

# Intermediate Tasks, Sessions, and Queues

---



**Harrison Ferrone**

SOFTWARE DEVELOPER & CYBERPUNK ENTHUSIAST

@mr\_cyborb1989 [www.paradigmshiftdev.com](http://www.paradigmshiftdev.com)



# Custom Session Configurations

---

# Session Configuration Explained

## **URLSession options**

- Default
- Ephemeral
- Background

**Modified by URLSessionConfiguration object**



# Configuration Objects

## **Modifiable properties**

- Security
- Cookies
- Caching
- Request headers
- Unique identifier
- And more

# Operation and Dispatch Queues

---

# Threading Basics

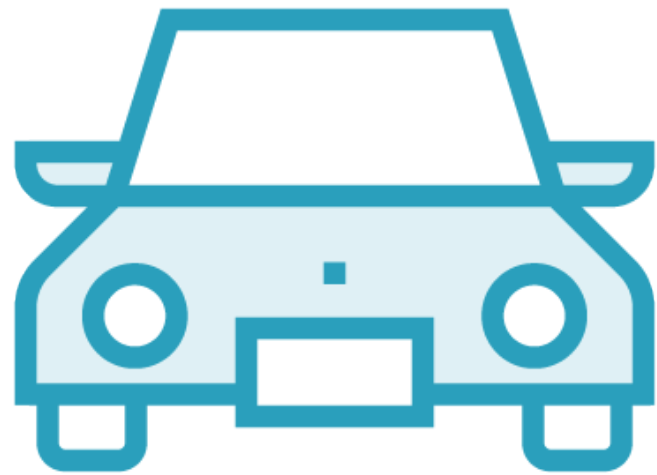
## Background Thread

Data fetching and other time  
consuming operations

## Main Thread

UI updates

# Why Have Threads at All?



## Slow operations

Can hold up traffic and block faster executing tasks, slowing down the app



## Fast operations

Can finish executing quickly and need to be let through in front of time consuming operations



# Operation Queue

**Manage sets of Operations objects**

**Control over queue creation and modification**

**Operations can be:**

- Cancelled
- Resumed

**Organized by priority and dependencies**





# Dispatch Queue

**Set of work items on a queue**

**Queue is managed by the system**

**More performant for completion tasks**



# Other Session Tasks and ATS

---

# ATS Basics

**App Transport Security**

**Requires secure HTTPS network connection**

**HTTP requests are not supported by default**



# Refactoring Tips and Next Steps

---

# Making Networking Efficient

## **Turn network code into a generic method**

- More flexible
- Easily modified and expanded

## **Create a URL router or factory**

- Enums are great for this in Swift
- Include router parameter in generic request



# Additional Resources

## **Pluralsight library**

- HTTP Networking with iOS

## **Third-party tool**

- Alamofire



# Summary

**Creating URL and URLComponents**

**CRUD requests**

**Encoding and decoding data**

**Working with authentication**



Happy Coding!

