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Assignments — Week 09 | Design | Design Patterns

Design patterns are general, reusable solutions to commonly occurring problems in design. As in city planning and architecture, design patterns in UX development involve a hierarchy of patterns, starting at the conceptual level down to the low-level implementation of a component. van Welie & van der Veer suggested six levels: *business purpose*, *posture level*, *experience level*, *task level*, and *action level*. These levels make up a framework that helps designers analyze patterns in existing designs and utilize pattern to *generate* designs, following a top-down design process. In this assignment, you will use this framework to do both in the context of mobile fitness/calorie-tracking applications. First, you will identify an existing system (see this link for an example list) and analyze the patterns used in its design. Second, you will use the framework to start designing your React Native 3 deliverable—a mobile fitness/calorie-tracking app. Below are the levels of the framework for reference.

Levels of Pattern Languages in Interaction Design

Business Purpose. Conceptual design that captures the role that the design plays in user's life, i.e., the mission of the application, e.g., "helping users achieve fitness goals."

Posture-Level Patterns. The structure that an application follows, i.e., what type of application it is, e.g., "a calorie tracking app," "a step counter app," or "a life coaching app."

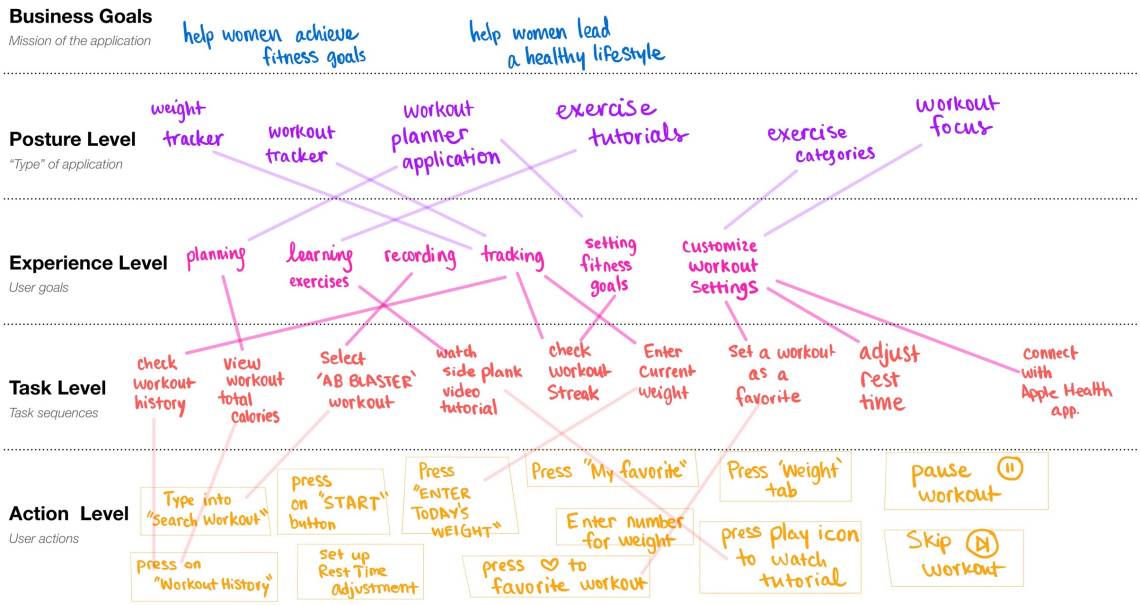
Experience-Level Patterns. The *user goals* that make up the *user experience* that the application supports, e.g., activity tracking, coaching, and reviewing.

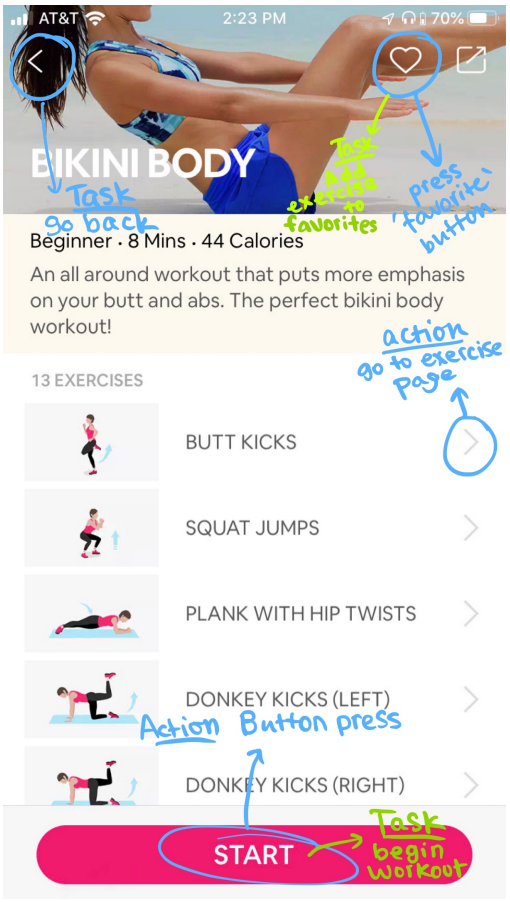
Task-Level Patterns. Design solutions that help users accomplish sequences of actions that make up user *tasks*, e.g., logging a meal, capturing a run, or completing a workout.

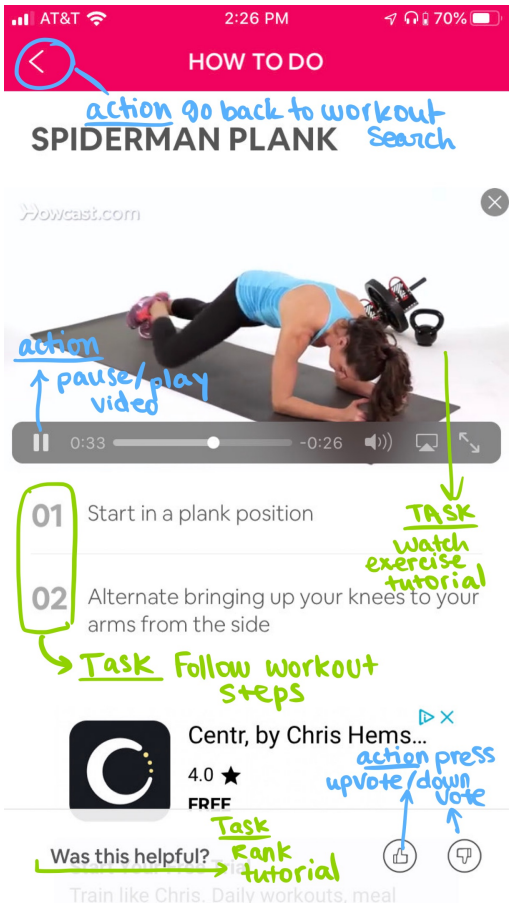
Action-Level Patterns. Design solutions that support the *actions* taken to complete the steps(s) of the user's task, e.g., a "start" button to initiate activity tracking, a selectable list entry for a food item.

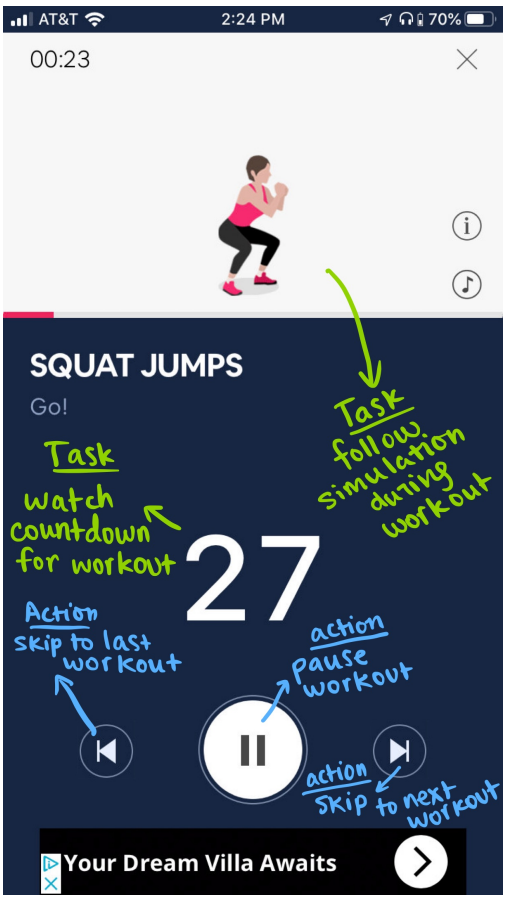
Step 1. Analyze an Existing Design. In this step, you will identify a mobile fitness/calorie-tracking application. Before you settle on an application, study the landscape of applications (e.g., search online) and choose an app that you think is well designed and clearly have patterns that you can analyze. For example, you should be able to easily identify the business purpose by looking at the developer's website for the app or on the App Store/Google Play. Find/capture 3–5 screenshots that illustrate the main features of the app. There are two deliverables in this step. First, provide below your analysis of the patterns at each level below in the same way we have done in class using the analysis template (download PDF, PPTX, Keynote versions, or use the drawing below). Second, annotate the screenshots to highlight

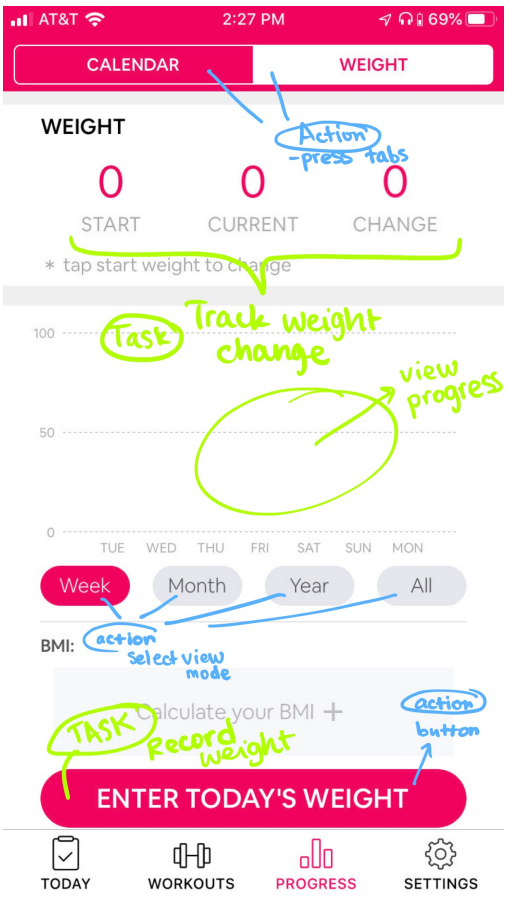
the *task*- and *action*-level patterns you can identify. You should be able to find at least 5 patterns for the Task Level and another 5 for the Action Level.

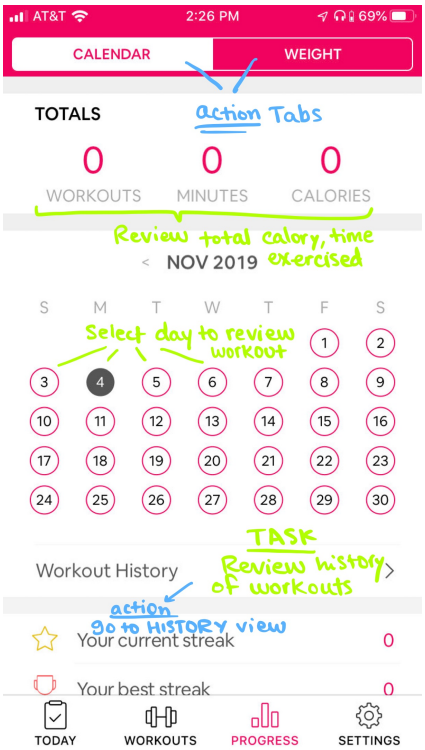



AT&T
2:23 PM
70%
BIKINI BODY
Task go back
Task Add exercise to favorites
press favorite button
Beginner · 8 Mins · 44 Calories
An all around workout that puts more emphasis on your butt and abs. The perfect bikini body workout!
action go to exercise page
13 EXERCISES
BUTT KICKS
SQUAT JUMPS
PLANK WITH HIP TWISTS
DONKEY KICKS (LEFT)
Action Button press
DONKEY KICKS (RIGHT)
START
Task begin workout

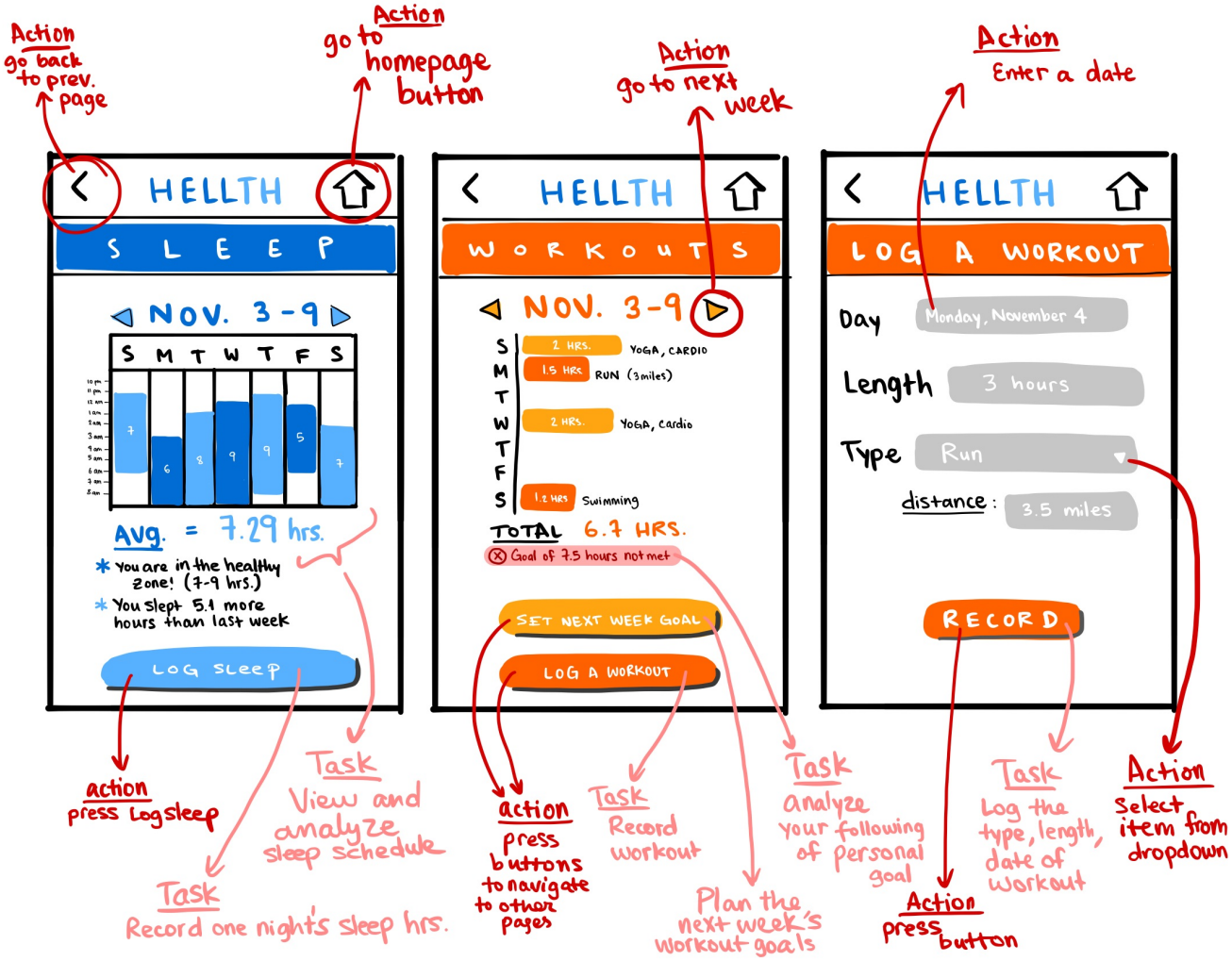

AT&T
2:26 PM
70%
HOW TO DO
action go back to workout
SPIDERMAN PLANK
Search
Dowcast.com
action pause/play video
0:33
-0:26
01 Start in a plank position
TASK watch exercise tutorial
02 Alternate bringing up your knees to your arms from the side
Task Follow workout steps
Centr, by Chris Hems...
4.0 ★
FREE
action press upvote/down vote
Was this helpful?
Task Rank tutorial
Train like Chris. Daily workouts, meal


AT&T 2:24 PM 70%
00:23
SQUAT JUMPS
Go!
27
Task
follow simulation during workout
Task
watch countdown for workout
Action
skip to last workout
action
pause workout
action
skip to next workout
Your Dream Villa Awaits


AT&T 2:27 PM 69%
CALENDAR
WEIGHT
Action
-press tabs
WEIGHT
0
START
0
CURRENT
0
CHANGE
* tap start weight to change
Task
Track weight change
view progress
100
50
0
TUE WED THU FRI SAT SUN MON
Week
Month
Year
All
BMI:
action
select view mode
Calculate your BMI +
TASK
Record weight
action
button
ENTER TODAY'S WEIGHT
TODAY
WORKOUTS
PROGRESS
SETTINGS


AT&T 2:26 PM 69%
CALENDAR
WEIGHT
TOTALS
Action Tabs
0
WORKOUTS
0
MINUTES
0
CALORIES
Review total calory, time exercised
< NOV 2019
S M T W T F S
Select day to review workout
1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
TASK
Review history of workouts
Workout History
action
go to HISTORY view
Your current streak 0
Your best streak 0
TODAY
WORKOUTS
PROGRESS
SETTINGS

Step 2. Generate Design. In this step, you will follow the top-down design process using pattern languages to generate a lo-fi prototype design for your React Native deliverable. Although the deliverable will be constrained by the requirements of each React Native assignment, you will still be able to carry over some of your ideas from this assignment to your deliverable. To complete this step, using the template you used above, start making design decisions about your application, starting from the top and moving to the bottom. Consider what you want the *mission* (business purpose) of your app to be, what *type* of app it should be, and so on. Should it be motivational, providing messages to keep up the good work during the day, or more technical making sure that users are given detailed breakdowns of micronutrients? Outline your decisions in the analysis template below. Next, informed by your design decisions, create 3–5 (hand-drawn or digitally generated) ***wireframes*** of your envisioned application to show the task- and action-level components and annotate them to highlight the patterns. You should try to define 5 patterns in each category.


Action
go back to prev. page
Action
go to homepage button
Action
go to next week
Action
Enter a date
HELLTH
SLEEP
NOV. 3-9
S M T W T F S
Avg. = 7.29 hrs.
* You are in the healthy zone! (7-9 hrs.)
* You slept 5.1 more hours than last week
LOG SLEEP
HELLTH
WORKOUTS
NOV. 3-9
2 HRS. YOGA, CARDIO
1.5 HRS RUN (3 miles)
2 HRS. YOGA, cardio
1.2 HRS Swimming
TOTAL 6.7 HRS.
Goal of 7.5 hours not met
SET NEXT WEEK GOAL
LOG A WORKOUT
HELLTH
LOG A WORKOUT
Day Monday, November 4
Length 3 hours
Type Run
distance : 3.5 miles
RECORD
action press Logsleep
Task View and analyze sleep schedule
Task Record one night's sleep hrs.
action press buttons to navigate to other pages
Task Record workout
Task analyze your following of personal goal
Plan the next week's workout goals
Action press button
Task Log the type, length, date of workout
Action Select item from dropdown