# Docker Container

## what is containers?

- OS Level virtualization technology
- Detaches the application and its dependencies from rest of system
- Container are kernel level abstraction to isolate process

## Types of Namespaces

- PID Namespaces
- Network Namespaces
- Mount Namespaces
- UTS Namespaces
- IPC Namespaces
- USER Namespaces

## Container Design Patterns

- Sidecar pattern
- Adapter pattern
- Ambassador pattern

## Sidecar Pattern

- Seperate container is deployed along the main container
- Sidecar container provides isolation and encapsulation
- Usually deployed to extend the behaviour of main container

## Adapter Pattern

- This pattern maintains consistency between containers

- Rules define and ensure similar request yeild similar response

## Ambassador Pattern

- Provides a simplified view of the outside Ecosystem
- Ambassador service act as a proxy for the outside world