

What is your name?

aziza makhmudova

ravshanbek kosimov

nigorakhon amet

malika vaxidova

akmaljon

azimkhon

darkhan

What city (or region) are you from?

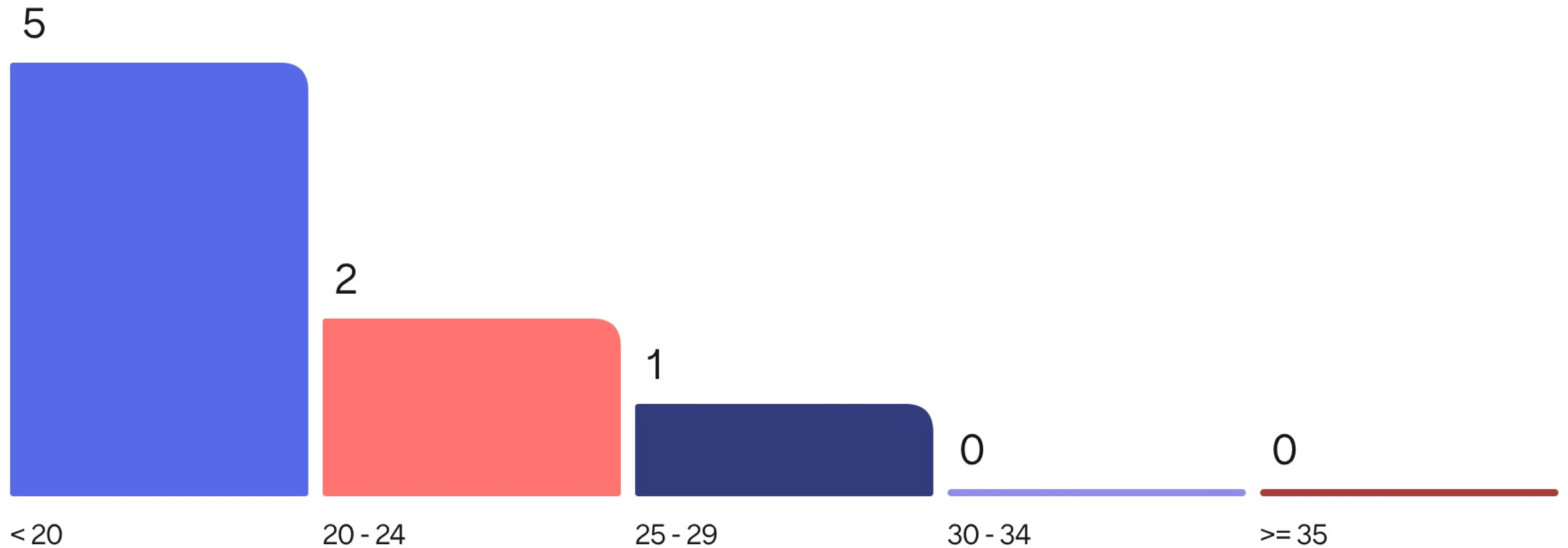
bukhara

tashkent

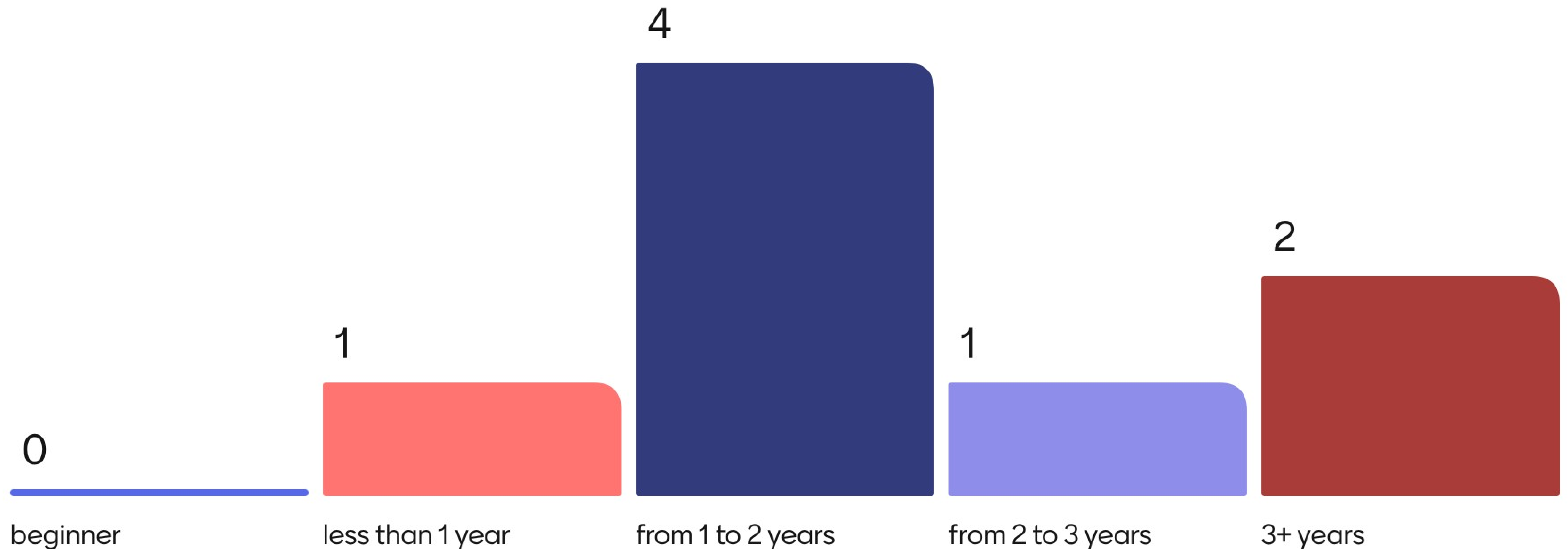
tashkent region

navoi

How old are you?



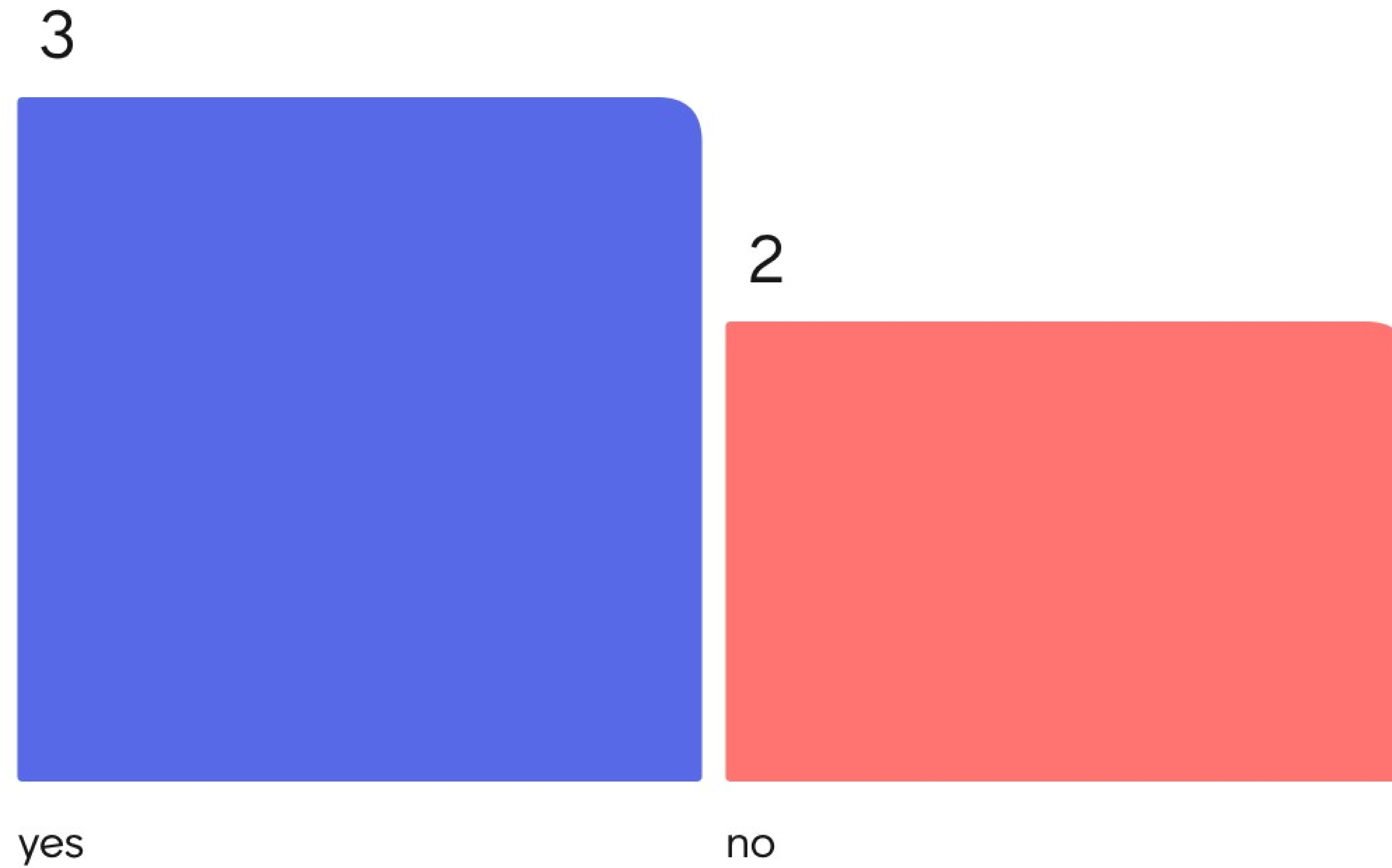
How long have you been programming?



What programming languages have you picked up??

python
java
swift
c
java 24
c sharp
yoqta script
java python

Have you looked into the first topic?



OOD and OOP stand for ...

object orientation

Encapsulation,
Abstraction, Inheritance,
and Polymorphism

OOD stands for Object-Oriented Design, which is the blueprint or **planning phase** for structuring software using object-oriented principles, defining objects, their properties, behaviors, and relationships.

OOP stands for Object-Oriented Programming, which is the **implementation phase** where the OOD is translated into actual code using an object-oriented programming language to create classes and objects.

OOD (Object-Oriented Design)

Purpose:

To create a high-level conceptual model and architecture for a software system.

Activities:

Identifying objects, their attributes (data), methods (behaviors), and the interactions and relationships between them.

Nature:

Abstract and conceptual, providing a blueprint before coding begins.

Outcome:

A well-defined structure for the system that emphasizes maintainability and scalability.

OOP (Object-Oriented Programming)

Purpose:

To implement the design into a working software using a programming language.

Activities:

Writing code, creating classes based on the design, instantiating objects, and implementing the methods to define object behaviors.

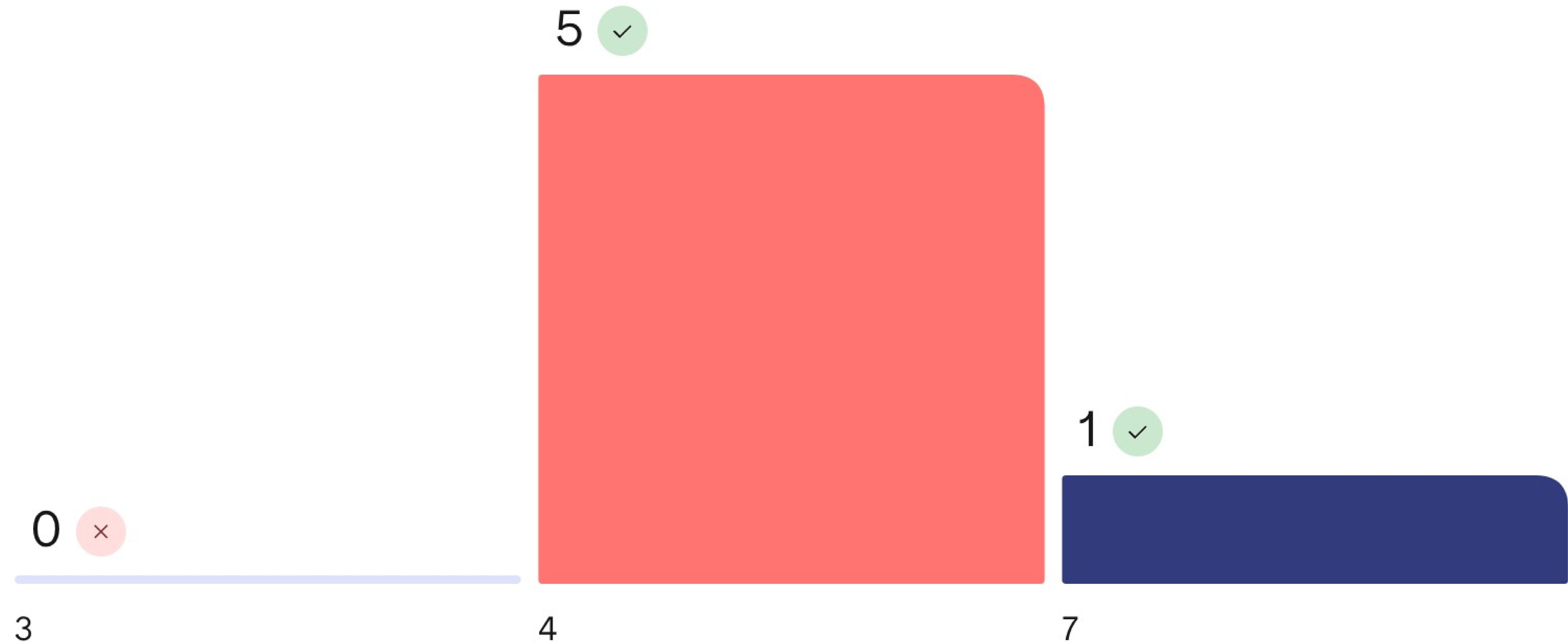
Nature:

Practical and hands-on, translating the design into executable code.

Outcome:

A functional software program built

How many principles is there in OOP?



List OOP Principles

Encapsulation,
Abstraction, Inheritance
and Polymorphism

inheritance,
polymorphism

Provide examples of Polymorphism

Animals example, Math example

multiple behaviors

method overloading

Animal has a method makeSound()

When class inherits another one and overload its method

Provide examples of Abstraction

classes may have methods without implementation and must be implemented by subclasses

Car class, we use drive() and brake() but cannot see how engine works

Provide examples of Inheritance

Animal - Dog with
method eat()

Provide examples of Incapsulation

Class Person

Highlight another famous acronym used in OOP?

AOP?

SOLID

solid

SOLID

SOLID

Principles

- Single responsibility
- Open–closed
- Liskov substitution
- Interface segregation
- Dependency inversion

Few more

- Encapsulate what varies
- Favor composition, not inheritance
- Program to interface
- Loose coupling

Design Pattern vs Design Principle

principles = rules,
pattern = ways

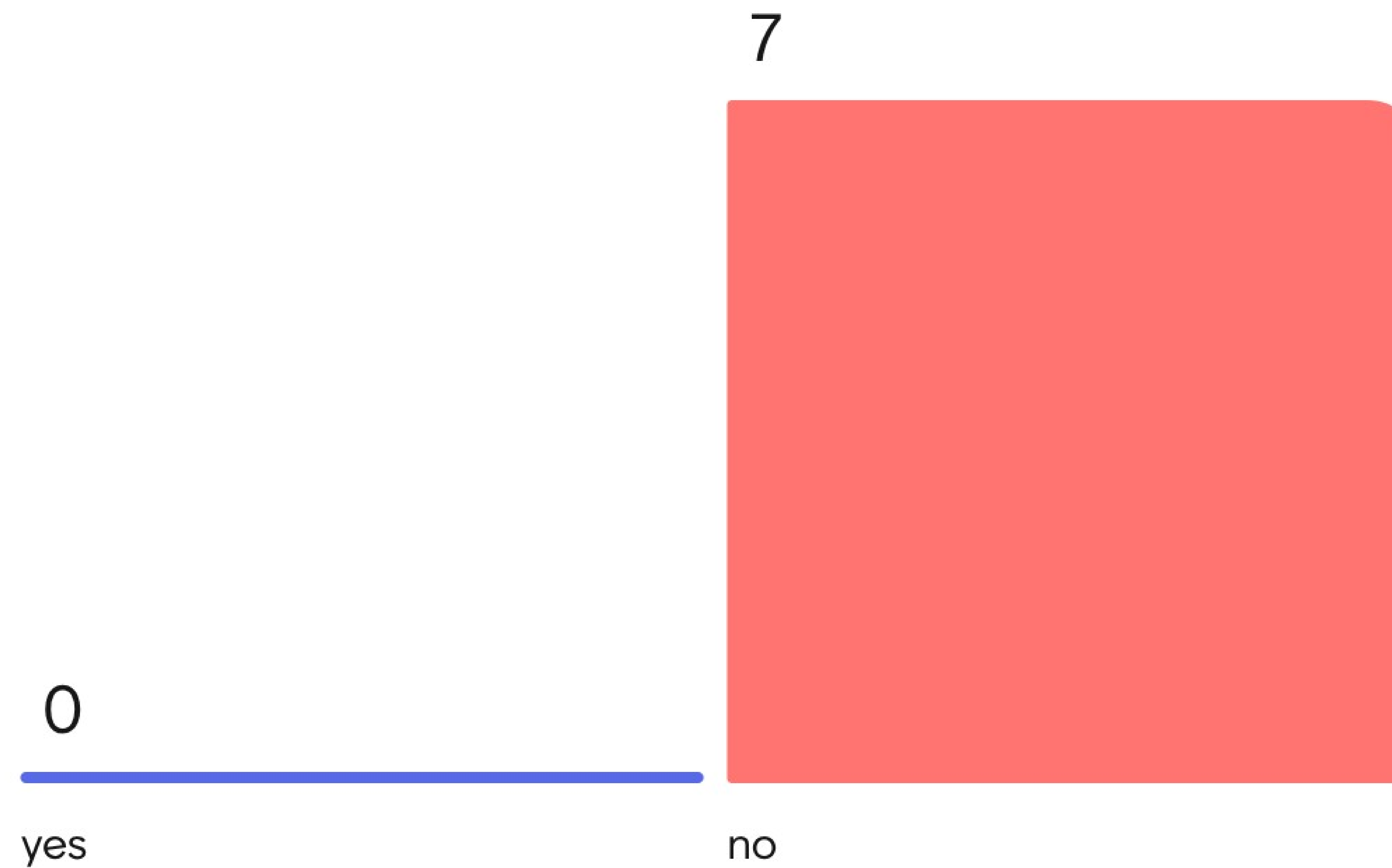
Design principles are high-level, abstract guidelines for creating good software, offering a "why" for good design, such as the SOLID principles which promote maintainable and flexible systems.

Design patterns are concrete, reusable solutions to specific, recurring design problems, providing a "how-to" for implementing those principles, such as the Singleton or Observer patterns.

Principles guide overall architecture, while patterns offer specific implementation details and have defined use cases, working together to create robust software.

10 mins break

Have you heard about **General Responsibility Assignment Software Patterns**?

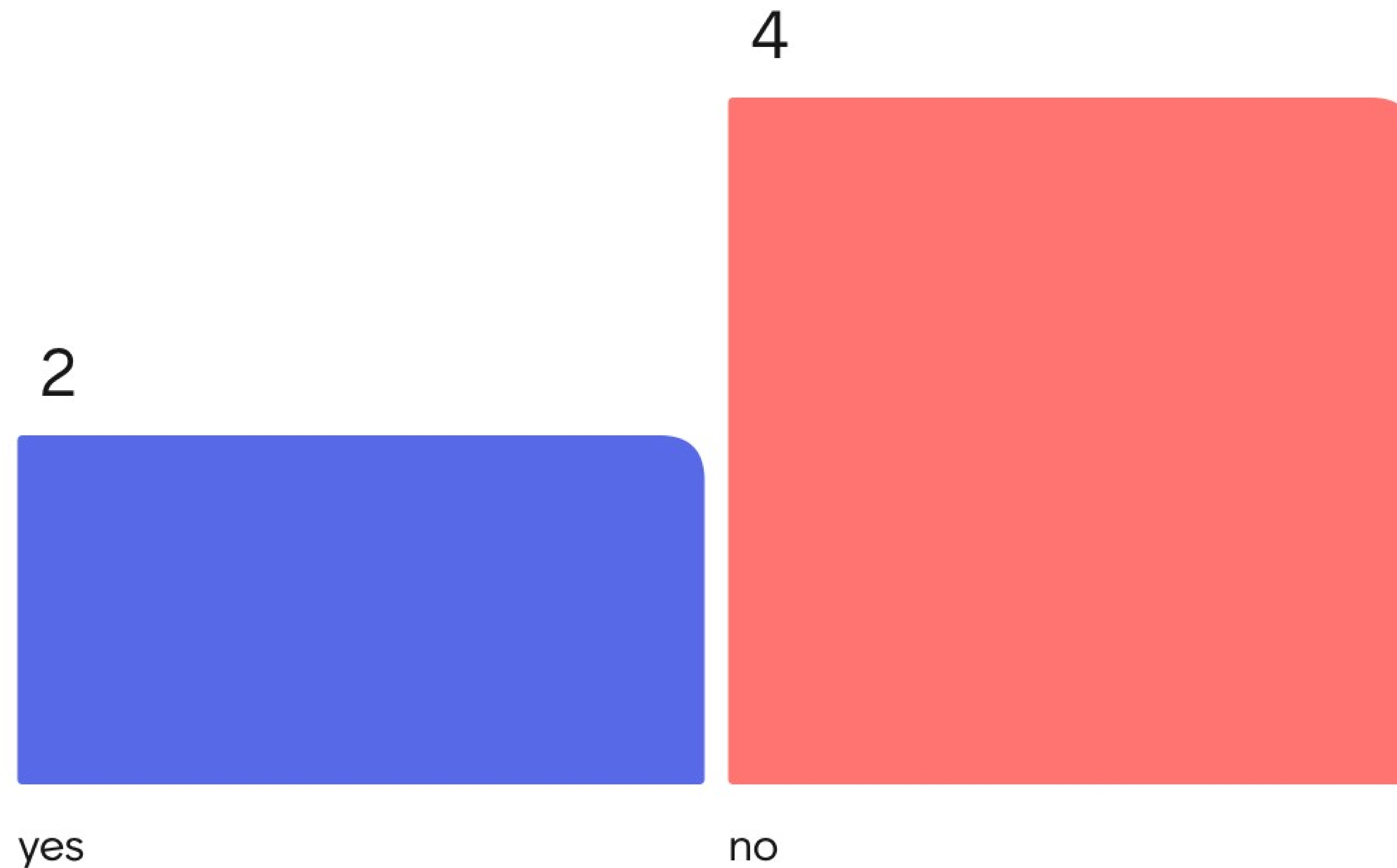


Learn

[[https://en.wikipedia.org/wiki/GRASP_\(object-oriented_design\)](https://en.wikipedia.org/wiki/GRASP_(object-oriented_design))]

- Creator
- Expert
- Controller
- Loose coupling
- High cohesion

Have you looked through the practice part of the topic?



What is your expectation about this course?

just chilling a bit

Firstly let it show in my learning path

more quizzes

being 2nd in menti quizzes

to enhance java skill

Create a super smooth and effectively working application

Q&A part

0 questions

0 upvotes