***Domain Objects (entities + view models)***

***Apache Isis™ CheatSheet***

[**http://isis.apache.org/toc/about.html**](http://isis.apache.org/toc/about.html)

@DomainObject @DomainObjectLayout

@ViewModel, @ViewModelLayout

@Property, @PropertyLayout

@Collection, @CollectionLayout

@Action , @ActionLayout

@Parameter, @ParameterLayout

@Title, @MemberOrder, @MemberGroupLayout

@HomePage, @MinLength, @Programmatic

@javax.inject.Inject – inject services into object

@javax.annotation.Nullable

@javax.validation.constraints.Digits

@lombok.Data; @lombok.Builder; @lombok.AllArgsConstructor

***Layout***

*Xxx.layout.xml* is more flexible than @XxxLayout

title(), iconName(), cssClass(), layout()

***Domain Entities*** **(javax.jdo.annotation)**

@PersistenceCapable, @DatastoreIdentity

@Inheritance, @Discriminator; @Version

@Queries, @Query;

@Uniques, @Unique; @Indices, @Index

@Persistent, @NotPersistent

@Column, @PrimaryKey,@Join, @Element

@XmlJavaTypeAdapter(PersistentEntityAdapter.class)

[www.datanucleus.org/products/datanucleus/jdo/annotations.html](http://www.datanucleus.org/products/datanucleus/jdo/annotations.html)

***JAXB View Models* (javax.xml.bind.annotation)**

@XmRootElement; @XmlType

@XmlAccessorType; @XmlTransient

***Domain Services***

@DomainService @DomainServiceLayout

@org.springframework.stereotype.Service

@Action , @MemberOrder (not props or colls)

@PostConstruct ; @PreDestroy (javax.annotation)

@javax.inject.Inject – inject services into service

***Layout***

*menubars.layout.xml* is more flexible than @DomainServiceLayout and @MemberOrder

***Domain Service Subscribers***

@org.springframework.context.event.EventListener

***Mixins***

@Mixin ; 1-arg constructor of the mixee

Mixin props or colls must have 0 arguments, and annotated with @Action(semantics=SAFE) and @ActionLayout(contributed=AS\_ASSOCIATION)

***Methods: Actions***

placeOrder(X x, Y y, Z z)

hidePlaceOrder(); disablePlaceOrder()

validate{0|1|2}PlaceOrder(X|Y|Z);

validatePlaceOrder(X x, Y y, Z z)

autoComplete{0|1|2}PlaceOrder(X,Y)

choices{0|1|2}PlaceOrder(X,Y) (n-1 args) default{0}PlaceOrder()

***Methods: Properties***

@lombok.Getter, @lombok.Setter; @javax.validation.constraints.Digits

getName(), setName();

hideName(); disableName(); validateName()

autoCompleteName(), choicesName()

***Methods: Collections***

**v2.0.x**

@lombok.Getter, @lombok.Setter;

getOrders(); hideOrders(); disableOrders();

***Events***

@DomainObject(xxxLifecycleEvent=….)

@DomainObjectLayout(xxxUiEvent=….)

@Action(domainEvent=….) @Property(domainEvent=…) @Collection(domainEvent=…)

***RepositoryService***

allMatches(Query) & QueryDefault(…), persist(), remove()

***MessageService***

informUser(), warnUser(), raiseError()

***(some) other Applib Services***

FactoryService, TitleService, ClockService, ConfigurationService, BookmarkService, EventBusService, BackgroundService, MetaModelService, IsisJdoSupport, WrapperFactory, CommandContext, QueryResultsCache

***Error & Exception Handling***

RecoverableException, NonRecoverableExeption

***Value Types***

8 primitive types + wrappers; BigDecimal, BigInteger; java.util.Date, java.time.{LocalDate|LocalDateTime|  
LocalTime} dates; JODA dates; java.sql.{Date|Time|  
Timestamp}; enums; value types library

***Bootstrapping***

@SpringBootApplication; @SpringBootTest; @Configuration; @Import; @ComponentScan