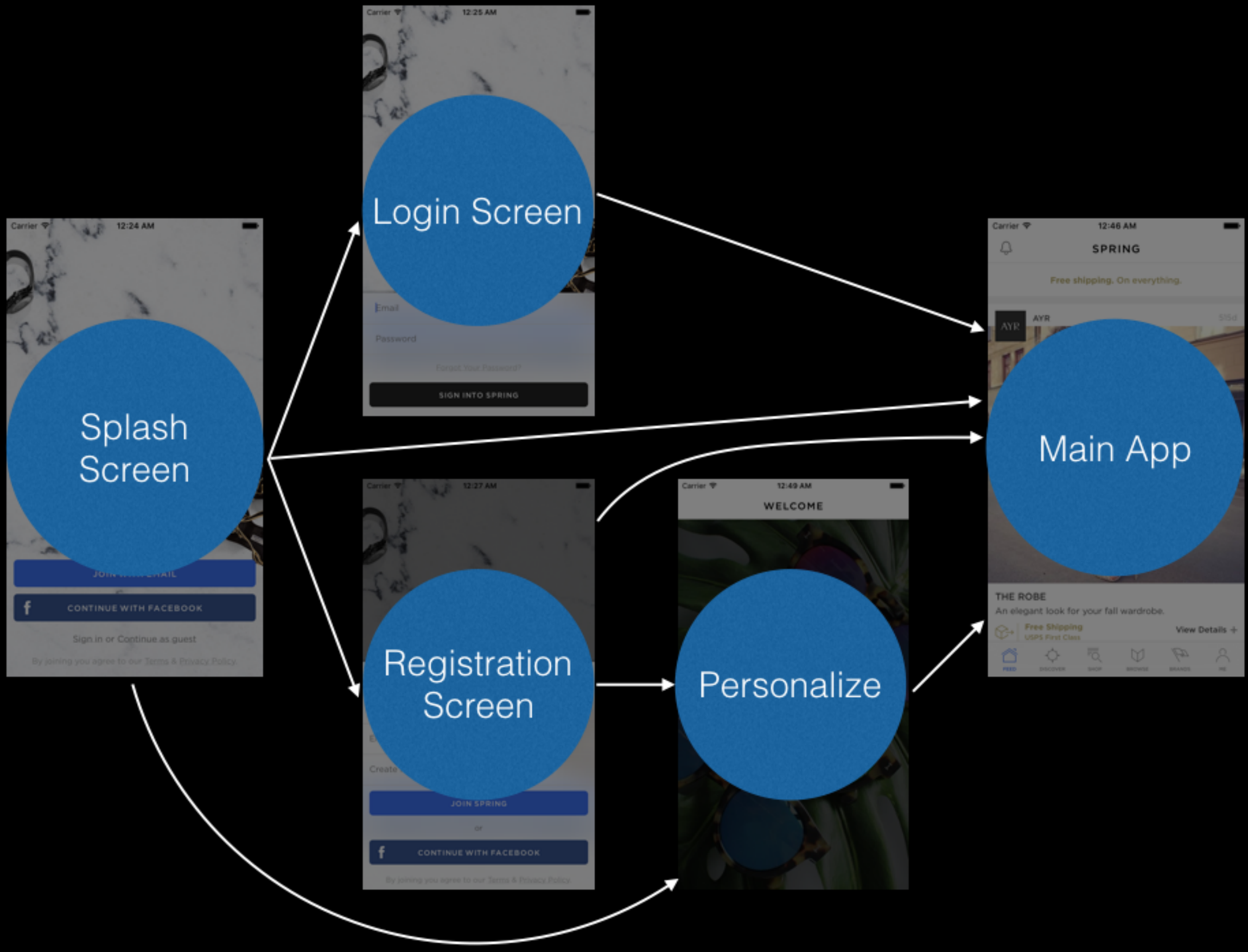
Demo

When do I use this?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Questions?

Code on Github!

github.com/tangphillip/state-machine-talk