

Das Concept Ord

```
template <typename T>
concept Ord =
    Equal<T> &&
    requires (T a, T b) {
        { a <= b } -> std::convertible_to<bool>;
        { a < b } -> std::convertible_to<bool>;
        { a > b } -> std::convertible_to<bool>;
        { a >= b } -> std::convertible_to<bool>;
    };
```

 Any type that supports Ord must support Equal.

SemiRegular and Regular

SemiRegular

- **Default constructor:** `X()`
- **Copy constructor:** `X(const X&)`
- **Copy assignment:** `X& operator=(const X&)`
- **Move constructor:** `X(X&&)`
- **Move assignment:** `X& operator=(X&&)`
- **Destructor:** `~X()`

- **Swappable:** `swap(X&, Y&)`

Regular

- `SemiRegular`
- **Equality comparable**

SemiRegular and Regular

```
template<typename T>
struct isSemiRegular: std::integral_constant<bool,
    std::is_default_constructible<T>::value &&
    std::is_copy_constructible<T>::value &&
    std::is_copy_assignable<T>::value &&
    std::is_move_constructible<T>::value &&
    std::is_move_assignable<T>::value &&
    std::is_destructible<T>::value &&
    std::is_swappable<T>::value
    >{};
```

```
template<typename T>
concept SemiRegular = isSemiRegular<T>::value;
```

```
template<typename T>
concept Regular = Equal<T> && SemiRegular<T>;
```

(C++20) semiregular and regular

```
template<class T>  
concept movable = is_object_v<T> && move_constructible<T> &&  
assignable_from<T&, T> && swappable<T>;
```

```
template<class T>  
concept copyable = copy_constructible<T> && movable<T> &&  
assignable_from<T&, const T&>;
```

```
template<class T>  
concept semiregular = copyable<T> && default_constructible<T>;
```

```
template<class T>  
concept regular = semiregular<T> && equality_comparable<T>;
```