

# Software design using Archetypes

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# INSPIRATION

- Enterprise Patterns and MDA  
by Jim Arlow/Ila Neustadt

# CENTRAL THEME

- Business Patterns which are ubiquitous
- Archetype is a term coined by the Legendary Swiss psychologist Carl Gustav Jung.
- Archetype and Archetype Patterns

# What is an Archetype ?

- An Archetype is a primordial thing or Circumstances that recurs consistently and is thought to be a universal concept or situation
- It arises from the collective consciousness or common fund of human experiences
- Most archetypes show a trait called “Variability” to adapt to different cultural context.

# What is an Archetype ?...contd.

- Some examples of Psychological archetypes are Hero , Tragically flawed hero , anti-hero , villain , girl with a perpetual misfortune, Victim etc

# Archetypes!..what it has to do with software ?????

- Since Business is at least three millennia old , Archetypes like Party , customer , product , inventory , money do popup
- Such Archetypes can be called a Business Archetype.
- Enterprise modeling is all about modeling business scenarios.

# Business Archetype

- A Business Archetype is a primordial thing that occurs consistently and universally in business domains and software systems.
- The collaboration between business archetypes that occurs consistently and universally between business environment and software systems has to be modeled
- How do we do that ?

# How do we model collaboration between Archetypes ?

- The ANSWER

PATTERNS

Patterns ??? – what the heck is it ?



# What are Patterns ?

- “A Pattern describes a problem which occurs over and over again in the environment in question and then describes the core of the solution to the problem ,in such a way that one can use this solution a million times over ,without much thinking about it. “

Adapted from Christopher Alexander's definition  
– Christopher Alexander is an architect

# History of Pattern movement in software

- Christopher Alexander and town building
- Erich Gamma et al... ( GoF )
- Martin Fowler and analysis patterns
- Martin Fowler and Enterprise architecture patterns
- J2EE Core patterns from John crupi ,  
deepak Alur

# History of Patterns ?

- Microsoft patterns and practices
- Arlow/Nuestadt Business Archetype patterns....
- And many other domain specific patterns like data patterns , infrastructure patterns , health care , finance etc

# What is a business archetype pattern ?

- A business archetype pattern is a collaboration between business archetypes that occurs consistently and universally in business environments and software systems.

- PART – II

A short tour of Business Archetypes and  
Business Archetype patterns

# Party Archetype

- Business context
- Unique identifier , Registered identifier , Name , address-email address , geographic address , telephone # etc
- Party authentication and security violation
- Gender – male , female , not known, not specified
- Ethnicity etc

# Party Relationship archetype pattern

- PartyRelationship can be quite abstract and complex
- Capturing relationship between parties is essential for CRM, organization units etc
- Party Role and Relationship
- Party Role type and Party relationship type
- Responsibilities
- Capabilities

# Customer relationship management archetype patterns

- Customer (Party)
- CustomerService case
- Customer communication manager
- Customer Agent – how to represent the role of some one who acts on the behalf of the customer
- Action and outcome of the service case
  - Resolution



# Quantity archetype pattern

- Which metric has to be used ? A metric is a standard of measurement
- SI system and MKS system
- Money and currency
- Unit and System of units
- Base Unit and derived units
- Man hour
- Quantity arithmetic – precision – rounding , comparison , floating point round off, standard conversion

# Product archetype pattern

- Generalized model of representing products
- Product type and Product instance
- Product specification
- Product catalog
- Packaging
- Rule driven packaging specification

# Inventory archetype pattern

- How inventory archetype interacts with product
- How to represent inventory of items ?
- Inventory entry
- ProductInventoryentry – how to represent inventory information for a set of Product instances all of a same product type.

# Inventory archetype patterns..contd.

- ServiceInventoryentry – how to represent inventory information for a set of service instances all of same service type
- Availability of product instance for sale
- Reservation arrangement by which a product instance is reserved for a particular party.

# Order archetype pattern

- Order archetype – order identifier
- Purchase Order – sales order
- Order Line
- Party summary role in order
- Charge Line and Tax On Line
- Order events
- Order status

# Order archetype. Pattern.

- Order manager
- Amend events
- Amend Order Line events – Change , Add , delete order line
- DiscountEvent
- DespatchEvent
- OrderPayment and Payment events
- Other things to follow

# Business rule archetype pattern

- How rules interact with the business process ?
- Business rules and the business system rules
- Business rules are captured in source code , data base triggers , explicit rules and implied rules
- Use a Rule Engine !

# Has some one realized the stuff in code ?

- [http://java.ereimte.org/bin/view/CORM/About\\_the\\_CORM\\_Project](http://java.ereimte.org/bin/view/CORM/About_the_CORM_Project)
- Keep on search arlow/neustadt in google...some day u will get more
- I got my one !



# Thank You

- Q&A
- U can contact me @

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