

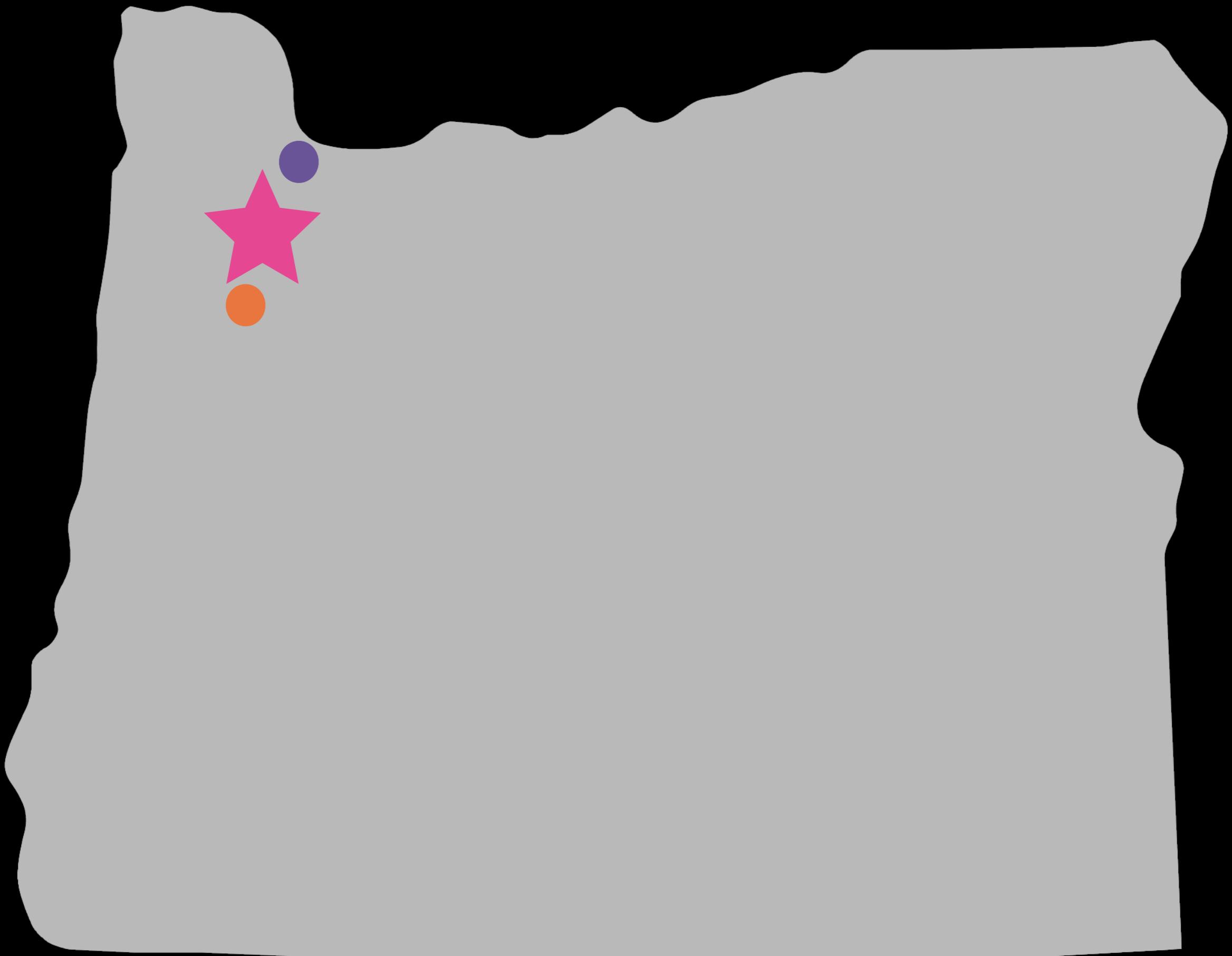


Hi! I'm Katie

✨ @glitteringkatie ✨



where the elm am I?







new
city

\approx

new
code
base



learning goals

- two strategies for exploration
- understand how to explore mindfully

- 
1. walk down the block
 2. turn the corner
 3. get lost (and find your way)
 4. go with locals
 5. get to know your neighborhood
 6. get to know your neighborhood's place

1. walk down the block

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spoiler alert

you can orient yourself in
code this same way



wait, katie, what do you
mean by orientation?



real life

can you get to where you're
trying to go?



code

can you do what you're
trying to do?



building your cognitive
map allows you to be
flexible



so when do you need
to orient yourself?



new code base!
unfamiliar section!
it's been a while!
learning purposes!



I had a new code
base and a purpose.





Welcome! Select your interests below, and we'll use them to create your first assignment.

Please add more interests!

Continue

TV Shows and Movies



Crazy Rich Asians



Black Panther



DC Legends of Tomorrow



Supergirl



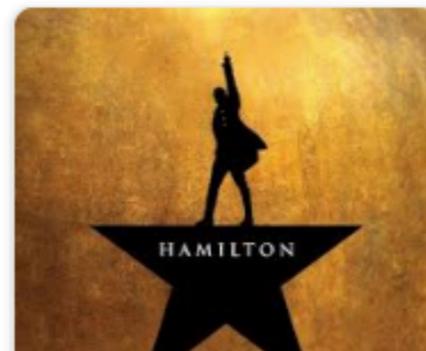
The Flash



Arrow



High School Musical



Hamilton: An American Musical



Teenage Mutant Ninja Turtles



Hidden Figures

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Hidden Figures



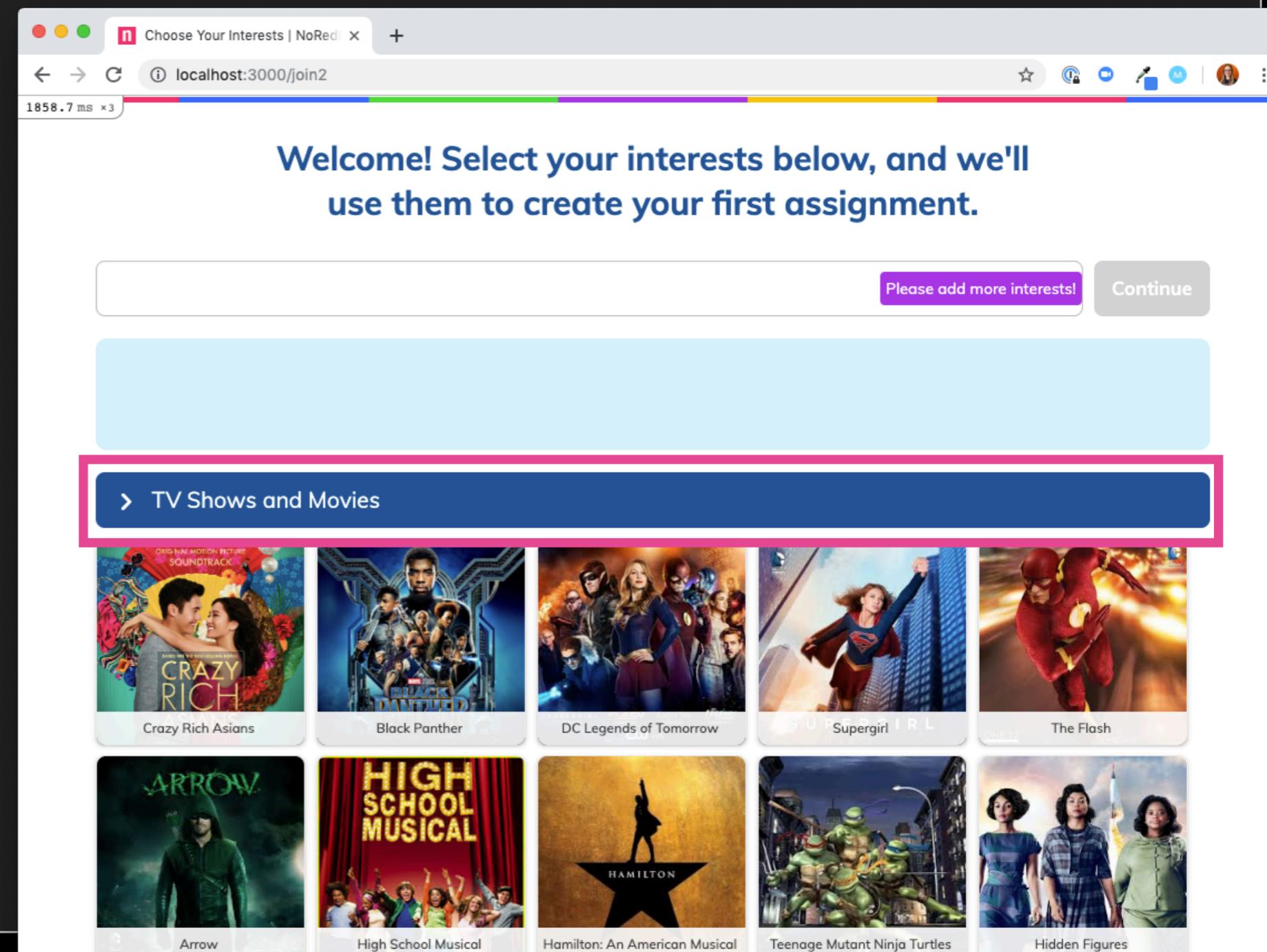
```
module Page.Join.Main exposing (main)

import Html exposing (text)

main =
    text "Welcome! Select your interests below, and we'll use them to create your first assignment."
```

```
main : Nri.Program.Program Model ()  
main =  
  Nri.Program.program  
  { moduleName = "Page.Join.Main"  
    ...  
    , init = init  
    , view = view  
    , update =  
      \_ msg model →  
        ( model, Cmd.none )  
  }
```

```
init : Env → () → ( Model, Cmd () )
init _ flags =
( [ { name = "Sports" } ], Cmd.none )
```



```
view : Env → Model → Html ()  
view _ model =  
  div []  
    [ text "Same welcome text as before"  
    , div [] (model  
      ▷ List.map  
        (\interest → text interest.name)  
    )  
    ]
```

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expand on the model & refactor
(v easy)



```
type alias Model =  
List Interest
```



```
type alias Model =  
GraphqlData  
(List ViewableInterestCategory)
```



Choose Your Interests | NoRed

Zamboni/interest tiles/0 by bro

+



localhost:3000/join2



1858.7 ms x3

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Continue



> TV Shows and Movies



Crazy Rich Asians



Black Panther



DC Legends of Tomorrow



Supergirl



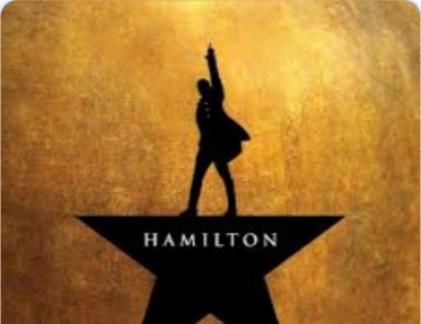
The Flash



Arrow



High School Musical



Hamilton: An American Musical



Teenage Mutant Ninja Turtles



Hidden Figures



```
type alias Model =  
    GraphqlData  
    (List ViewableInterestCategory)  
  
type alias ViewableInterestCategory =  
{ interest : InterestCategory  
, isOpen : Bool  
}  
  
type alias InterestCategory =  
{ id : Scalar.Id  
, name : String  
, visibleChildren : Maybe  
    (List SelectableInterest)  
}
```

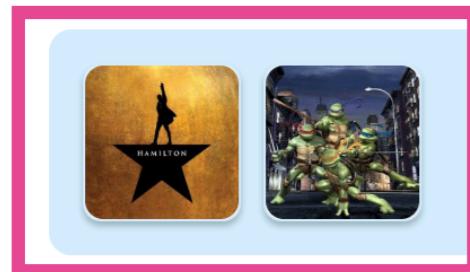


Welcome! Select your interests below, and we'll use them to create your first assignment.



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> TV Shows and Movies



Crazy Rich Asians



Black Panther



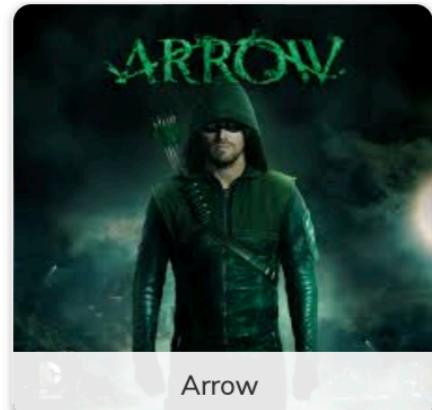
DC Legends of Tomorrow



Supergirl



The Flash



Arrow



High School Musical



Hamilton: An American Musical



Teenage Mutant Ninja Turtles



Hidden Figures

```
type alias Model =  
{ interests : GraphqlData  
(List ViewableInterestCategory)  
, selectedInterests : Set  
( Scalar.Id, String )  
-- String is a photo url  
}
```



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elm-graphql



- Watched an internal demo, on our GraphQL client generator
- Searched for `SelfReview.selection`
- Found it!

```
pageQuery : Int →  
  SelectionSet SelfReview RootQuery  
pageQuery selfReviewId =  
  Query.selection identity  
  ▷ with  
    ( Query.selfReview  
      { id = Scalar.Id  
        (String.toInt selfReviewId)  
      }  
      SelfReview.selection  
    )
```

- Replaced their stuff with my stuff
- Looked at docs
- Fought compiler
- Looked at docs more
- Fought compiler more
- Eventually won 💪

```
pageQuery : Int →  
  SelectionSet SelfReview RootQuery  
pageQuery selfReviewId =  
Query.selection identity  
  ▷ with  
    ( Query.selfReview  
      { id = Scalar.Id  
        (String.toInt selfReviewId)  
      }  
      SelfReview.selection  
    )
```



```
interestsQuery : SelectionSet
(List Interest)
RootQuery
interestsQuery =
Query.selection identity
    ▷ with
        (Query.interests
            (Interest.selection Interest
                ▷ with Interest.id
                ▷ with Interest.name
                ▷ with Interest.parentId
                ▷ with Interest.photo
            )
        )
    )
```

```
{  
  interests {  
    id  
    name  
    parentId  
    photo  
  }  
}
```



```
interestsQuery : SelectionSet  
(List Interest)  
RootQuery  
interestsQuery =  
Query.selection identity
```



{

}



```
interestsQuery : SelectionSet
(List Interest)
RootQuery
interestsQuery =
Query.selection identity
▷ with
(Query.interests
```



```
{  
  interests  
}
```

```
interestsQuery : SelectionSet
(List Interest)
RootQuery
interestsQuery =
Query.selection identity
▷ with
(Query.interests
(Interest.selection Interest
```



{

interests {

}

}

```
interestsQuery : SelectionSet
(List Interest)
RootQuery
interestsQuery =
Query.selection identity
    ▷ with
        (Query.interests
            (Interest.selection Interest
                ▷ with Interest.id
```



```
{  
  interests {  
    id  
  }  
}
```



```
interestsQuery : SelectionSet
(List Interest)
RootQuery
interestsQuery =
Query.selection identity
    ▷ with
        (Query.interests
            (Interest.selection Interest
                ▷ with Interest.id
                ▷ with Interest.name
                ▷ with Interest.parentId
                ▷ with Interest.photo
            )
        )
    )
```

```
{  
  interests {  
    id  
    name  
    parentId  
    photo  
  }  
}
```

elm-graphql



1. walk down the block
2. turn the corner
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4. go with locals

5. get to know your neighborhood
6. get to know your neighborhood's place





```
import Sort.Set as Set  
exposing (Set)
```

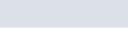




```
type alias Model =  
{ interests : GraphqlData  
(List ViewableInterestCategory)  
, selectedInterests : Set  
( Scalar.Id, String )  
-- String is a photo url  
}
```

```
type alias ViewableInterestCategory =  
{ interest : InterestCategory  
, isOpen : Bool  
}
```

```
type alias InterestCategory =  
{ id : Scalar.Id  
, name : String  
, visibleChildren : Maybe  
(List SelectableInterest)  
}
```

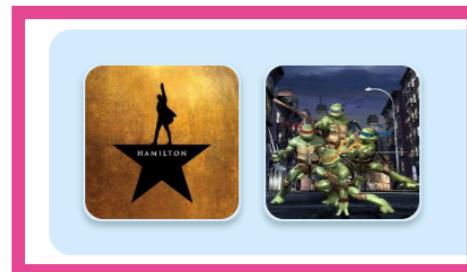


Welcome! Select your interests below, and we'll use them to create your first assignment.



Please add more interests!

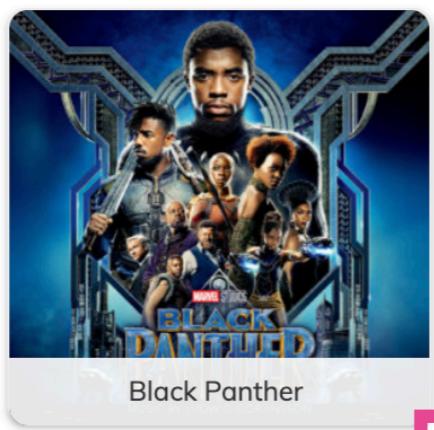
Continue



> TV Shows and Movies



Crazy Rich Asians



Black Panther



DC Legends of Tomorrow



Supergirl



The Flash



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High School Musical



Hamilton: An American Musical



Teenage Mutant Ninja Turtles



Hidden Figures

```
type alias Model =  
{ interests : GraphqlData  
(List ViewableInterestCategory)  
, selectedInterests : Set  
( Scalar.Id, String )  
-- String is a photo url  
}
```

if the user had to add a
sticky-note, that's a bad
experience



```
type alias Model =  
{ interests : GraphqlData  
(List ViewableInterestCategory)  
, selectedInterests : Set  
( Scalar.Id, String )  
-- String is a photo url  
}
```



```
type alias Model =  
{ interests : GraphqlData Interests  
, selectedInterests : List Scalar.Id  
}
```

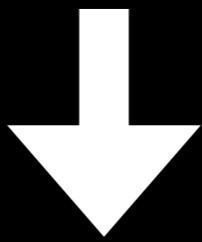


```
type alias Model =  
{ interests : GraphqlData Interests  
, selectedInterests : List Scalar.Id  
}
```

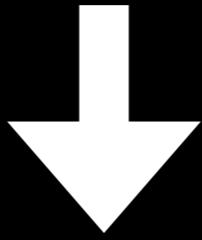
```
type alias Interests =  
{ selectableInterestsById : Dict  
  Scalar.Id  
  SelectableInterest  
, interestCategoriesById : Dict  
  Scalar.Id  
  InterestCategory  
}
```

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- 5. get to know your neighborhood**
6. get to know your neighborhood's place

basic program



1000+ line program



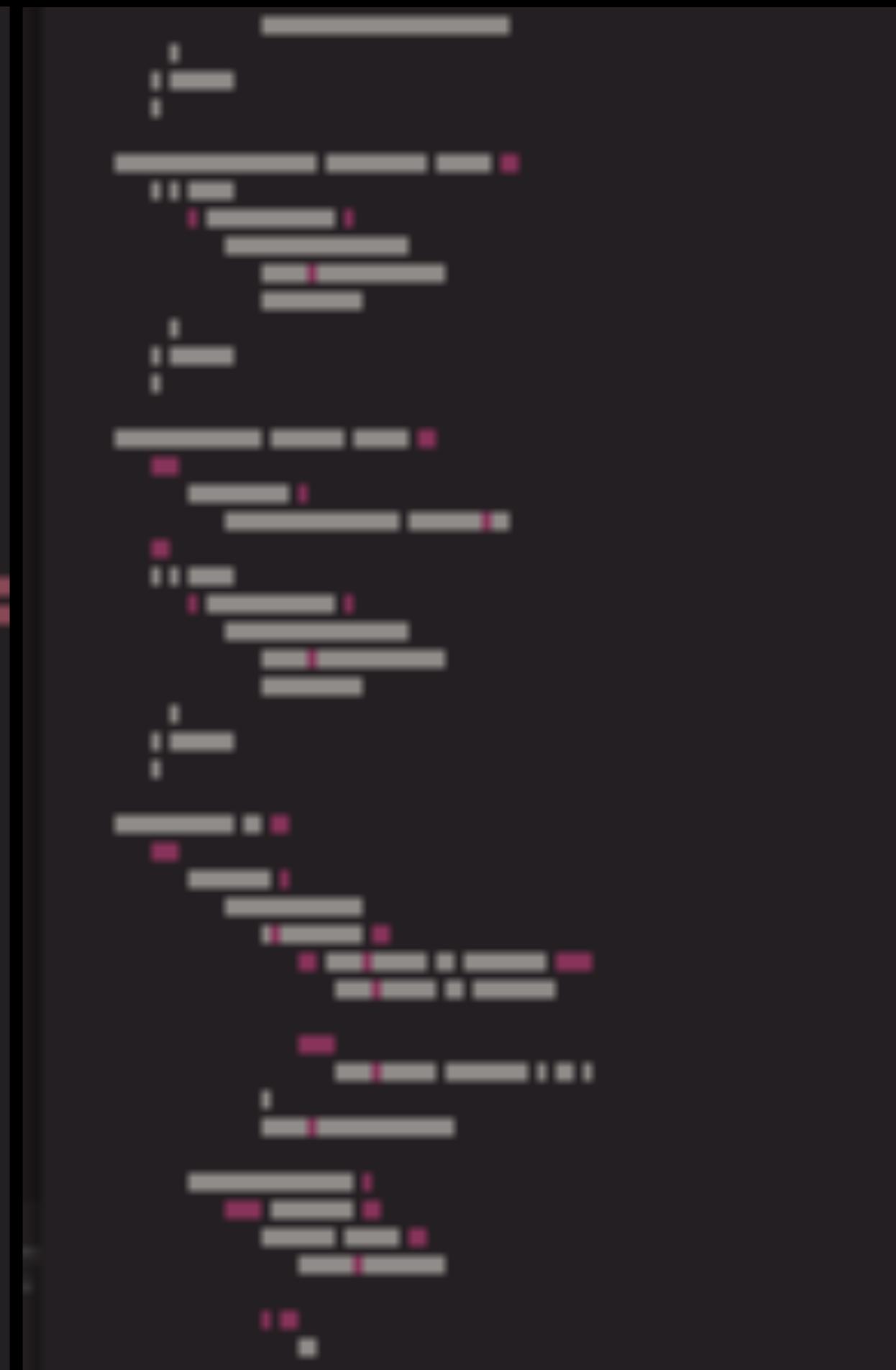
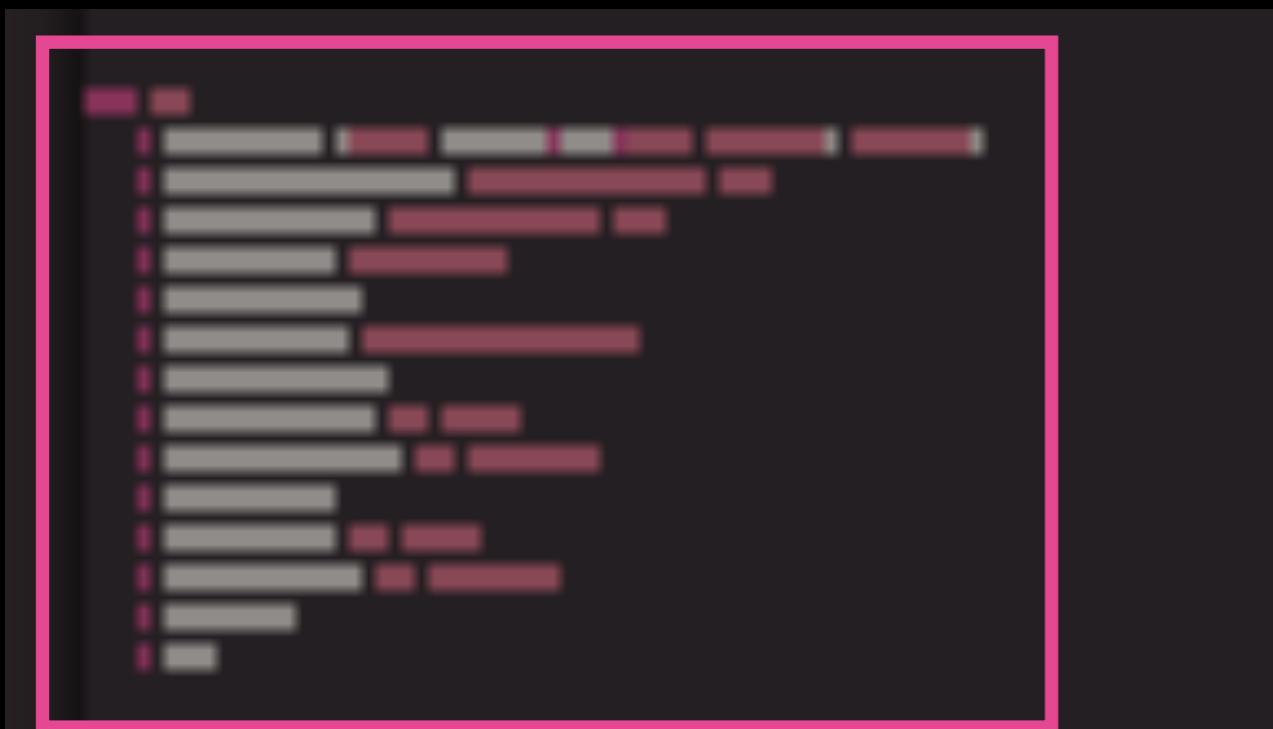
Main, Model, View, Update

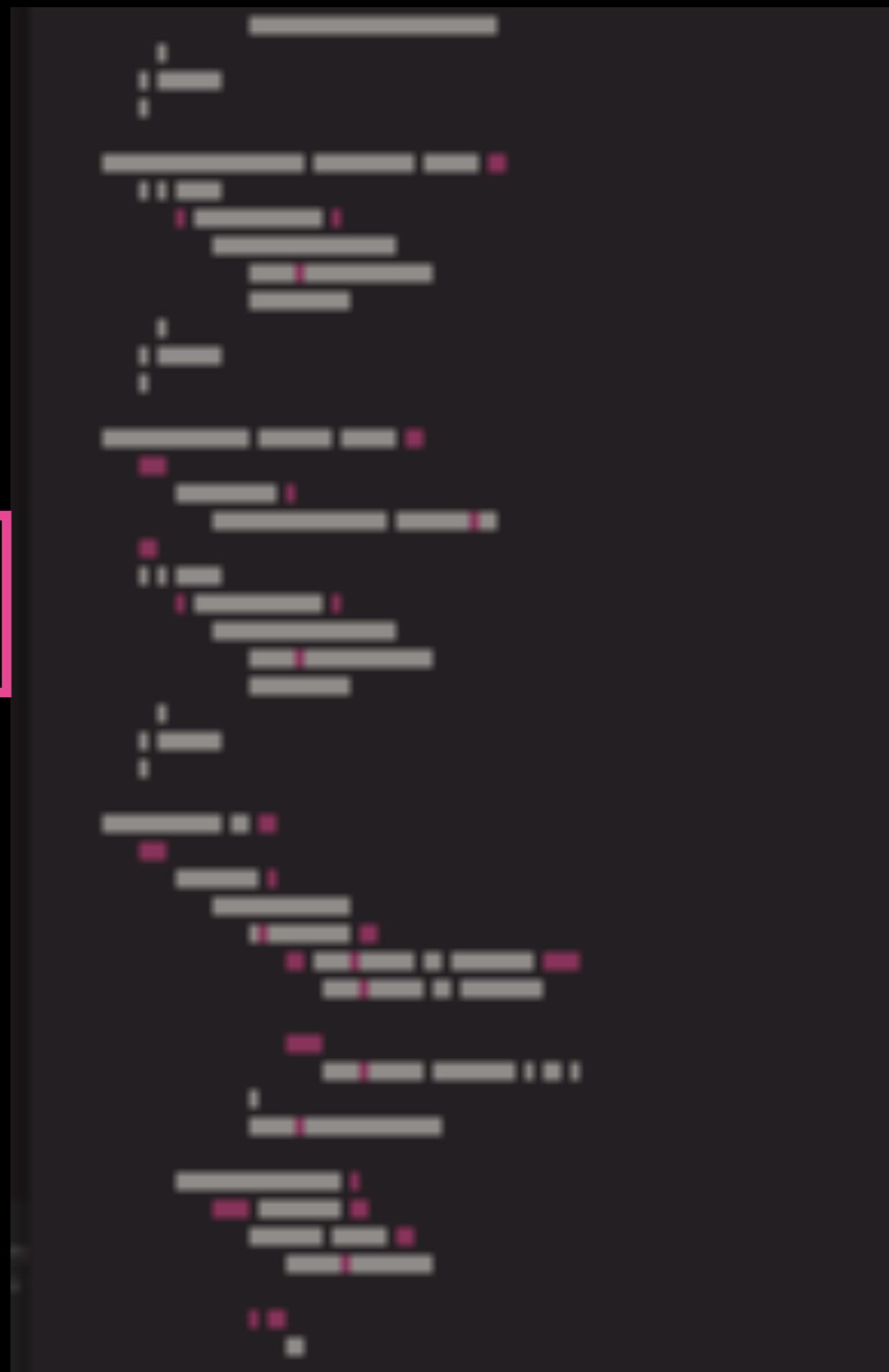














learning the shapes
to expect



1. walk down the block
2. turn the corner
3. get lost (and find your way)
4. go with locals
5. get to know your neighborhood
- 6. get to know your neighborhood's place**

ui/src/Page/Join

ui/Page/Join
what I am



ui/Page/Join
who I am





plot twist!



flip it and reverse it
(ti esrever dna ti pilf)

- 
1. walk down the block
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- 
1. walk down the block
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6. get to know your neighborhood's place

5. get to know your neighborhood
4. go with locals
3. get lost (and find your way)
2. turn the corner
1. walk down the block

ui/Page/Admin/ Announcements



6. get to know your neighborhood's place

5. get to know your neighborhood

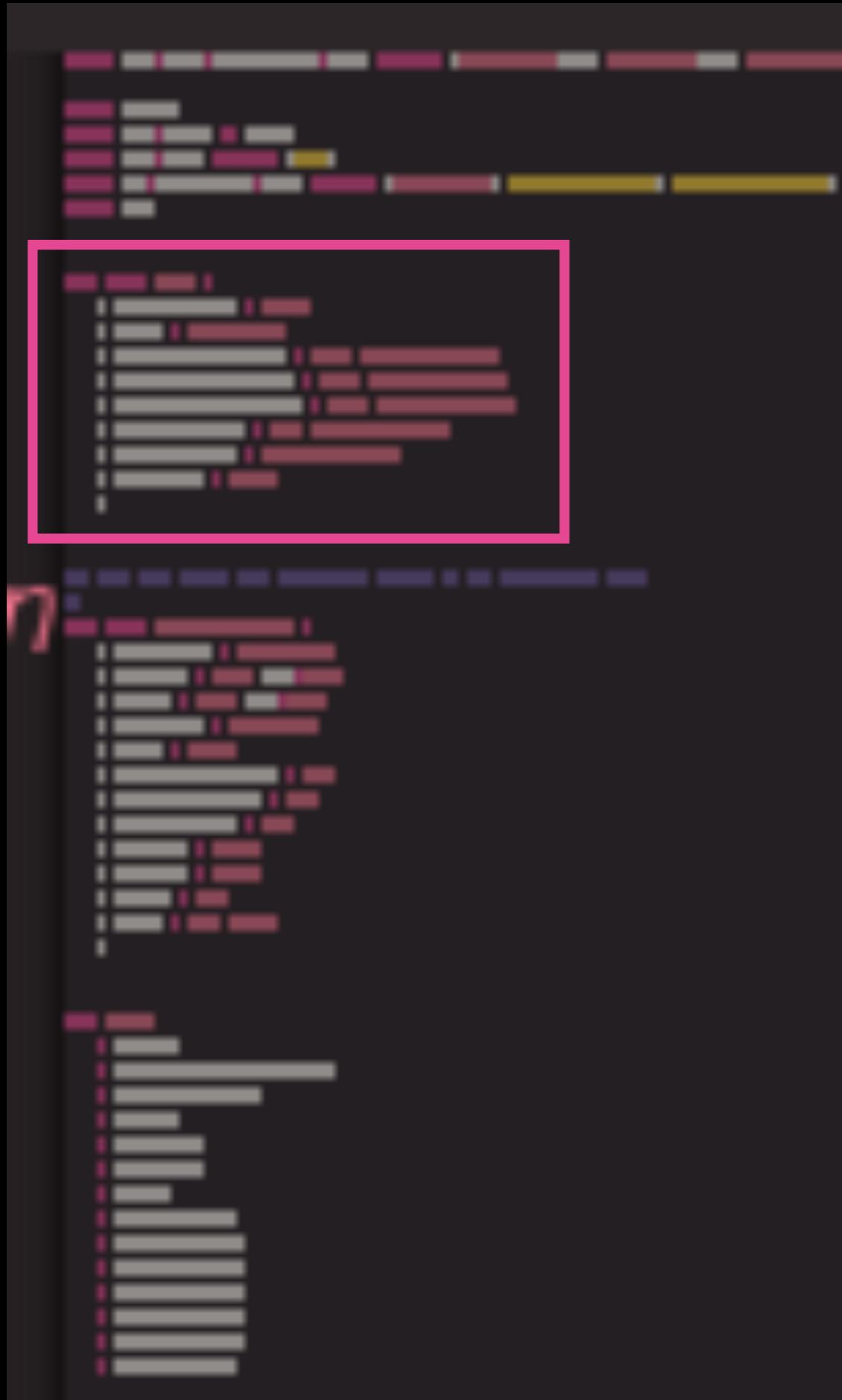
4. go with locals

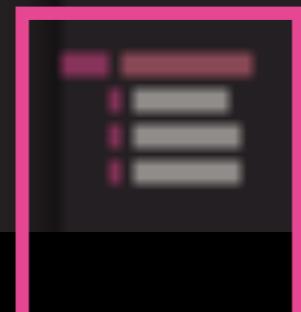
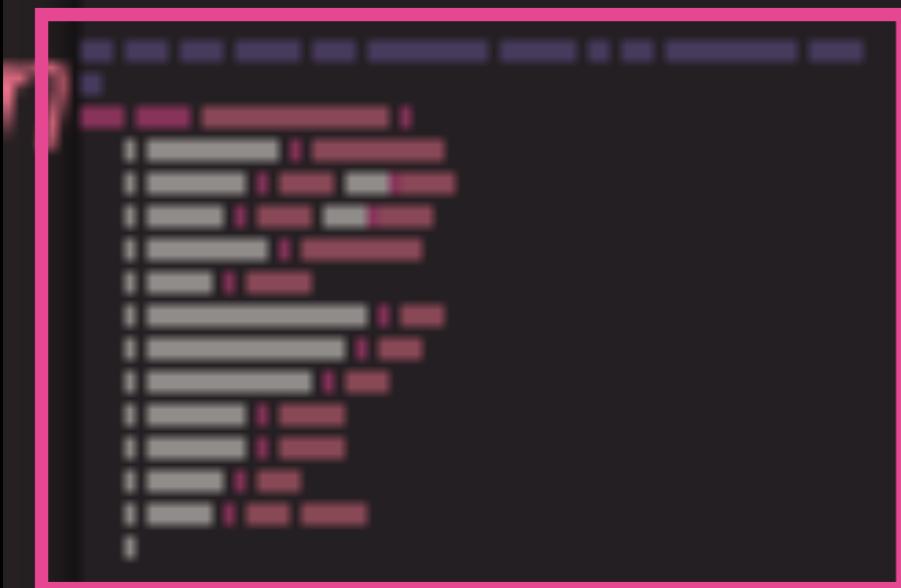
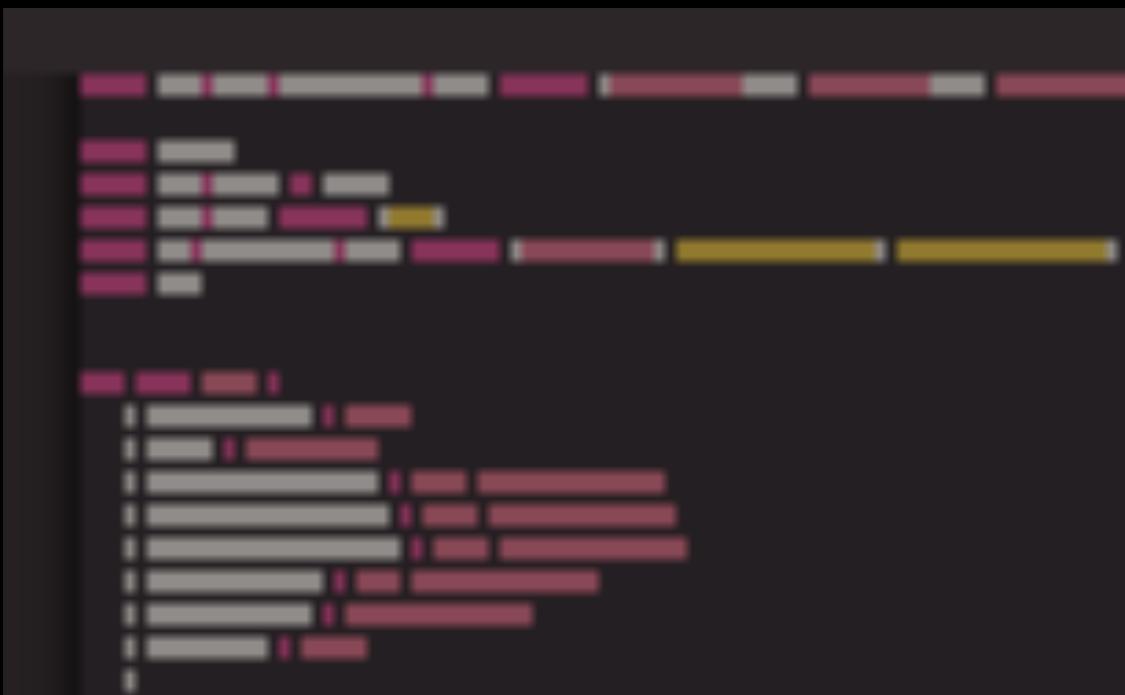
3. get lost (and find your way)

2. turn the corner

1. walk down the block



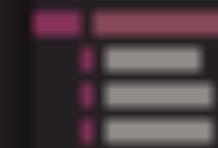
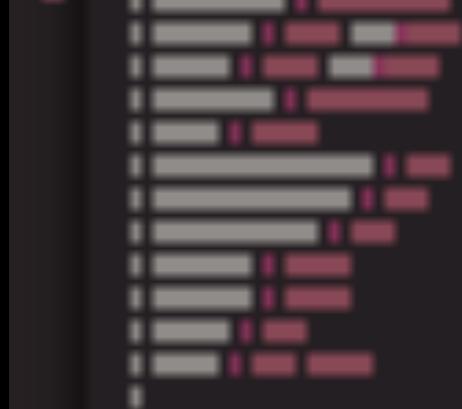








7











establishing expectations
of what might be
interesting



6. get to know your neighborhood's place
5. get to know your neighborhood

4. go with locals

3. get lost (and find your way)
2. turn the corner
1. walk down the block





(with the tests)





```
describe "announcementInEditMode"  
  
test "should find the first  
announcement in edit mode"  
test "nothing when not in edit mode"
```

6. get to know your neighborhood's place
5. get to know your neighborhood
4. go with locals

3. get lost (and find your way)

2. turn the corner
1. walk down the block

break things!

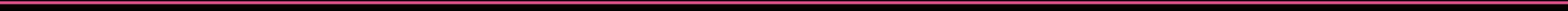
did they break like you expected?
did they break the tests you
expected?

6. get to know your neighborhood's place
5. get to know your neighborhood
4. go with locals
3. get lost (and find your way)

2. turn the corner

1. walk down the block

start solidifying your
understanding by making
assumptions & breaking them





- 1. walk down the block**
2. turn the corner
3. get lost (and find your way)
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what was unique in
this part of the code?

what patterns did you
see reinforced?

turns out this was another
person's first elm app!

go



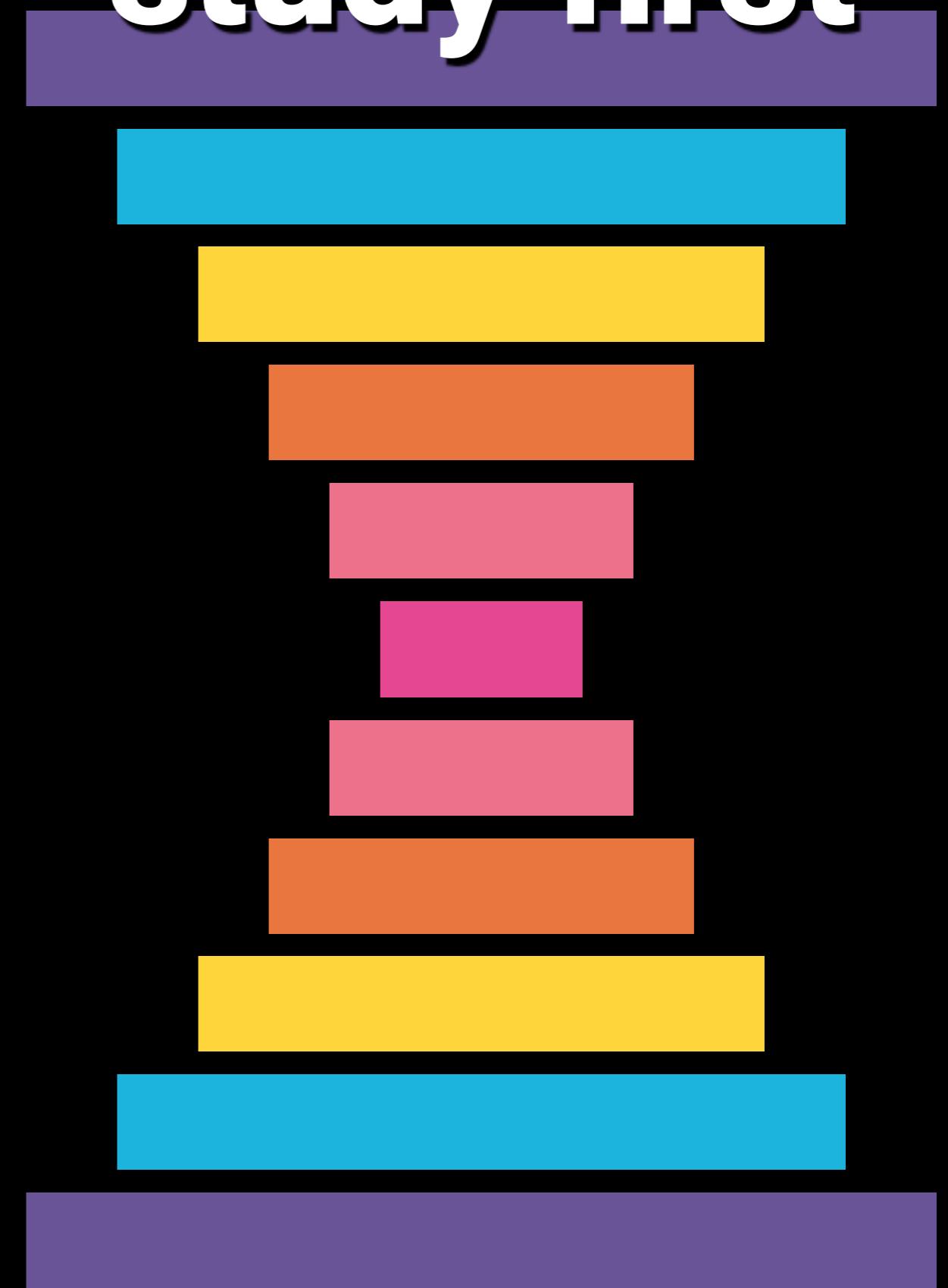
go

study first



google has maps
github has code

study first



go

study first



explore mindfully.

Take in as much input as you can through as many methods as you can and **make predictions as you go.**



**know where the elm
you are**



thank you!

✨ @glitteringkatie ✨