Detailed UI/UX Ontology Class Hierarchy

1. UI_Methodology

- **IndividualStrategy**
  - UI_IndividualStrategy
    - AtomicDesignStrategy *(leaf - needs instances)*
    - ComponentBasedStrategy *(leaf - needs instances)*
    - ConsistencyStrategy *(leaf - needs instances)*
  - UX_IndividualStrategy
    - MicrointeractionStrategy *(leaf - needs instances)*
    - AffordanceStrategy *(leaf - needs instances)*
    - FeedbackStrategy *(leaf - needs instances)*
  - IA_IndividualStrategy
    - TaxonomyStrategy *(leaf - needs instances)*
    - NavigationStrategy *(leaf - needs instances)*
    - SearchStrategy *(leaf - needs instances)*
- **OverallStrategy**
  - UI_OverallStrategy
    - MinimalistStrategy *(leaf - needs instances)*
    - RichInteractionStrategy *(leaf - needs instances)*
    - ResponsiveStrategy *(leaf - needs instances)*
  - UX_OverallStrategy
    - UserFirstStrategy *(leaf - needs instances)*
    - TaskOrientedStrategy *(leaf - needs instances)*
    - EmotionalDesignStrategy *(leaf - needs instances)*
  - IA_OverallStrategy
    - FlatHierarchyStrategy *(leaf - needs instances)*
    - DeepHierarchyStrategy *(leaf - needs instances)*
    - HybridNavigationStrategy *(leaf - needs instances)*
- **ComprehensiveDesign**
  - DesignSystem

- ComponentLibrary *(leaf - needs instances)*
- TokenSystem *(leaf - needs instances)*
- DesignLanguage
  - MaterialDesign *(leaf - needs instances)*
  - FlatDesign *(leaf - needs instances)*
  - NeumorphicDesign *(leaf - needs instances)*
  - SkeuomorphicDesign *(leaf - needs instances)*
- StyleGuide
  - BrandStyleGuide *(leaf - needs instances)*
  - UIStyleGuide *(leaf - needs instances)*
  - ContentStyleGuide *(leaf - needs instances)*
- BrandIdentity
  - ColorIdentity *(leaf - needs instances)*
  - TypographyIdentity *(leaf - needs instances)*
  - LogoIdentity *(leaf - needs instances)*
- DesignPrinciples
  - UsabilityPrinciples *(leaf - needs instances)*
  - AccessibilityPrinciples *(leaf - needs instances)*
  - AestheticsPrinciples *(leaf - needs instances)*

- **FormField**
  - TextInput
    - SingleLineInput *(leaf - needs instances)*
    - PasswordInput *(leaf - needs instances)*
    - EmailInput *(leaf - needs instances)*
    - SearchInput *(leaf - needs instances)*
    - NumberInput *(leaf - needs instances)*
  - Select
    - Dropdown *(leaf - needs instances)*
    - MultiSelect *(leaf - needs instances)*
    - ComboBox *(leaf - needs instances)*
    - Autocomplete *(leaf - needs instances)*

- Checkbox
  - SingleCheckbox *(leaf - needs instances)*
  - CheckboxGroup *(leaf - needs instances)*
  - ToggleSwitch *(leaf - needs instances)*
- RadioButton
  - StandardRadio *(leaf - needs instances)*
  - RadioGroup *(leaf - needs instances)*
  - ImageRadio *(leaf - needs instances)*
- TextArea
  - ExpandableTextArea *(leaf - needs instances)*
  - RichTextEditor *(leaf - needs instances)*
  - MarkdownEditor *(leaf - needs instances)*
- DatePicker
  - CalendarPicker *(leaf - needs instances)*
  - DateRangePicker *(leaf - needs instances)*
  - TimePicker *(leaf - needs instances)*
- FileUpload
  - SingleFileUpload *(leaf - needs instances)*
  - MultiFileUpload *(leaf - needs instances)*
  - DragDropUpload *(leaf - needs instances)*

- **GridSystem**
  - FixedGrid
    - FixedColumnGrid *(leaf - needs instances)*
    - FixedWidthGrid *(leaf - needs instances)*
  - FluidGrid
    - PercentageGrid *(leaf - needs instances)*
    - FlexboxGrid *(leaf - needs instances)*
  - HybridGrid
    - FixedFluidHybrid *(leaf - needs instances)*
    - NestedGrids *(leaf - needs instances)*
  - ResponsiveGrid

- BreakpointGrid *(leaf - needs instances)*
- MobileFirstGrid *(leaf - needs instances)*
- AutofitGrid *(leaf - needs instances)*

- **Button**
  - PrimaryButton *(leaf - needs instances)*
  - SecondaryButton *(leaf - needs instances)*
  - TertiaryButton *(leaf - needs instances)*
  - IconButton
    - CircularIconButton *(leaf - needs instances)*
    - SquareIconButton *(leaf - needs instances)*
  - ToggleButton *(leaf - needs instances)*
  - FloatingActionButton *(leaf - needs instances)*
  - ButtonGroup *(leaf - needs instances)*

- **Card**
  - StandardCard *(leaf - needs instances)*
  - MediaCard *(leaf - needs instances)*
  - ActionCard *(leaf - needs instances)*
  - InformationCard *(leaf - needs instances)*
  - ProductCard *(leaf - needs instances)*
  - ProfileCard *(leaf - needs instances)*

- **SiteNavigation**
  - PrimaryNavigation
    - HorizontalNavigation *(leaf - needs instances)*
    - VerticalNavigation *(leaf - needs instances)*
  - SecondaryNavigation
    - SubMenu *(leaf - needs instances)*
    - ContextualNavigation *(leaf - needs instances)*
  - Footer
    - StandardFooter *(leaf - needs instances)*
    - MegaFooter *(leaf - needs instances)*
    - MiniFooter *(leaf - needs instances)*

- Breadcrumbs *(leaf - needs instances)*
- Pagination
  - NumberedPagination *(leaf - needs instances)*
  - InfiniteScroll *(leaf - needs instances)*
  - LoadMorePagination *(leaf - needs instances)*

- **Notification**
  - Alert
    - InfoAlert *(leaf - needs instances)*
    - SuccessAlert *(leaf - needs instances)*
    - WarningAlert *(leaf - needs instances)*
    - ErrorAlert *(leaf - needs instances)*
  - Toast
    - TemporaryToast *(leaf - needs instances)*
    - ActionToast *(leaf - needs instances)*
    - StackedToast *(leaf - needs instances)*
  - Badge
    - CountBadge *(leaf - needs instances)*
    - StatusBadge *(leaf - needs instances)*
  - ProgressIndicator
    - LinearProgress *(leaf - needs instances)*
    - CircularProgress *(leaf - needs instances)*
    - StepProgress *(leaf - needs instances)*
  - StatusIndicator
    - OnlineStatus *(leaf - needs instances)*
    - ProcessStatus *(leaf - needs instances)*
    - ValidationStatus *(leaf - needs instances)*

2. UI_InterfaceElement

- **UI_Element**
  - Badge *(leaf - needs instances)*
  - Image
    - ResponsiveImage *(leaf - needs instances)*

- BackgroundImage *(leaf - needs instances)*
- AvatarImage *(leaf - needs instances)*
- IconImage *(leaf - needs instances)*

- Icon
  - SystemIcon *(leaf - needs instances)*
  - CustomIcon *(leaf - needs instances)*
  - AnimatedIcon *(leaf - needs instances)*

- Link
  - TextLink *(leaf - needs instances)*
  - ButtonLink *(leaf - needs instances)*
  - IconLink *(leaf - needs instances)*

- Dialog
  - ModalDialog *(leaf - needs instances)*
  - NonModalDialog *(leaf - needs instances)*
  - ConfirmationDialog *(leaf - needs instances)*

- Label
  - FormLabel *(leaf - needs instances)*
  - DescriptiveLabel *(leaf - needs instances)*
  - TagLabel *(leaf - needs instances)*

- List
  - UnorderedList *(leaf - needs instances)*
  - OrderedList *(leaf - needs instances)*
  - DescriptionList *(leaf - needs instances)*
  - TreeList *(leaf - needs instances)*

- Table
  - DataTable *(leaf - needs instances)*
  - SortableTable *(leaf - needs instances)*
  - ResponsiveTable *(leaf - needs instances)*

- Tooltip
  - HoverTooltip *(leaf - needs instances)*
  - ClickTooltip *(leaf - needs instances)*

- InfoTooltip *(leaf - needs instances)*
  - Modal
    - StandardModal *(leaf - needs instances)*
    - SideModal *(leaf - needs instances)*
    - FullscreenModal *(leaf - needs instances)*
- **UI_Navigation** (and remaining sections follow similar detailed breakdown)

3. UI_Properties

- **UI_State**
  - Default *(leaf - needs instances)*
  - Hover *(leaf - needs instances)*
  - Active *(leaf - needs instances)*
  - Focus *(leaf - needs instances)*
  - Selected *(leaf - needs instances)*
  - Disabled *(leaf - needs instances)*
  - Error *(leaf - needs instances)*
  - Loading
    - SpinnerLoading *(leaf - needs instances)*
    - ProgressBarLoading *(leaf - needs instances)*
    - SkeletonLoading *(leaf - needs instances)*
  - Success *(leaf - needs instances)*

4. Context

- **UserContext**
  - UserRole
    - FirstTimeUser *(leaf - needs instances)*
    - RegularUser *(leaf - needs instances)*
    - PowerUser *(leaf - needs instances)*
    - AdminUser *(leaf - needs instances)*
  - UserExperience
    - Beginner *(leaf - needs instances)*
    - Intermediate *(leaf - needs instances)*

- Expert *(leaf - needs instances)*

- UserPreference
  - VisualPreference *(leaf - needs instances)*
  - InteractionPreference *(leaf - needs instances)*
  - LanguagePreference *(leaf - needs instances)*

5. UserCenteredDesign

- **ResearchMethod**
  - UserInterview
    - StructuredInterview *(leaf - needs instances)*
    - UnstructuredInterview *(leaf - needs instances)*
    - ContextualInterview *(leaf - needs instances)*
  - UsabilityTesting
    - ModeratedTest *(leaf - needs instances)*
    - UnmoderatedTest *(leaf - needs instances)*
    - GuerrillaTest *(leaf - needs instances)*

6. InformationArchitecture

- **ContentStructure**
  - Hierarchy
    - FlatHierarchy *(leaf - needs instances)*
    - DeepHierarchy *(leaf - needs instances)*
    - NetworkStructure *(leaf - needs instances)*
  - Taxonomy
    - SingleTaxonomy *(leaf - needs instances)*
    - FacetedTaxonomy *(leaf - needs instances)*

7. Accessibility

- **AccessibilityStandard**
  - WCAG
    - WCAG_A *(leaf - needs instances)*
    - WCAG_AA *(leaf - needs instances)*

- WCAG_AAA *(leaf - needs instances)*
- WAI_ARIA
  - AriaLandmarks *(leaf - needs instances)*
  - AriaRoles *(leaf - needs instances)*
  - AriaStates *(leaf - needs instances)*