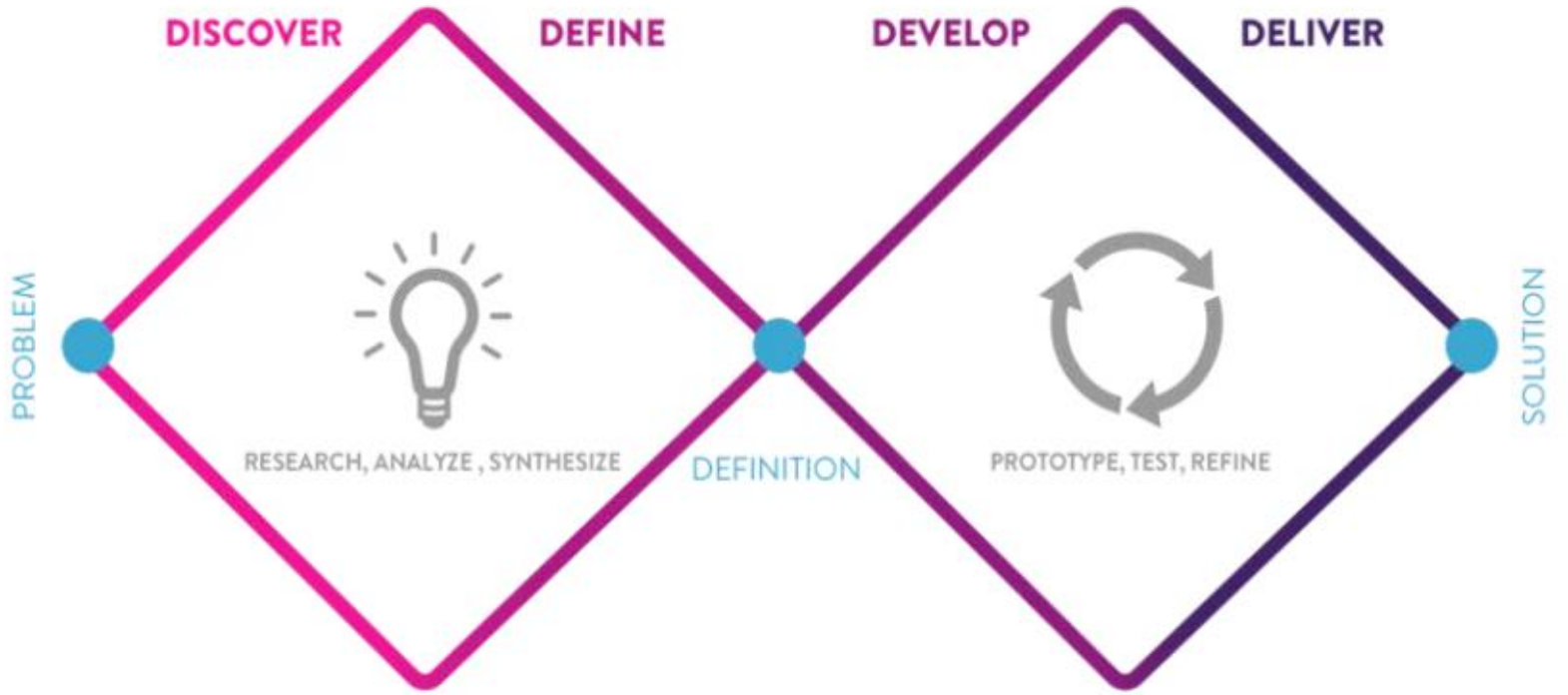
Usage models and Information architecture

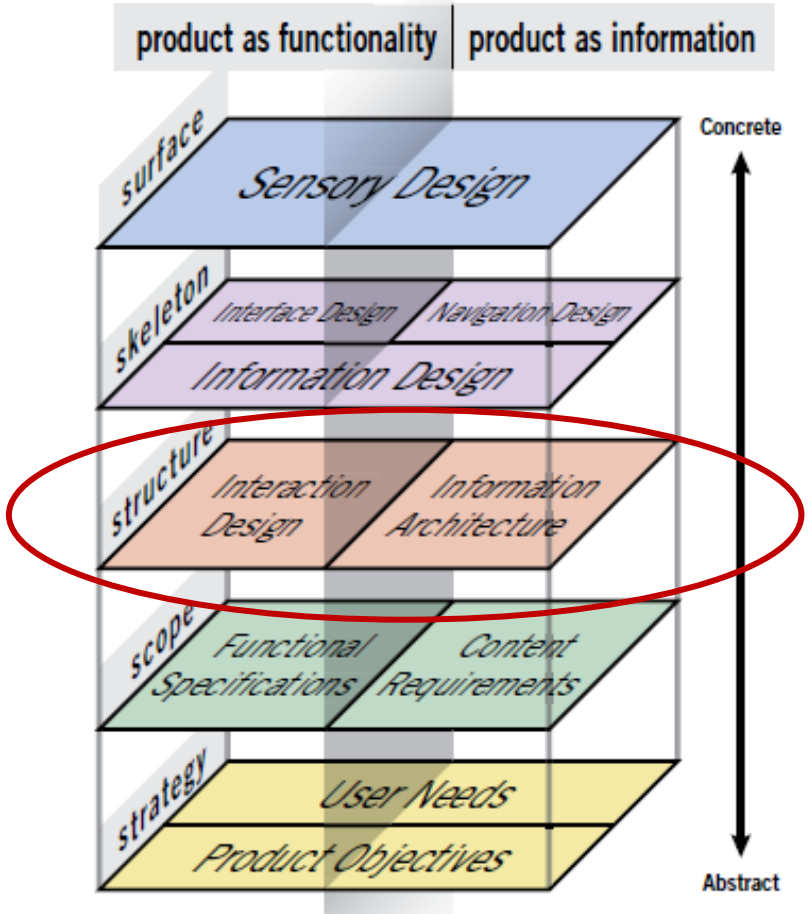
Univerzitet u Kragujevcu
Prirodno-matematički fakultet
Institutat za matematiku i informatiku

Design steps



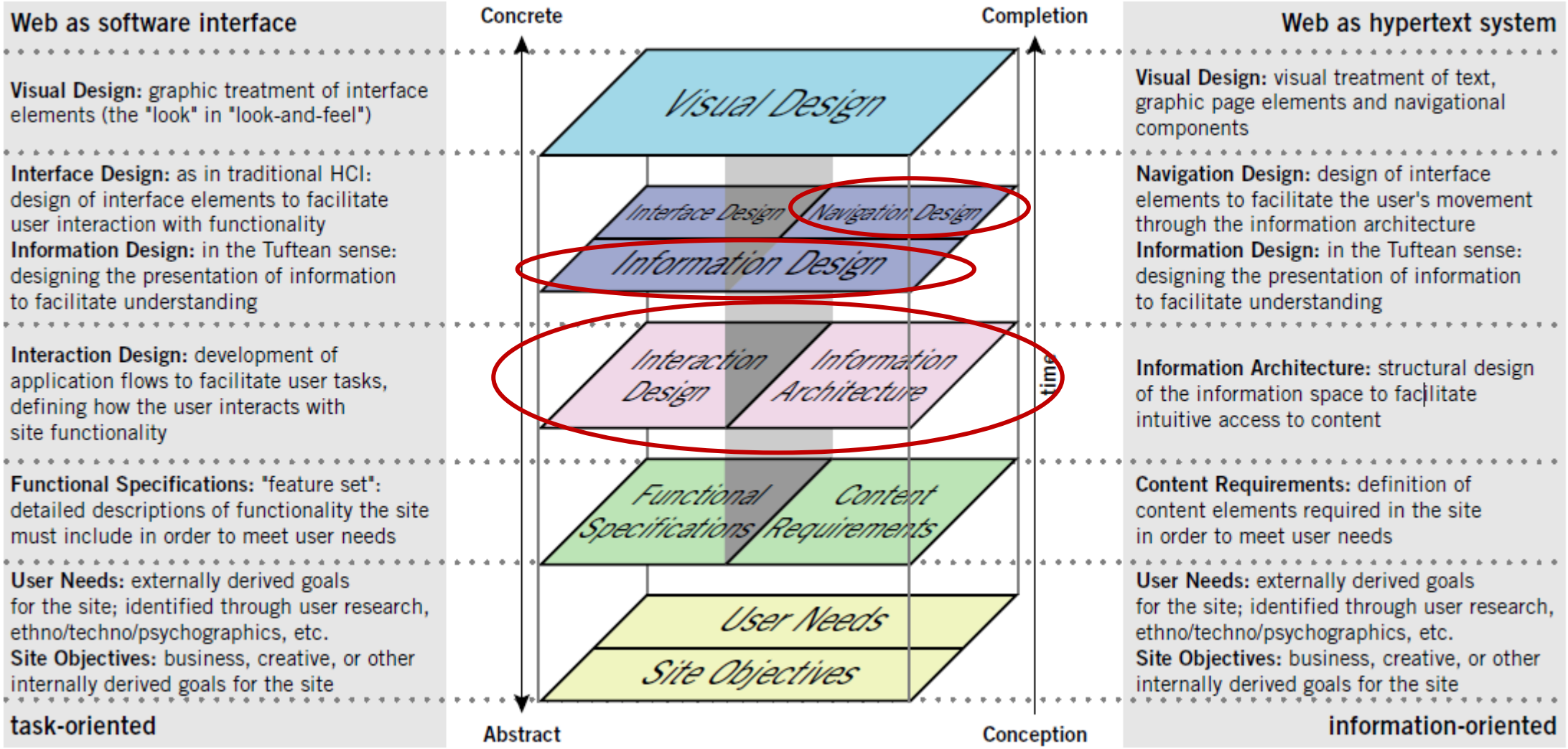
Jesse James Garrett - The Elements of User Experience_ User-Centered Design for the Web and Beyond, 2nd Edition, New Riders Press (2010)

Product defining



Jesse James Garrett - The Elements of User Experience_ User-Centered Design for the Web and Beyond, 2nd Edition, New Riders Press (2010)

Pre-design



http://www.jjg.net/elements/pdf/elements.pdf

Usage models

Usage models

- Usage models are a set of models that define how work gets done
  - (context) flow model
  - task structure models (task inventory modeling)
  - task interaction models – task flow, user flow models.

Flow model

- Usage models are a set of models that define steps to follow by users to get job done
  - task structure models (task inventory modeling)
  - task interaction models – task flow, user flow models.

Tasks

- A task refers to any activity that is usually observable and has a start and an end point.
- For example, if the goal is to set up a retirement fund, then the user might have to
  - search for good deals,
  - speak to a financial advisor,
  - and fill in an application form

  — all of which are tasks.
- It's important not to confuse goals with tasks. For instance, a user's goal isn't to fill in a form. Rather, a user might complete a form to register for a service they want to use (which would be the goal).

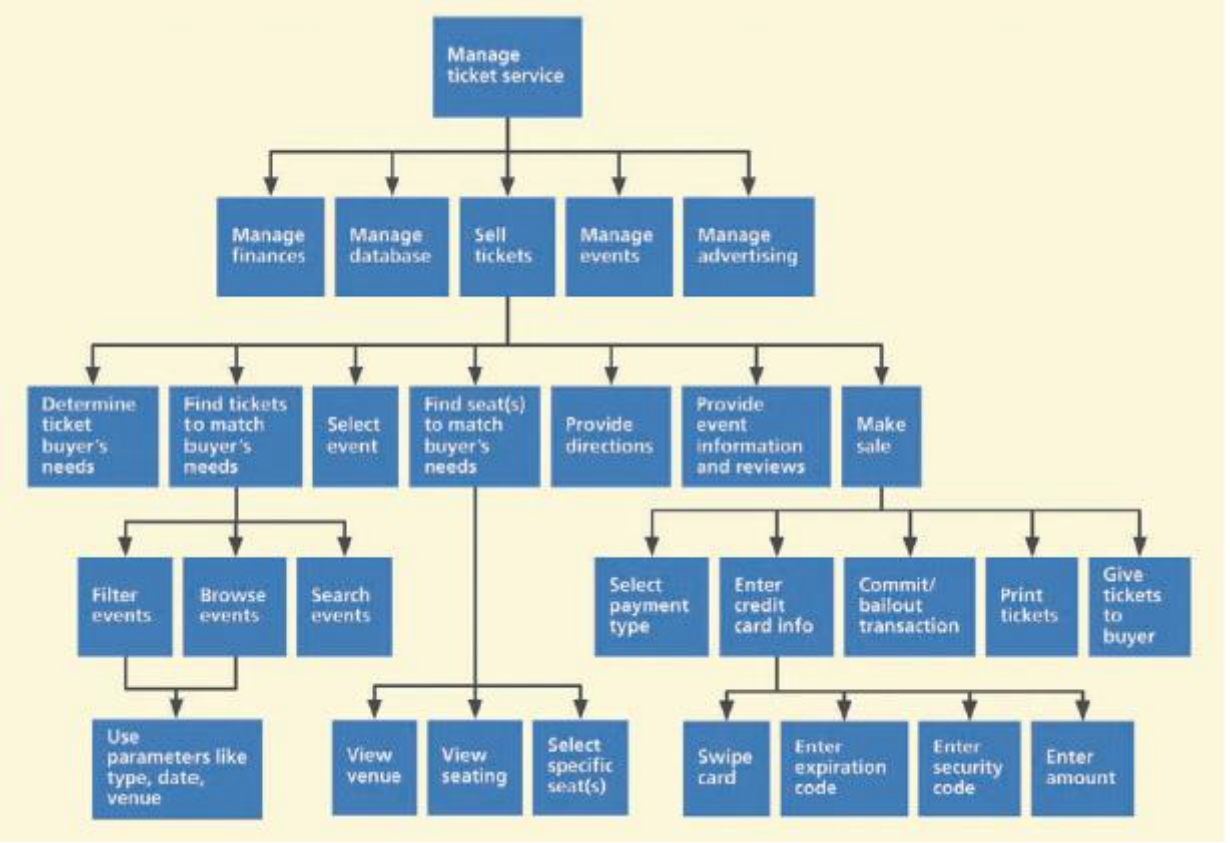
https://www.nngroup.com/articles/task-analysis/

Task evaluation

- Tasks ARE EVALUATED (final and very important step)
  - circulate descriptions to users, and rewrite if needed
  - ask users for omissions corrections clarifications suggestions

Hierarchical task inventory

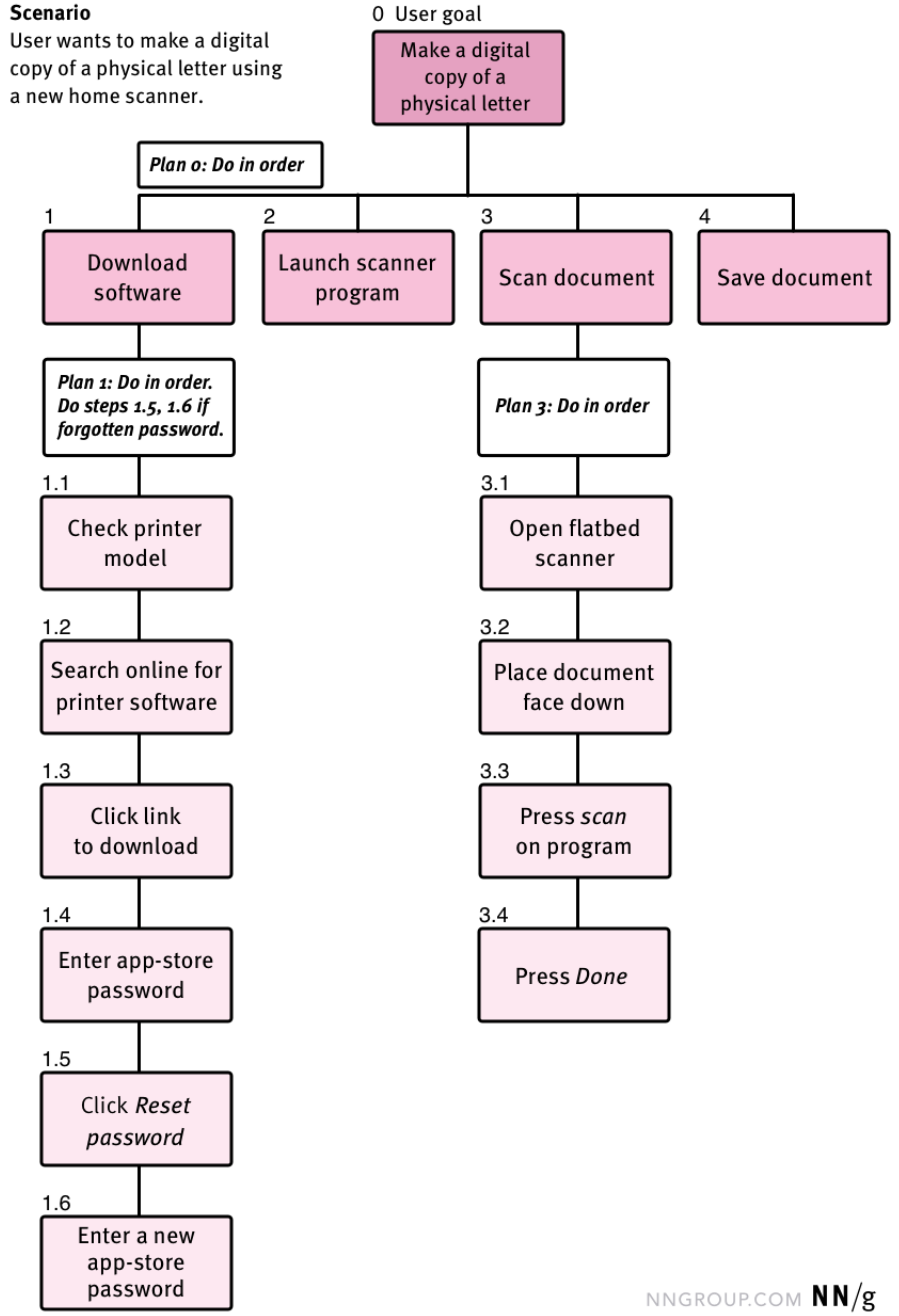
- Tasks are broken down into a series of subtasks and steps, is used:
  - to show what user tasks and actions are possible
  - to guide overall design
  - as a checklist for keeping track of task coverage in your design
  - for matching that coverage to your inventory of scenarios and other task representations



hierarchical task-analysis diagram (HTA)

Task structure models

- says what the user wants to do but does not say how they would do it
  - no specific assumptions made about the design/interface
  - can be used to compare different design alternatives in a fair way
- are specific
  - says exactly what the user wants to do
  - specifies actual items the user would eventually want to input
  - tasks can be hierarchical
- describe a complete job
  - forces designer to consider how different steps will work together
- say who the users are
  - reflect interests, backgrounds, capabilities of real users
  - helps find tasks that illustrate functionality in a person's real work context
- Different types of diagrams:
  - standard flowcharts
  - operational-sequence diagrams
  - the hierarchical task-analysis diagram (HTA)



https://www.nngroup.com/articles/task-analysis/

Task interaction models

- We must model the interaction part of tasks, steps, and user actions required to perform tasks.
  - Usage scenarios as narrative task interaction models.
  - task flow,
  - user flow models
- Flows are a way to map the dialog between a person and a product, system, or service over time.
- Distinct types of flow diagrams that accomplish different goals.
  - Task flows — Illustrates the motivations and steps that a user takes to complete a task or accomplish a goal. A user's "Happy Path".
  - User flows — Illustrates the motivations and steps a user takes to complete a task or accomplish a goal within a system… [+] Plus any (and all) alternate paths they can take within the system to reach the same destination.
  - Customer Journey Maps — Illustrates the motivation and steps that a user takes to complete a task or accomplish a goal… [+] Plus their emotions and attitudes at each touchpoint throughout the process.
- Flows can be representative or exhaustive
  - The level of detail in a flow should be determined by where you are in the design process and what you need to accomplish at this time — idea generation, validation, feature definition, etc…

https://blog.prototypr.io/ux-design-101-thinking-in-user-flows-8b571661866

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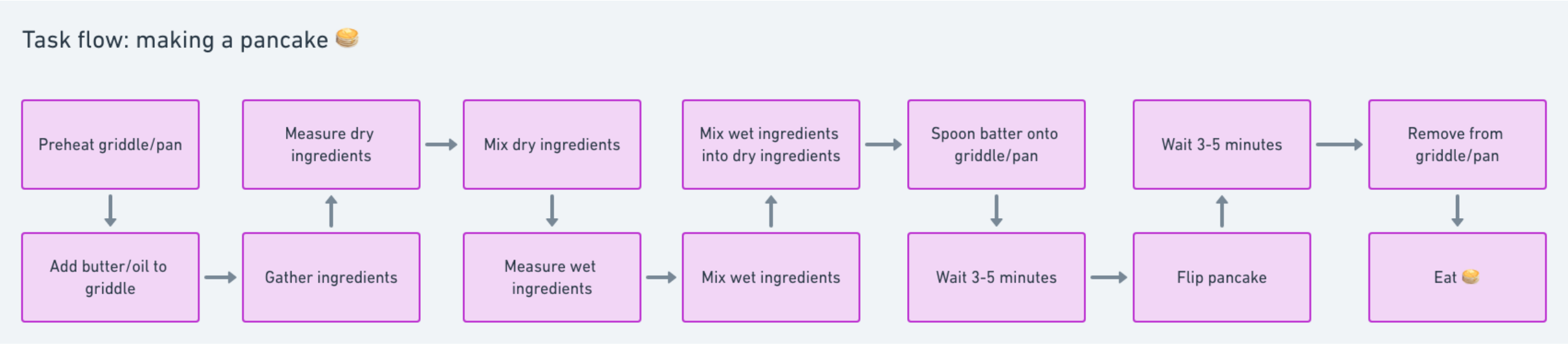
Task flow example

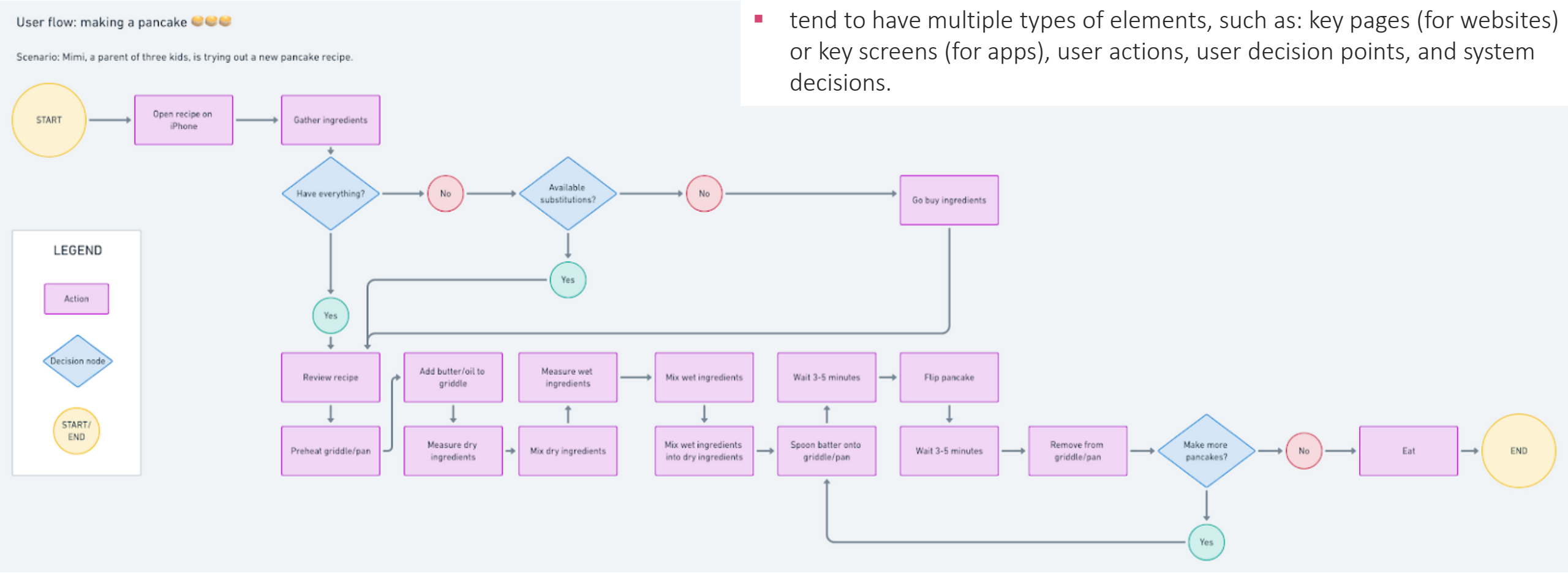


https://medium.com/erika-harano/ux-task-flows-versus-user-flows-as-demonstrated-by-pancakes-896e78a98026#:~:text=Here's%20how%20I%20differentiate%20between,task%20flows%20and%20user%20flows

User flow example

User flows

- show a specific persona's pathway
- a set or series of task flows can be embedded within user flows
- include decision points wherein the persona's journey to the desired goal can differ
- tend to have multiple types of elements, such as: key pages (for websites) or key screens (for apps), user actions, user decision points, and system decisions.



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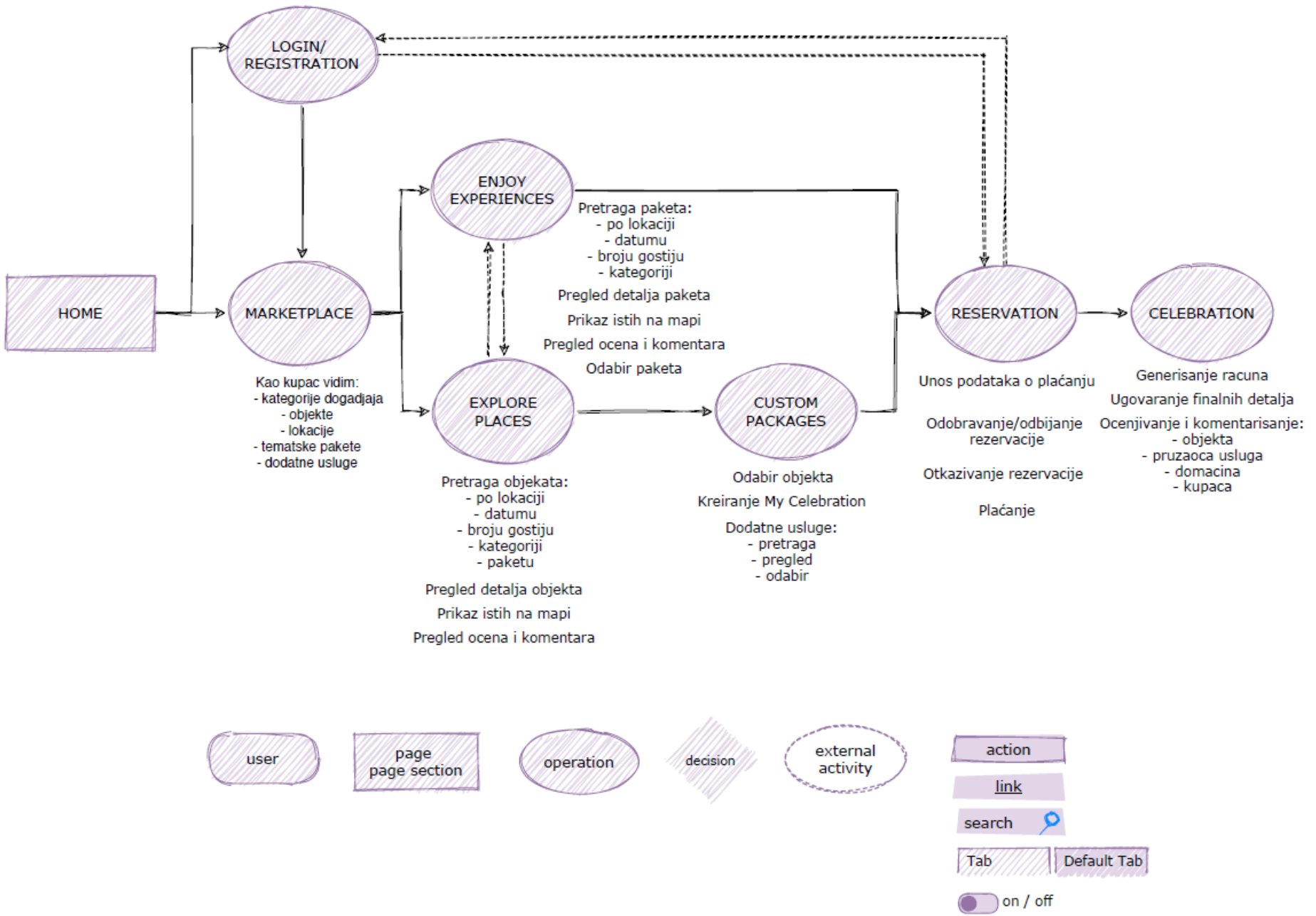
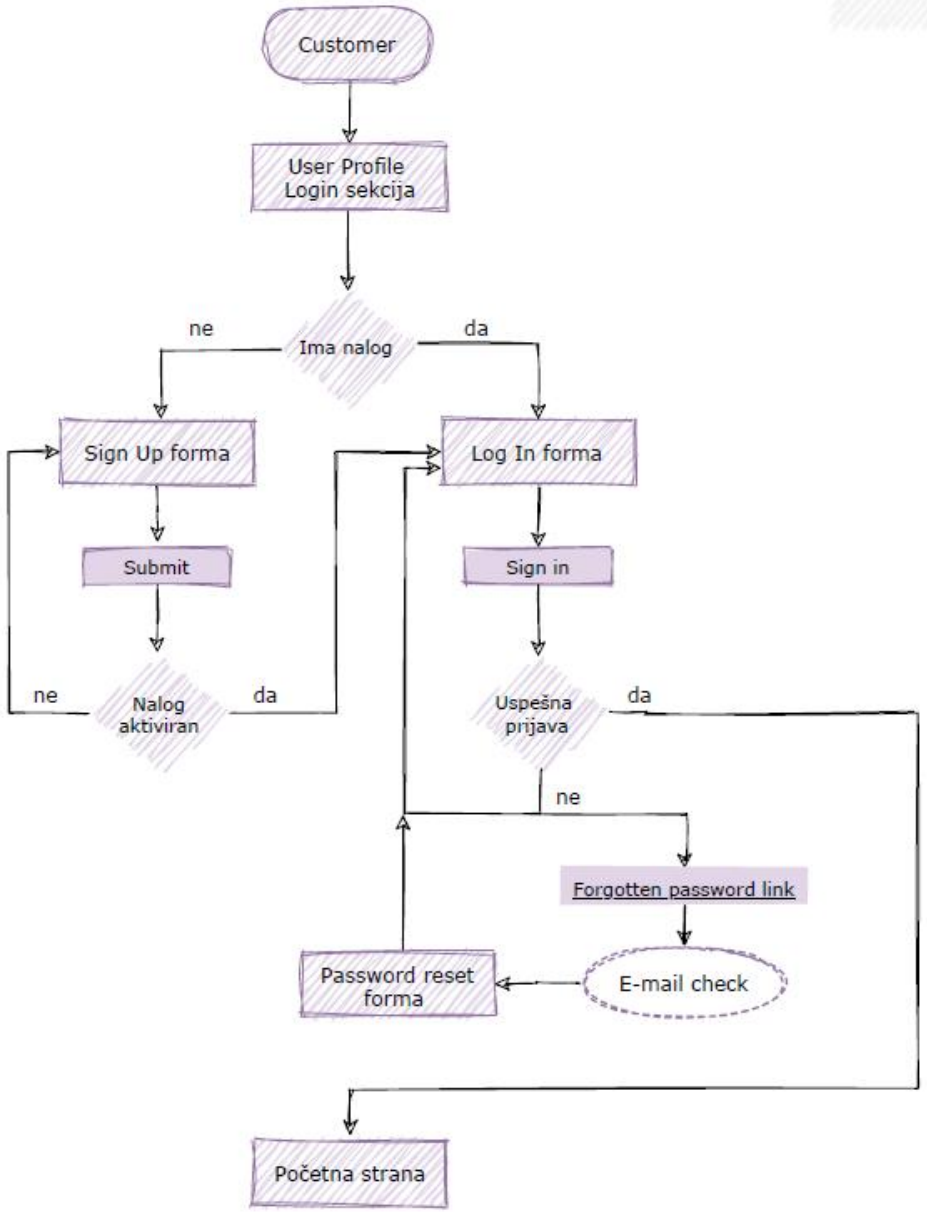
Example


FESTIVE
User Flow
LOGIN/
REGISTRATION
HOME
MARKETPLACE
Kao kupac vidim:
- kategorije dogadjaja
- objekte
- lokacije
- tematske pakete
- dodatne usluge
ENJOY
EXPERIENCES
Pretraga paketa:
- po lokaciji
- datumu
- broju gostiju
- kategoriji
Pregled detalja paketa
Prikaz istih na mapi
Pregled ocena i komentara
Odabir paketa
EXPLORE
PLACES
Pretraga objekata:
- po lokaciji
- datumu
- broju gostiju
- kategoriji
- paketu
Pregled detalja objekta
Prikaz istih na mapi
Pregled ocena i komentara
CUSTOM
PACKAGES
Odabir objekta
Kreiranje My Celebration
Dodatne usluge:
- pretraga
- pregled
- odabir
RESERVATION
Unos podataka o plaćanju
Odobravanje/odbijanje
rezervacije
Otkazivanje rezervacije
Plaćanje
CELEBRATION
Generisanje racuna
Ugovaranje finalnih detalja
Ocenjivanje i komentarisanje:
- objekta
- pruzaoca usluga
- domacina
- kupaca
user
page
page section
operation
decision
external
activity
action
link
search
Tab
Default Tab
on / off

Example


FESTIVE
User Flow
LOGIN/
REGISTRATION


Customer
User Profile
Login sekcija
Ima nalog
ne
da
Sign Up forma
Log In forma
Submit
Sign in
Nalog
aktiviran
ne
da
Uspešna
prijava
da
ne
Forgotten password link
Password reset
forma
E-mail check
Početna strana

Level of details

- Through the process of design the specificity and complexity in our User Scenarios & Taks/User Flows increases.
- Early in the design process.
  - When we are determining “What to build”, User Scenarios & UF are broad, less detailed, and cover more of a journey.
  - ‘Hero’ Task Flows are most commonly used early in the design process, when we are thinking broadly about the design of an experience.
- Later in the design process.
  - When we are determining “How to build” something, User Scenarios & Task Flows are more specific, detailed, and cover less of a journey.
  - As we get more specific and detailed in the design of our experience, our ‘Hero’ Task Flows evolve and become traditional Task Flow diagrams.
- Later in the design process.
  - When we are determining “How to build” something, User Scenarios & Task Flows are more specific, detailed, and cover less of a journey.
  - As we get more specific and detailed in the design of our experience, our ‘Hero’ Task Flows evolve and become traditional Task Flow diagrams.

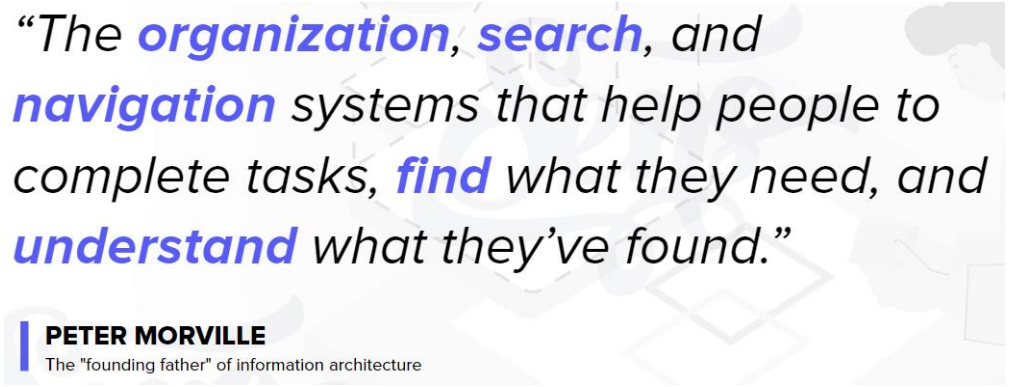
https://uxdesign.cc/scenarios-task-flows-how-to-align-design-decisions-with-user-behavior-db5c77a24729

Information architecture

Product as information

IA

- Information architecture is concerned with how people cognitively process information.
- The structural design of shared information environments.
- On content sites, information architecture is concerned with **creating organizational and navigational** schemes that allow users to move through site content **efficiently and effectively**.



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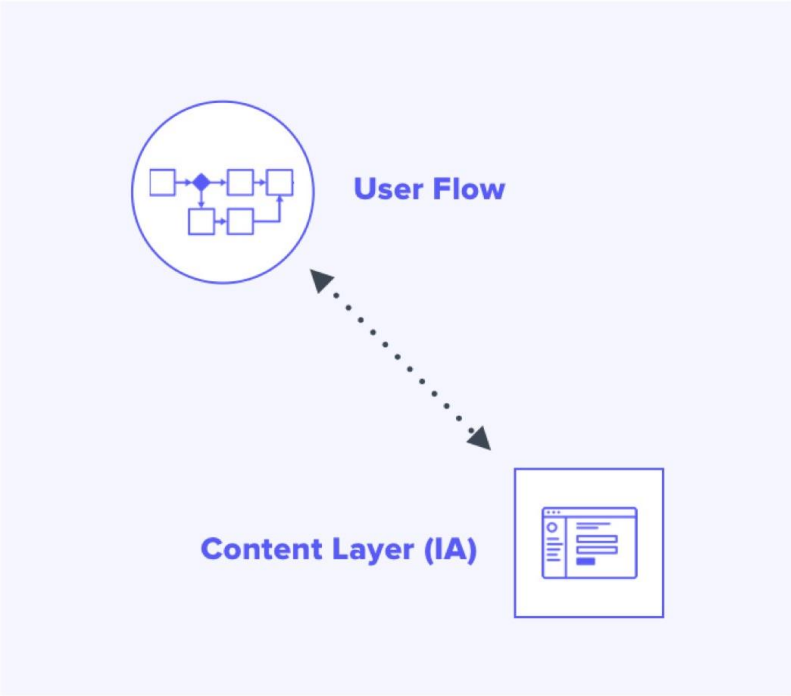
User Flows & Information Architecture



- A User's Flow — The system and paths that we envision will guide and enable a user to achieve a goal within our product.
- Content Layer (IA) — The structure and presentation of content to our user. (copy, functionality, affordances, etc…)
  - User flows structure (and depict) how a user experiences a system over time.
  - Information Architecture goes a level deeper and is concerned with how content is structured and presented to a user at each touchpoint within the system, as experienced over time.

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IA as making sence of complexity

Complexity = Content + Meaning + Interpretation

A. Content

Words, documents, images, videos, or whatever you are arranging or sequencing.

- *In example: Jars, jam, shelf, price*

B. Data *(Meaning)*

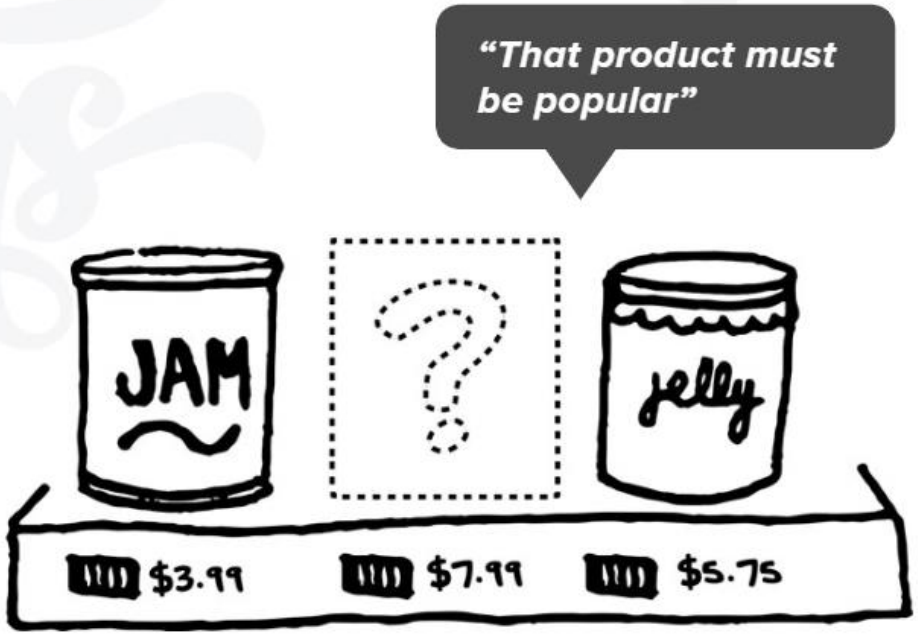
Facts, observations, and questions that a user has about something.

- *In example: One product is missing, similar items remain*

C. Information *(Interpretation)*

What a person interprets and believes to be true about something from.

- *In example: User surmises "This product must be popular"*



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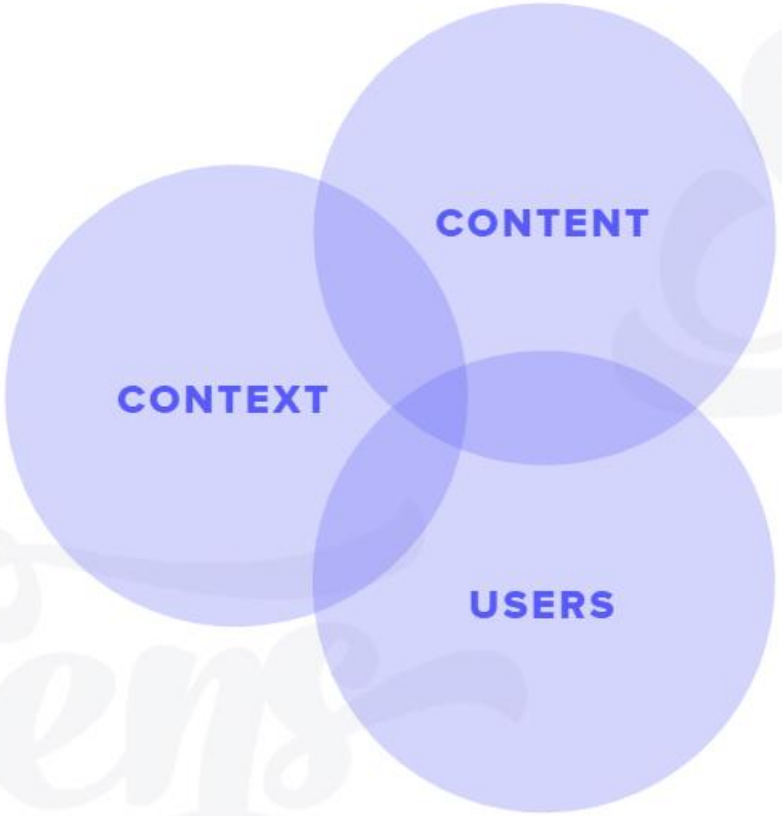
Effective IA

sits at the intersection of...



CONTENT

- What type of information are we dealing in?
- What relevance does it have to a user?

CONTEXT

- Where is a user seeking out this content?
- When, why, and how is a user engaging with this content?

USERS

- Who is consuming this content?
- What does it mean to them? What value does it provide?
- What pre-existing expectations do they have?

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Components of IA

ONTOLOGY

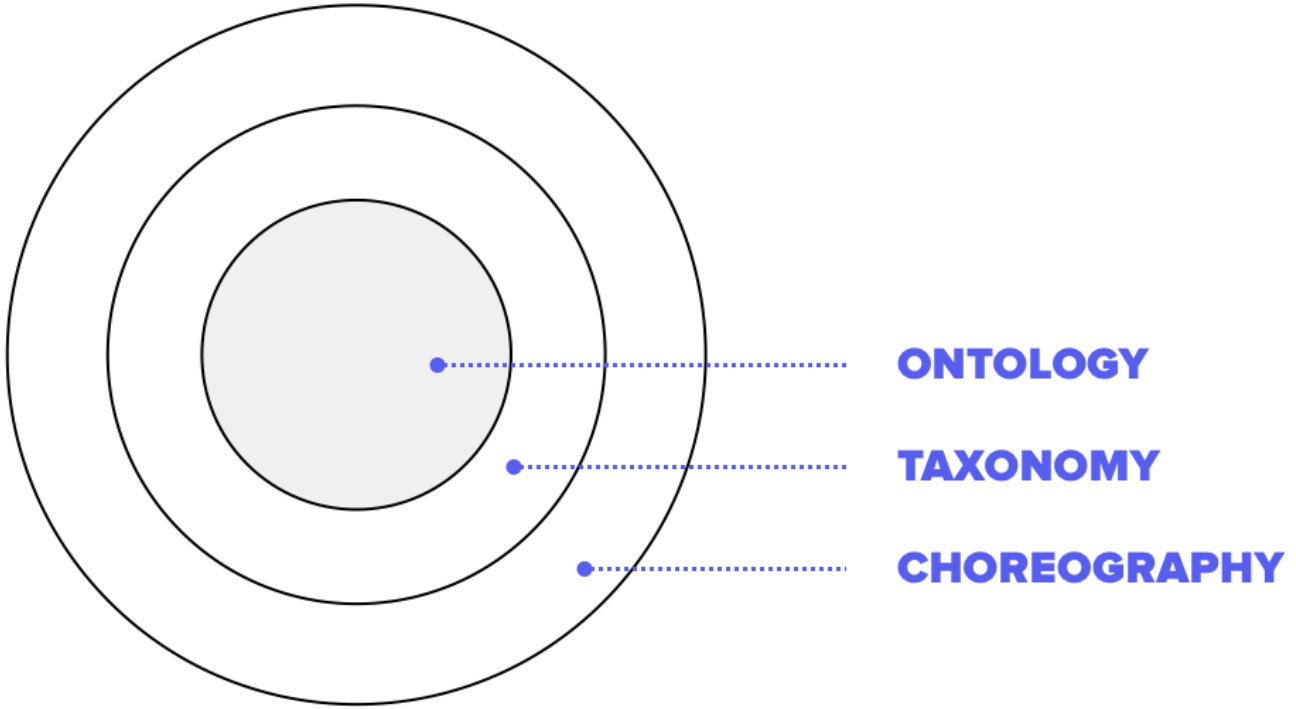
Do you know what you **mean** when you say what you say?

TAXONOMY

Have you provided logical **structure** that **brings meaning** to what you present?

CHOREOGRAPHY

How is **meaning affected** across various channels, over **time** and through **usage**?



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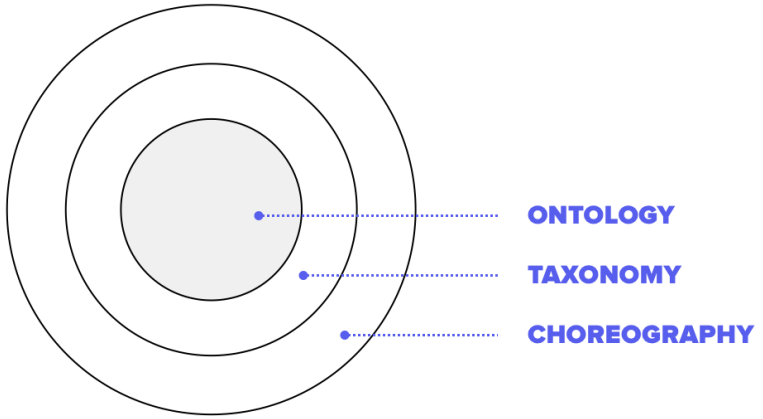
Components of IA

- Ontology = Understanding
  As designers, when considering the ***Ontology of content*** we are seeking to ***understand*** how our users interpret information: language, words, signs/symbols.
- Taxonomy = Organizing
  As designers, when considering the ***Taxonomy of content*** *we* are consciously ***organizing*** content and naming it in ways that makes sense to our users.
- Choreography = Applying
  As designers, when considering the ***Choreography of content*** *we* are intentionally designing ways to ***apply*** and deliver content to our users, within a system, over time.



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Meaning (Ontology)

- Things can take on different meaning based on the context in which a users interacts with them.
- People interpret meaning differently based on their own backgrounds and experiences.
- Cultural and language differences can have a significant impact on the interpretation of content.

- For this reason, it's essential to use the language of your users and to do so in a consistent fashion. The tool we use to enforce that consistency is called a **controlled vocabulary - a set of standard terms for use** - Labeling system
  - Describe categories, options, and links in language that (hopefully) is meaningful to users;
  - Labeling - What to call those categories and the series of navigation links that lead to them.

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Organization (Taxonomy)

- Taxonomy - ”The science (and practice) of classification of things or concepts to create hierarchy and organize meaning.”
  - Organization schemes can succeed or fail based on the context in which a users engages with them.
  - People have pre-conceptions of how things should be named and organized based on their backgrounds and experiences.
  - Regional or cultural differences can have significant impact on an understanding of how things are organized.

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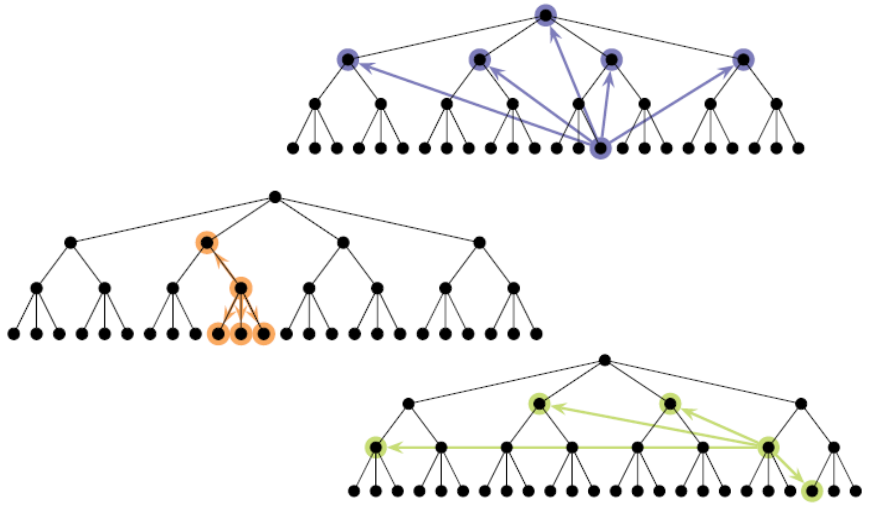
Presentation (Choreography)

- It is achieved when we truly understand our users, the context of their interaction with our product, and how they extract information and value from the content during their interaction.

Navigational system (Web site)

- The navigation design of any site must accomplish three simultaneous goals:
  - provide users with a means for getting from one point to another on the site
  - must communicate the relationship between the elements it contains. What do those links have to do with each other? Are some more important than others?
  - must communicate the relationship between its contents and the page the user is currently viewing. What does any of this stuff have to do with what I'm looking at right now?
- Types:
  - Global navigation – key set of access points that users might need to get from one end of the site to the other
  - Local navigation - access to what's "nearby" in the architecture
  - Supplementary navigation - shortcuts to related content
  - Contextual navigation - embedded in the content of the page itself
  - Courtesy navigation - Links to contact information, feedback forms



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Navigation

- Be easy to learn
- Be consistent
- Provide feedback
  - such as the use of breadcrumbs to indicate how to navigate back to where the user started.
- Use the minimum number of clicks to arrive at the next destination.
- Use clear and intuitive labels,
  - based on the user's perspective and terminology.
- Support user tasks.
- Have each link be distinct from other links.
- Group navigation into logical units.
- Avoid making the user scroll to get to important navigation or submit buttons.
- Not disable the browser's back button

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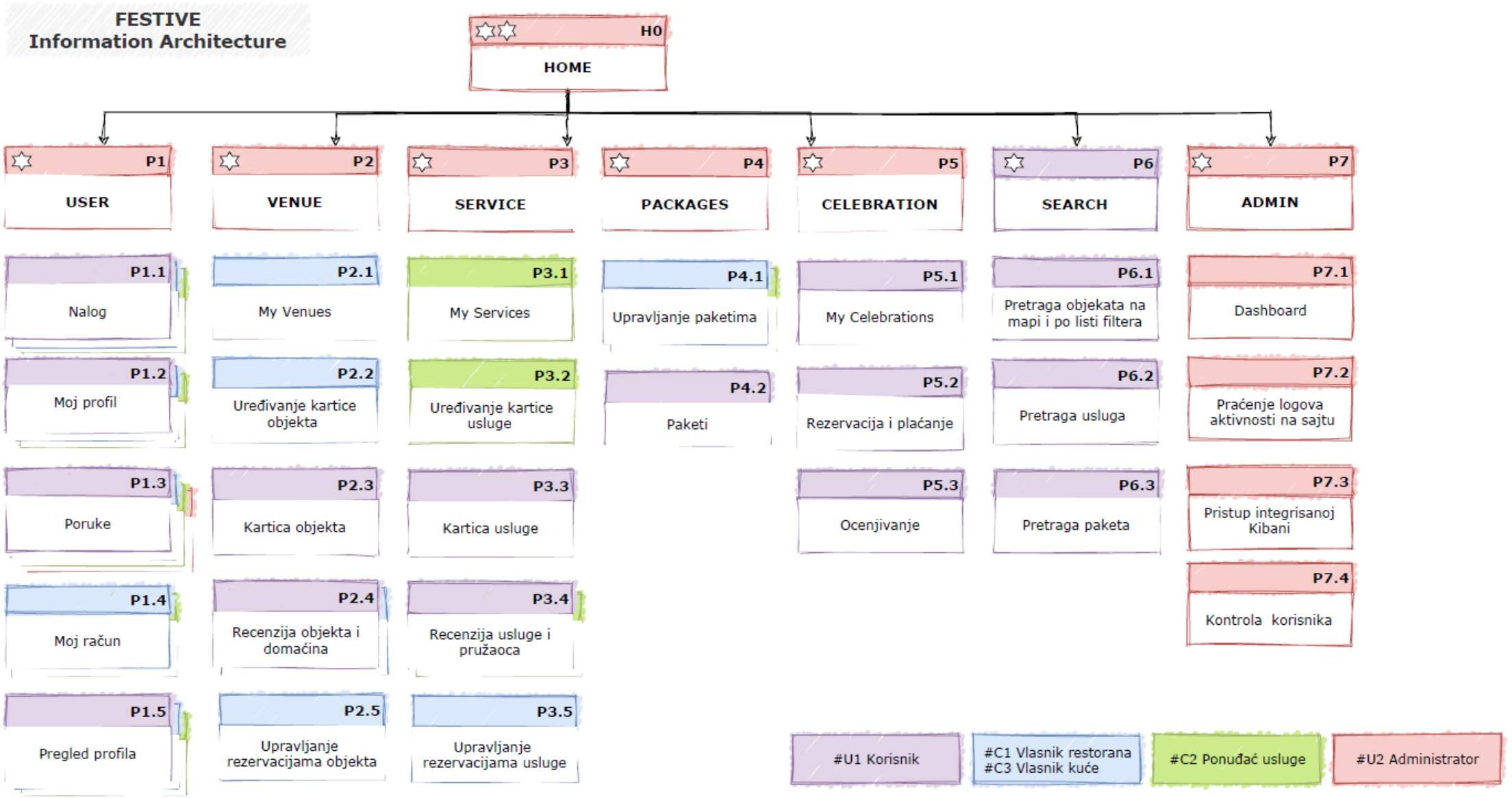
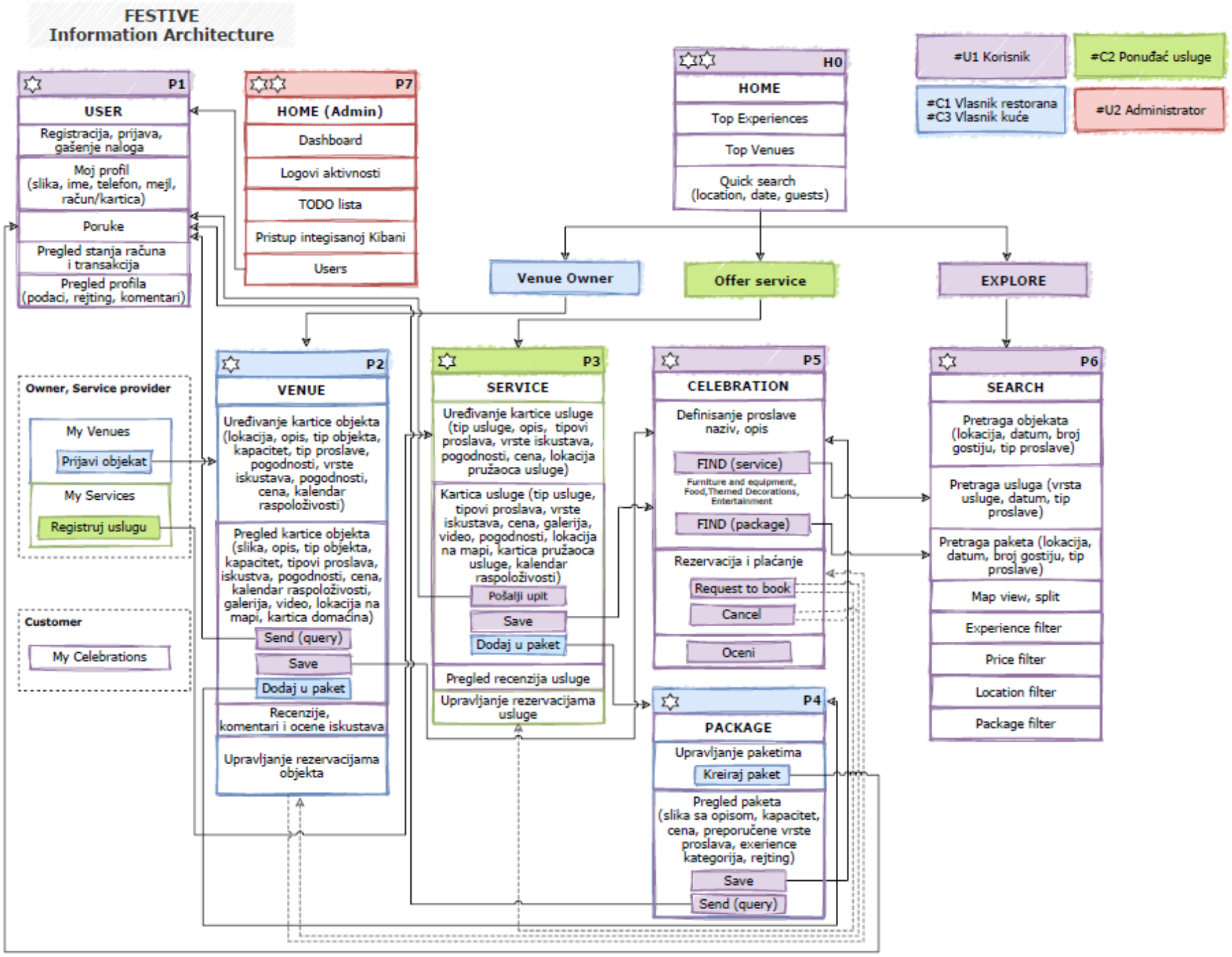
Example 1


FESTIVE
Information Architecture
H0
HOME
P1
USER
P2
VENUE
P3
SERVICE
P4
PACKAGES
P5
CELEBRATION
P6
SEARCH
P7
ADMIN
P1.1
Nalog
P1.2
Moj profil
P1.3
Poruke
P1.4
Moj račun
P1.5
Pregled profila
P2.1
My Venues
P2.2
Uređivanje kartice objekta
P2.3
Kartica objekta
P2.4
Recenzija objekta i domaćina
P2.5
Upravljanje rezervacijama objekta
P3.1
My Services
P3.2
Uređivanje kartice usluge
P3.3
Kartica usluge
P3.4
Recenzija usluge i pružaoca
P3.5
Upravljanje rezervacijama usluge
P4.1
Upravljanje paketima
P4.2
Paketi
P5.1
My Celebrations
P5.2
Rezervacija i plaćanje
P5.3
Ocenjivanje
P6.1
Pretraga objekata na mapi i po listi filtera
P6.2
Pretraga usluga
P6.3
Pretraga paketa
P7.1
Dashboard
P7.2
Praćenje logova aktivnosti na sajtu
P7.3
Pristup integrisanoj Kibani
P7.4
Kontrola korisnika
#U1 Korisnik
#C1 Vlasnik restorana
#C3 Vlasnik kuće
#C2 Ponuđač usluge
#U2 Administrator

Example 2


FESTIVE
Information Architecture
#U1 Korisnik
#C2 Ponuđač usluge
#C1 Vlasnik restorana
#C3 Vlasnik kuće
#U2 Administrator
H0
HOME
Top Experiences
Top Venues
Quick search
(location, date, guests)
P1
USER
Registracija, prijava, gašenje naloga
Moj profil
(slika, ime, telefon, mejl, račun/kartica)
Poruke
Pregled stanja računa i transakcija
Pregled profila
(podaci, rejting, komentari)
P7
HOME (Admin)
Dashboard
Logovi aktivnosti
TODO lista
Pristup integrisanoj Kibani
Users
Venue Owner
Offer service
EXPLORE
Owner, Service provider
My Venues
Prijavi objekat
My Services
Registruj uslugu
Customer
My Celebrations
P2
VENUE
Uređivanje kartice objekta (lokacija, opis, tip objekta, kapacitet, tip proslave, pogodnosti, vrste iskustava, pogodnosti, cena, kalendar raspoloživosti)
Pregled kartice objekta (slika, opis, tip objekta, kapacitet, tipovi proslava, iskustva, pogodnosti, cena, kalendar raspoloživosti, galerija, video, lokacija na mapi, kartica domaćina)
Send (query)
Save
Dodaj u paket
Recenzije, komentari i ocene iskustava
Upravljanje rezervacijama objekta
P3
SERVICE
Uređivanje kartice usluge (tip usluge, opis, tipovi proslava, vrste iskustava, pogodnosti, cena, lokacija pružaoca usluge)
Kartica usluge (tip usluge, tipovi proslava, vrste iskustava, cena, galerija, video, pogodnosti, lokacija na mapi, kartica pružaoca usluge, kalendar raspoloživosti)
Pošalji upit
Save
Dodaj u paket
Pregled recenzija usluge
Upravljanje rezervacijama usluge
P5
CELEBRATION
Definisanje proslave naziv, opis
FIND (service)
Furniture and equipment, Food,Themed Decorations, Entertainment
FIND (package)
Rezervacija i plaćanje
Request to book
Cancel
Oceni
P4
PACKAGE
Upravljanje paketima
Kreiraj paket
Pregled paketa (slika sa opisom, kapacitet, cena, preporučene vrste proslava, exerience kategorija, rejting)
Save
Send (query)
P6
SEARCH
Pretraga objekata (lokacija, datum, broj gostiju, tip proslave)
Pretraga usluga (vrsta usluge, datum, tip proslave)
Pretraga paketa (lokacija, datum, broj gostiju, tip proslave)
Map view, split
Experience filter
Price filter
Location filter
Package filter

Video

https://www.toptal.com/designers/ia/guide-to-information-architecture

Watch