



**High-fidelity prototypes link to design ideas discussed in class; people-centered design.**

ENSE871: Usability Engineering

High-fidelity prototypes link to design ideas discussed in class; two topics relating to people-centered design (affordances and constraints).

Norman explains (2013) an affordance is “relationship between the properties of an object and the capabilities of the agent that determines just how the object could possibly be used” (Norman 2013, p. 11). In the context of UI and UX affordances can be used to help users know what they should do without using picture labels or even structures. In our project we use the types of **affordances** to improve user interactions.

1. **Buttons:** buttons have a high contrast and like real life buttons afford pushing like login, create account, delete, save afford acting.
2. **Icons:** We have used icons in our project to real-world actions. For example, in user profile page, key icon is used in the password field, or a letter icon is used in the email section. A cellphone icon is used for entering the phone number which is familiar to the user in the real world.
3. **Input field with the words:** An input field with the words like enter e-mail address, enter your password, enter your profile name, enter your name, and last name afford an e-mail address name password profile name Bing entered.
4. **Labelled buttons:** we also use **explicit affordances** on our buttons that are clearly labeled as “Log in” and “Create an Account” that input fields that are also labeled.
5. **Hidden affordances:** we use the drop-down menu as a hidden affordance where the user cannot see the other menu items unless they click on or hover on the parent tab.

**Constraints:** constraints in a design refer to restrictions place and design to help users do appropriate action and they prevent errors. There are many constraints like physical logical semantics. We use constraints on the pages like Create an account and user profile. For example, we use the gray button for a submitting “create an account” form unless the user filled out all the fields so the create account button is Gray out and only become active when all the fields are filled out. Likely, in the user profile page the “save change” equals update is gray until the user fill out the all user profile fields then the button will be activated

These constraints say Gray out buttons or input field that no can only be activated if the user completes the actions.