

# Reactive Programming Overview



# Reactive Programlama Nedir?

- Programming paradigm
- Oriented around
  - Data flows
  - Propagation of change
- Async programming
- Needs thread management

# Neden Reactive Programlama?

- Improve user experience
- Make app more responsive
- Make heavy work on server, and free mobile devices
  - Need async work for network operations

# Rx Three Key Points

- RX=Observable + Observer + Schedulers
- Observable
  - Data streams
  - Emit data periodically, or only once
  - Suppliers, process and supply data to other components
  - SubscribeOn(): define on which thread observable should run

# Rx Three Key Points

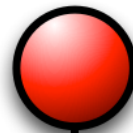
- Observer
  - Consumers
  - Consume data stream emitted by the observable
  - Whenever observable emits data, observer receives data in onNext() callback
  - If there is an error, observer receives it in onError()
  - ObserveOn(): define on which thread observer should run

# Rx Three Key Points

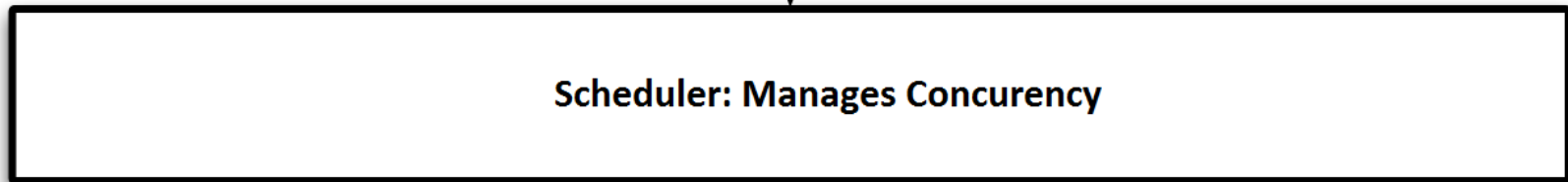
- Schedulers
  - Perform thread management
  - They tell observable & observers, on which thread they should run
  - Use `observeOn()` to tell observers
  - Use `scheduleOn()` to tell observable
- RxJava
  - `Scheduler.newThread()`: creates a background thread
  - `Scheduler.io()`: execute code on IO thread

# Rx Three Key Points

**Thread 1**



Observable : Emits data



Scheduler: Manages Concurency

**Thread 2**

Observer : Data Consumer



# 3 Adımda Rx Programlama

- Create observable that emits data
- Create observer that consumes data
- Manage concurrency



# İletişim

- **Harezmi** Bilişim Çözümleri
- Kurumsal Java Eğitimleri
- <http://www.java-egitimleri.com>
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