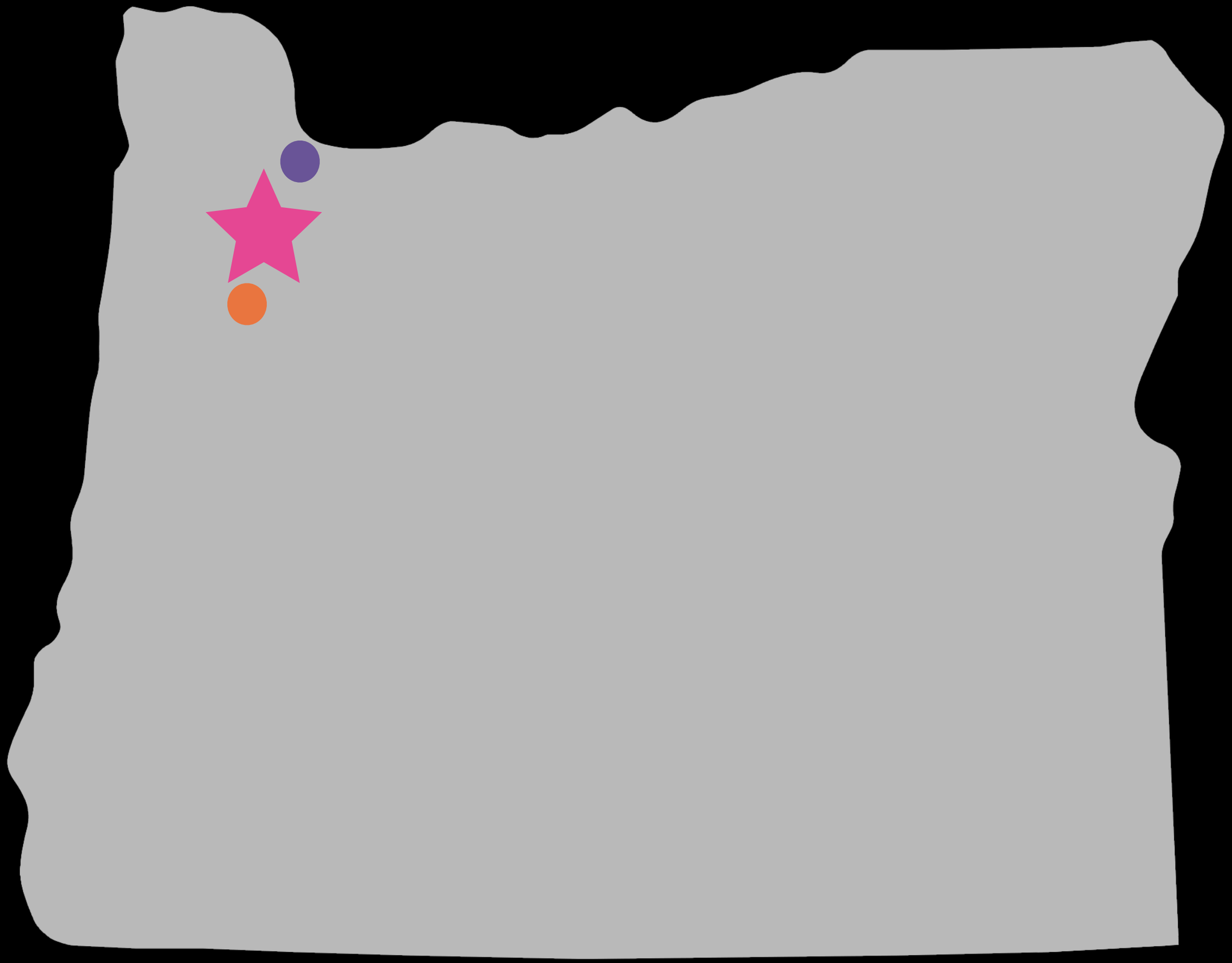
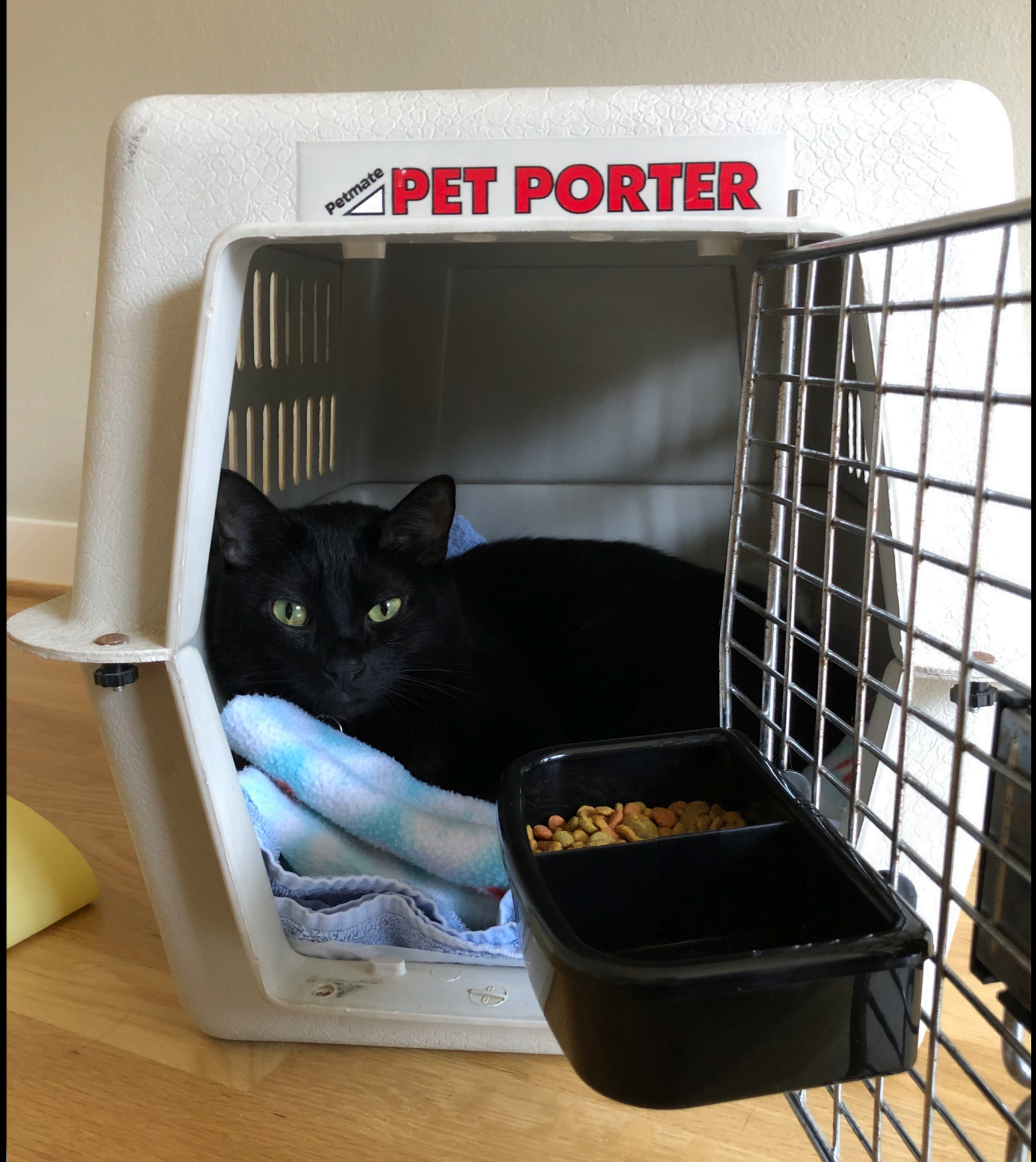
👋 Hi! I'm Katie

✨ @glitteringkatie ✨

where the elm am I?




Petmate
PET PORTER

new city

≈

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

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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.

Choose Your Interests | NoRed

localhost:3000/join2

1858.7 ms ×3

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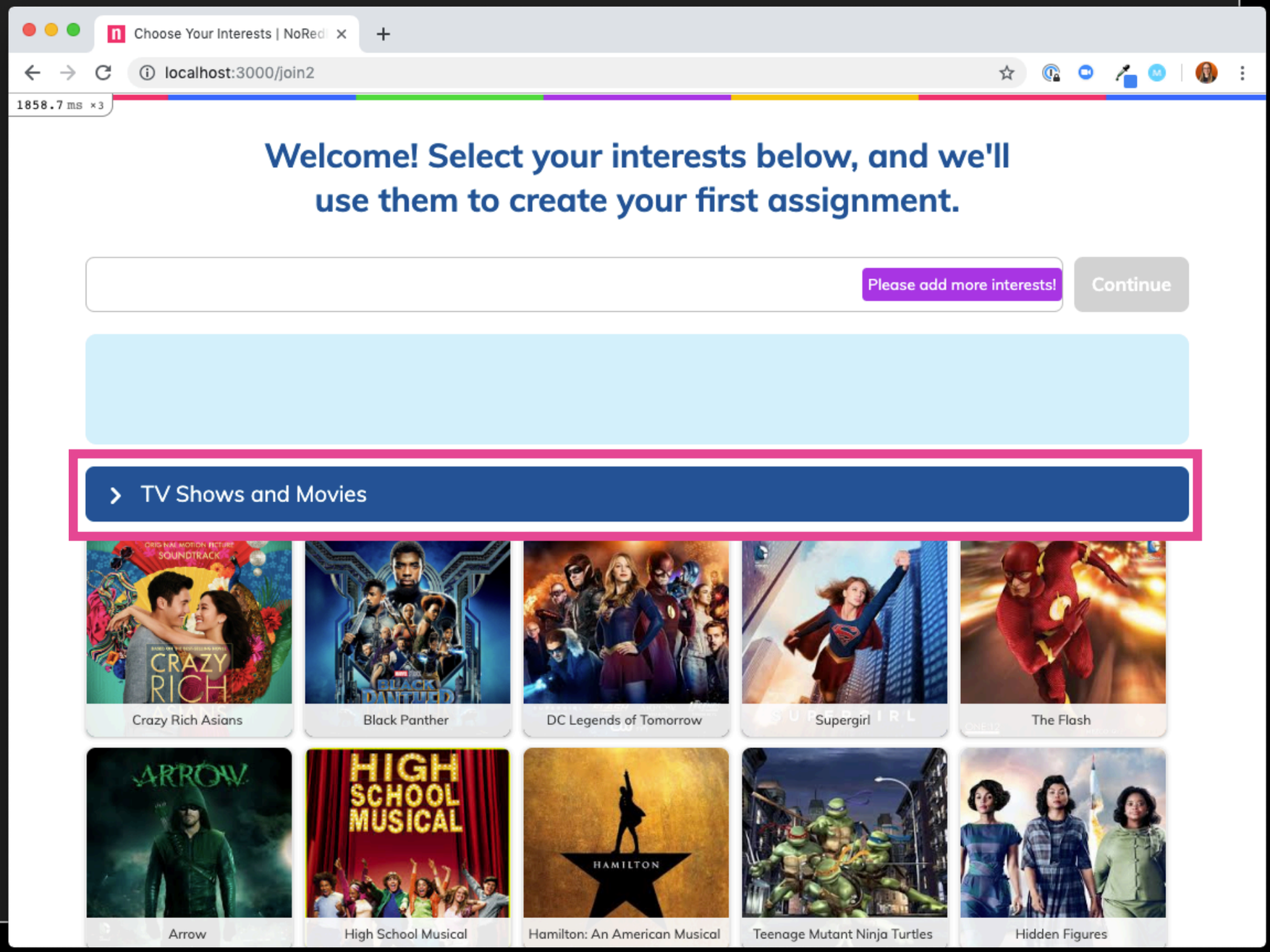
```elm
module Page.Join.Main exposing (main)

import Html exposing (text)


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

```elm
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 )
```



```elm
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 | NoRedI

Zamboni/interest tiles/0 by bro

localhost:3000/join2

1858.7 ms ×3

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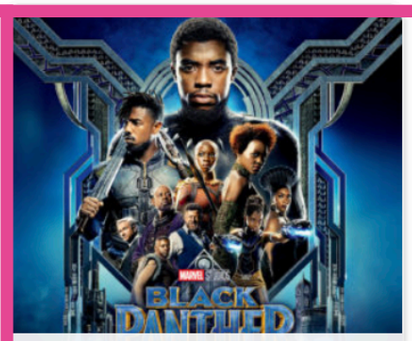
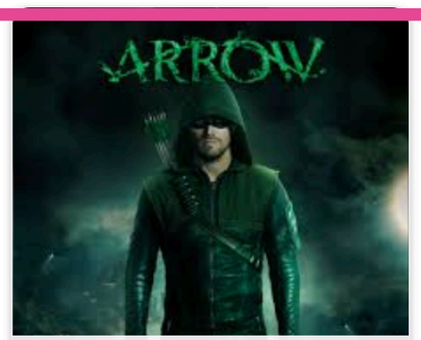


Black Panther


DC Legends of Tomorrow


Supergirl


The Flash



Arrow

High School Musical

Hamilton: An American Musical


Teenage Mutant Ninja Turtles

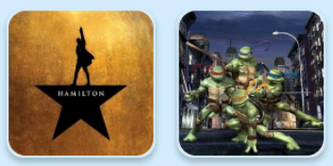

Hidden Figures

```elm
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.

Please add more interests!

Continue



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```elm
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.fromInt selfReviewId)
        }
        SelfReview.selection
      )
```

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

```elm
pageQuery : Int →
  SelectionSet SelfReview RootQuery
pageQuery selfReviewId =
  Query.selection identity
    |> with
      ( Query.selfReview
        { id = Scalar.Id
          (String.fromInt 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
   }
}
```

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

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

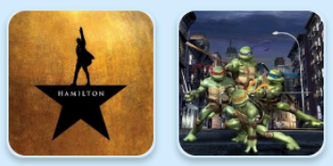
```
type alias ViewableInterestCategory =
    { interest : InterestCategory
    , isOpen : Bool
    }


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



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```
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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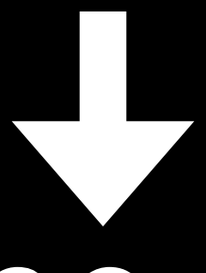
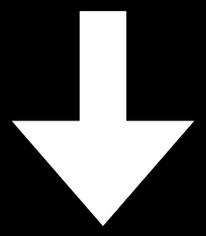
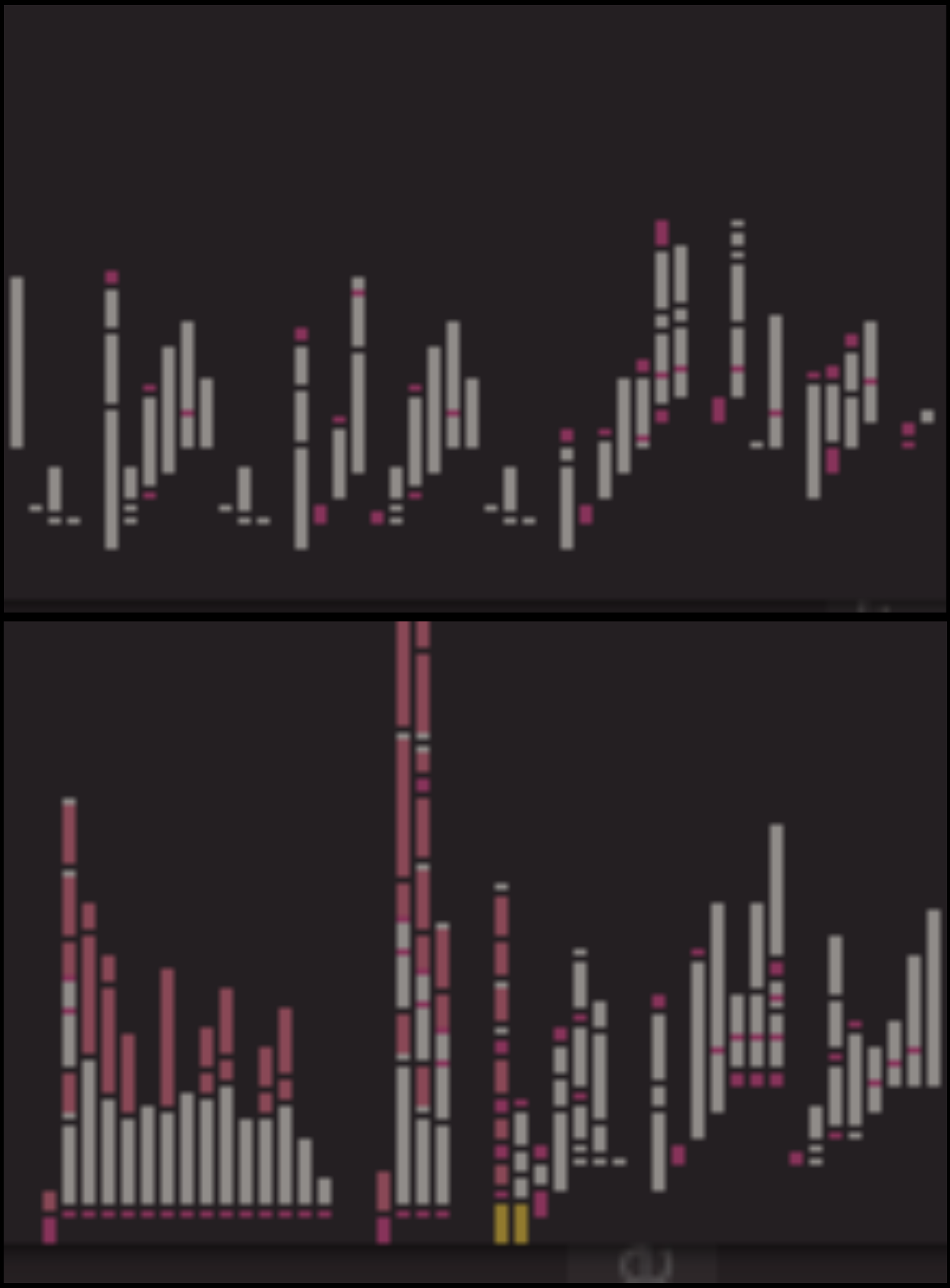
basic program



1000+ line program



Main, Model, View, Update



learning the shapes

to expect

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

ui/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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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

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

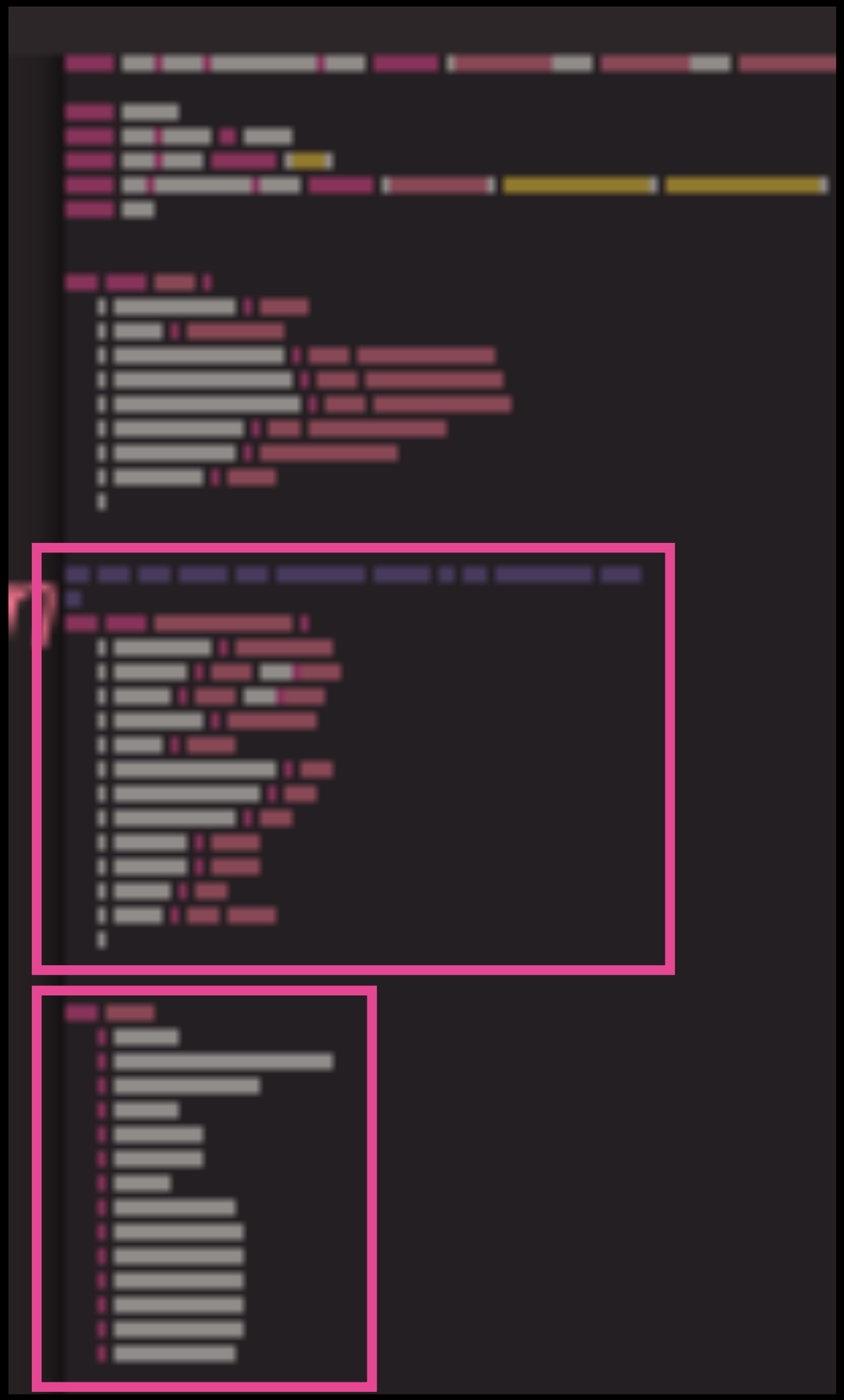
5. get to know your neighborhood

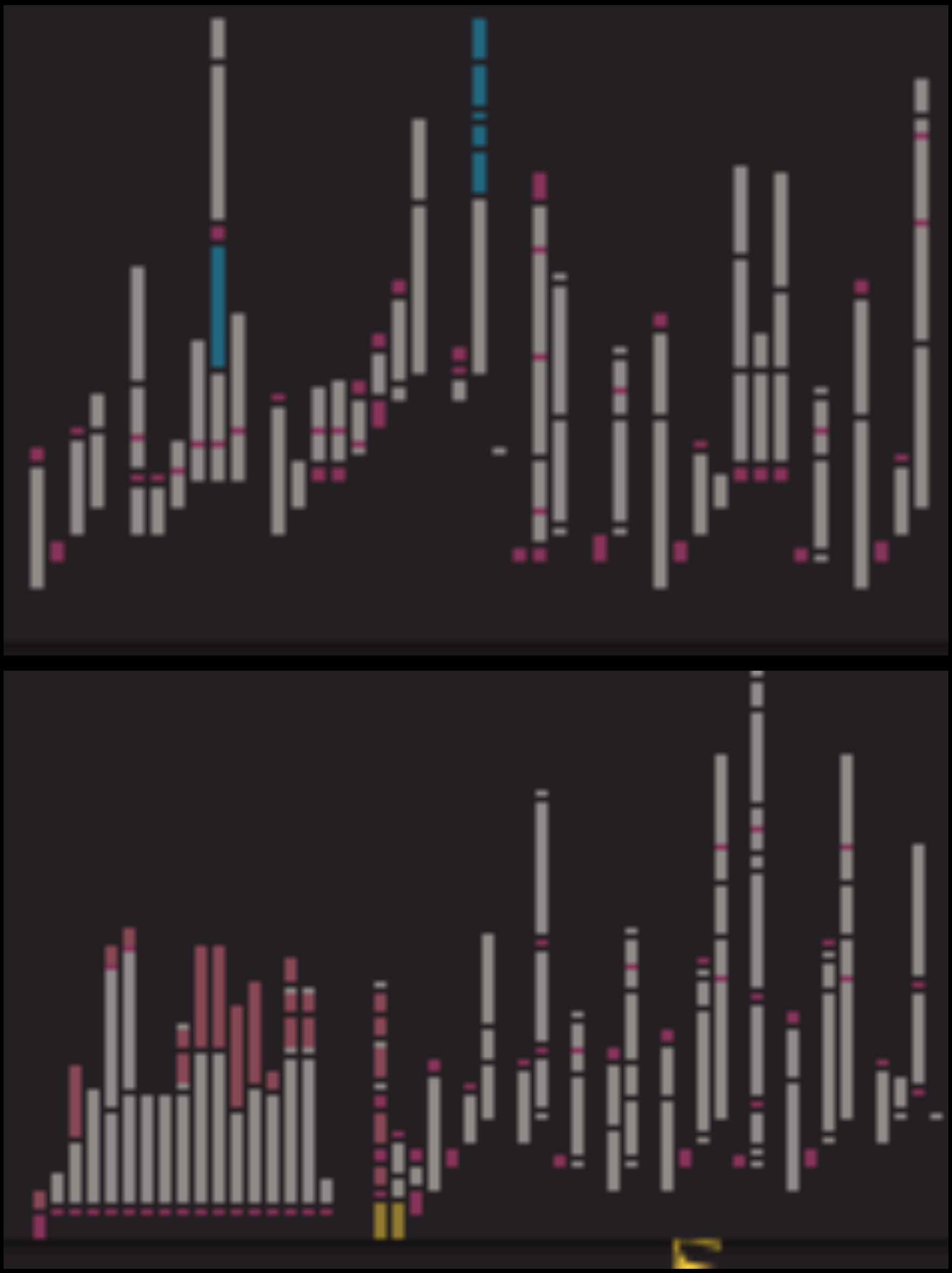
4. go with locals

3. get lost (and find your way)

2. turn the corner

1. walk down the block





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

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**

what was unique in this part of the code?

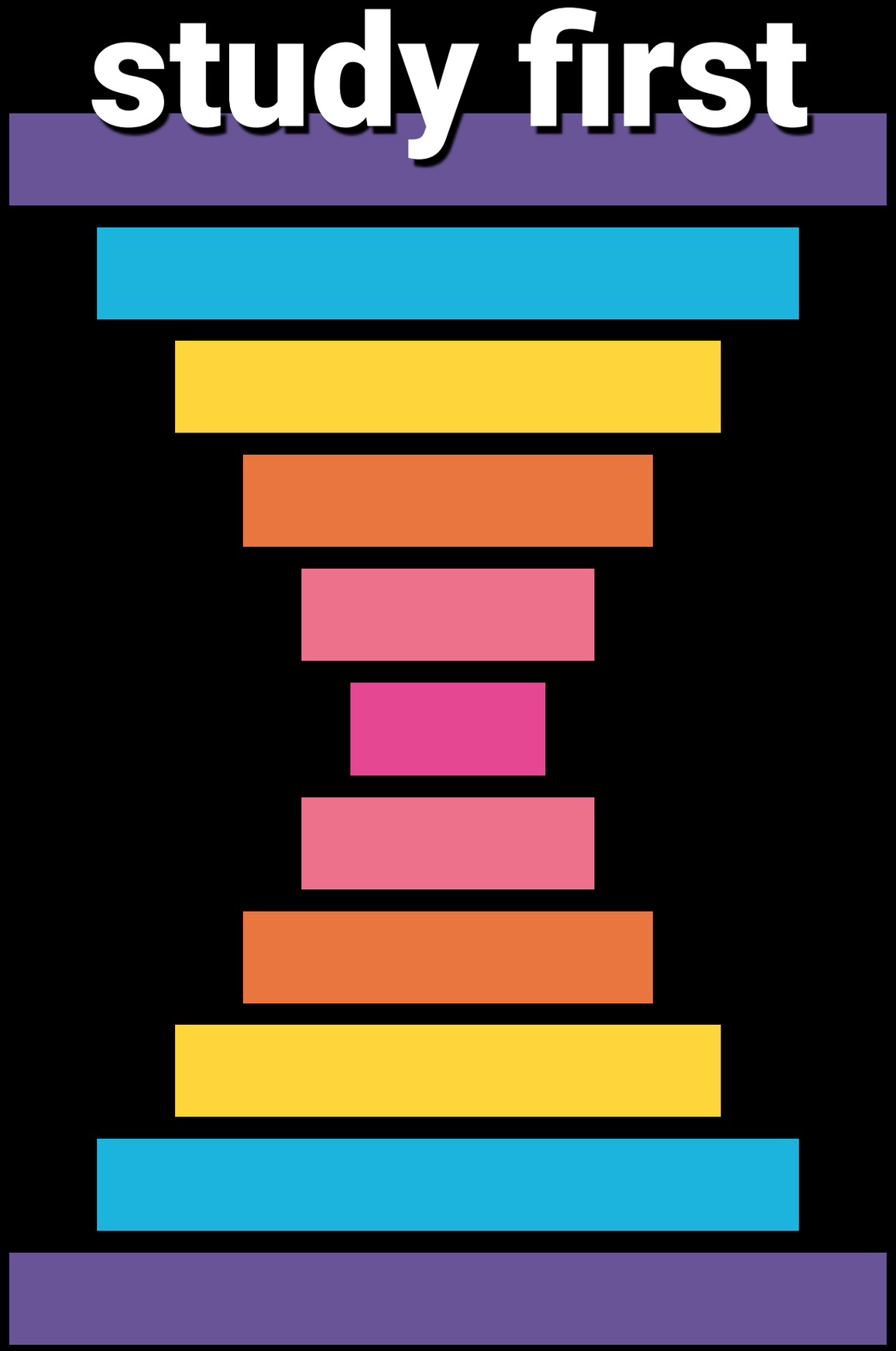
what patterns did you see reinforced?

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

go

go

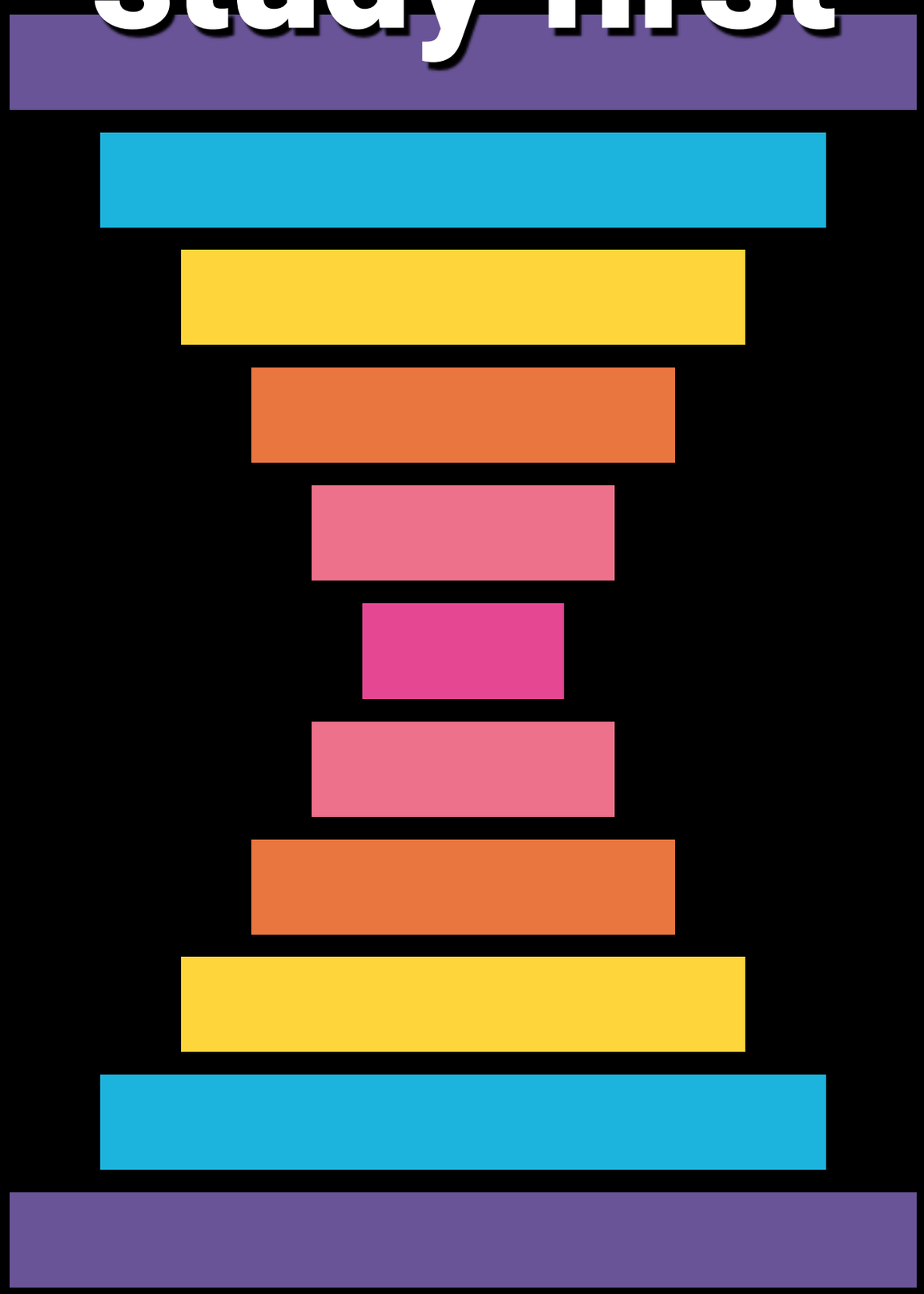
study first



google has maps

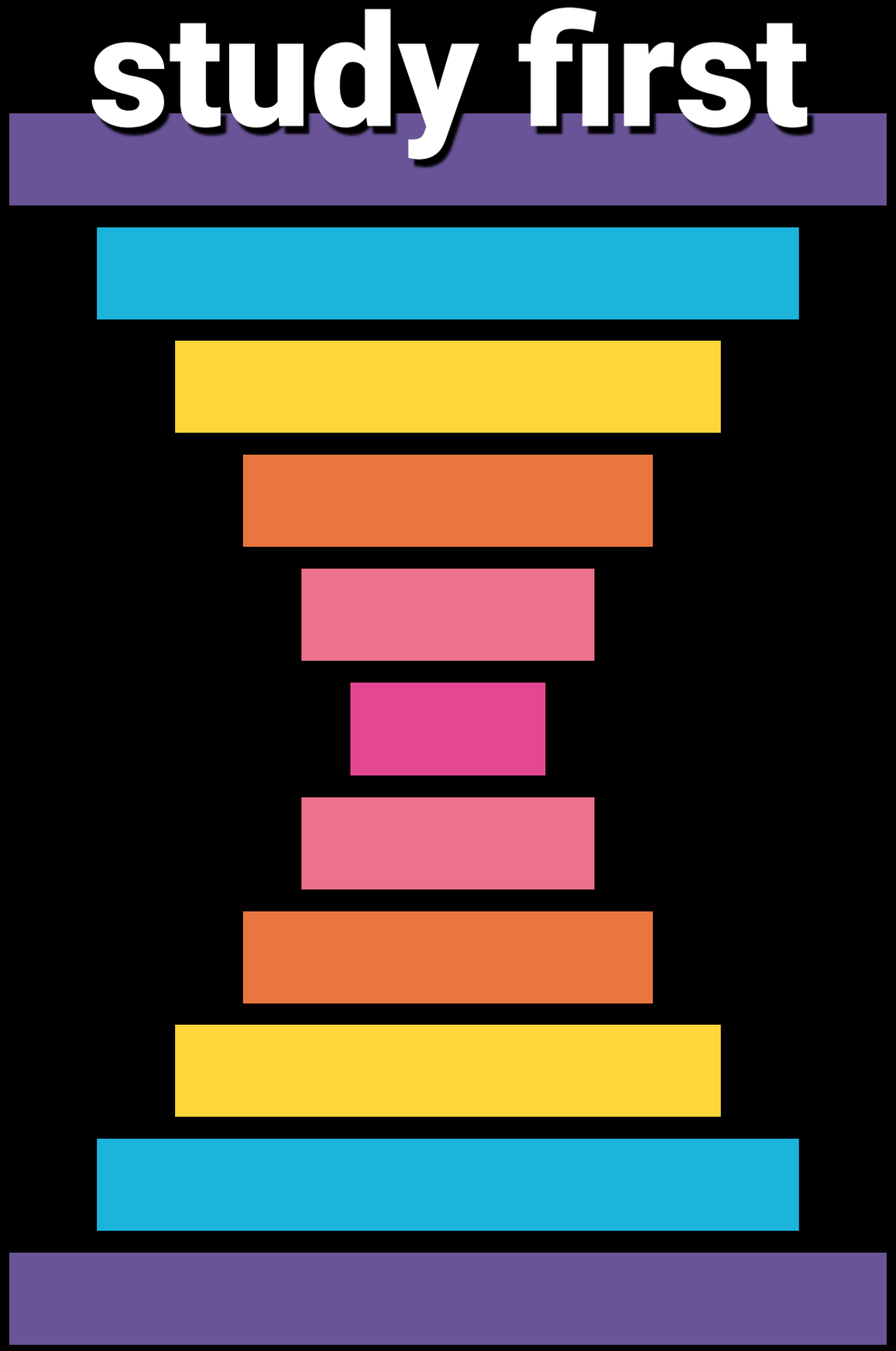
github has code

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 ✨