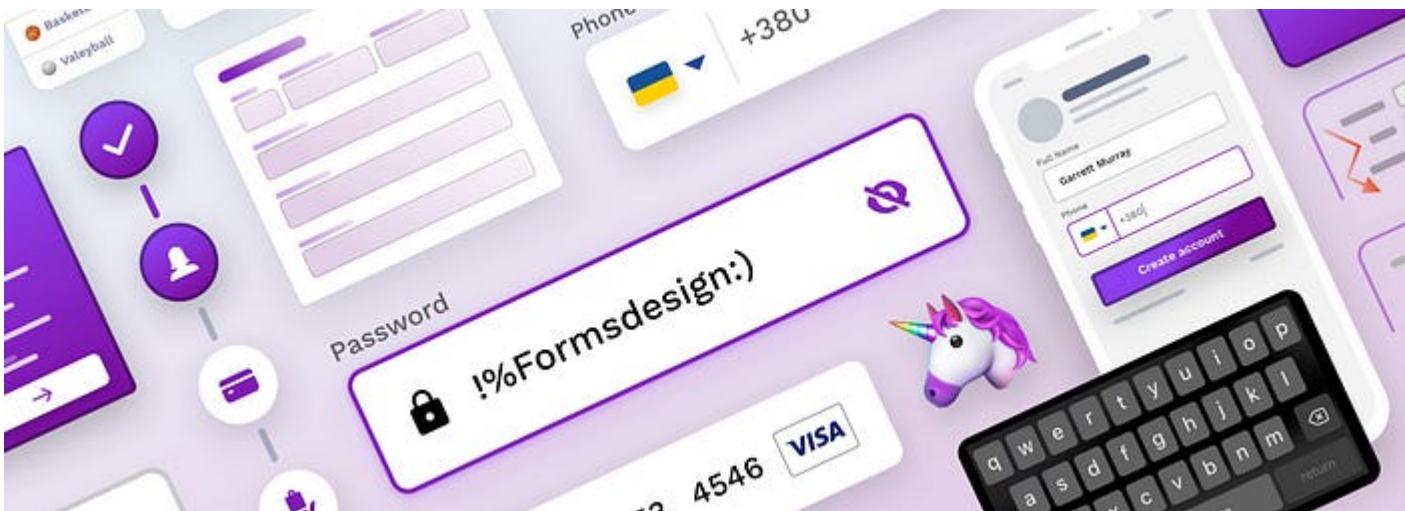


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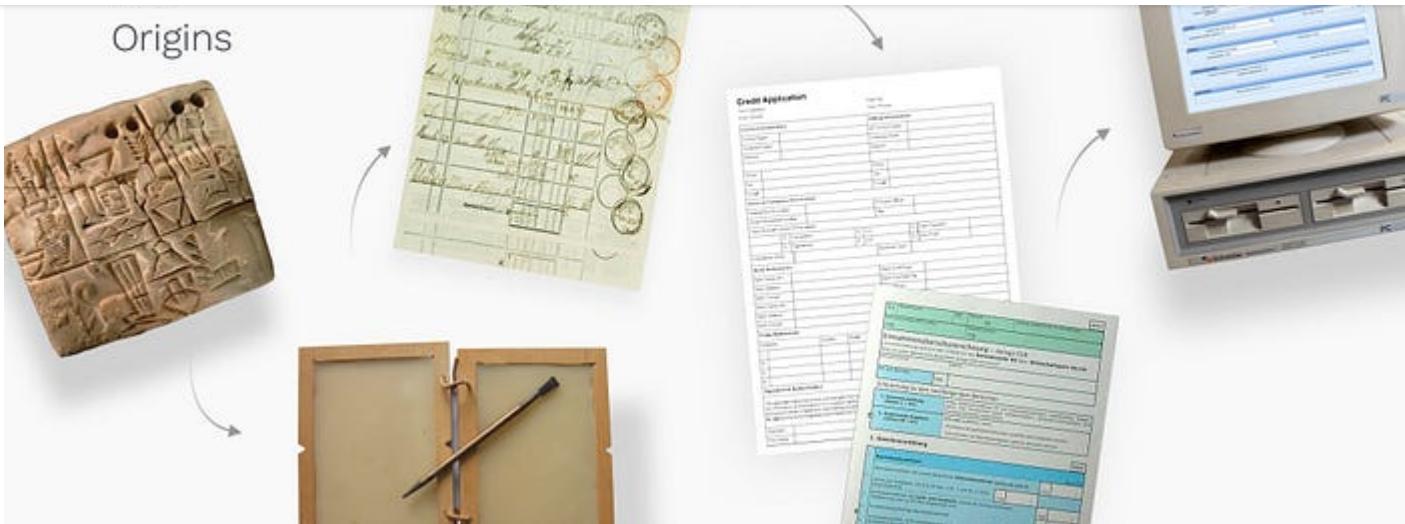
Text fields & Forms design—UI components series

Simple rules that will help you design forms users will like to complete

**Taras Bakusevych**[Follow](#)

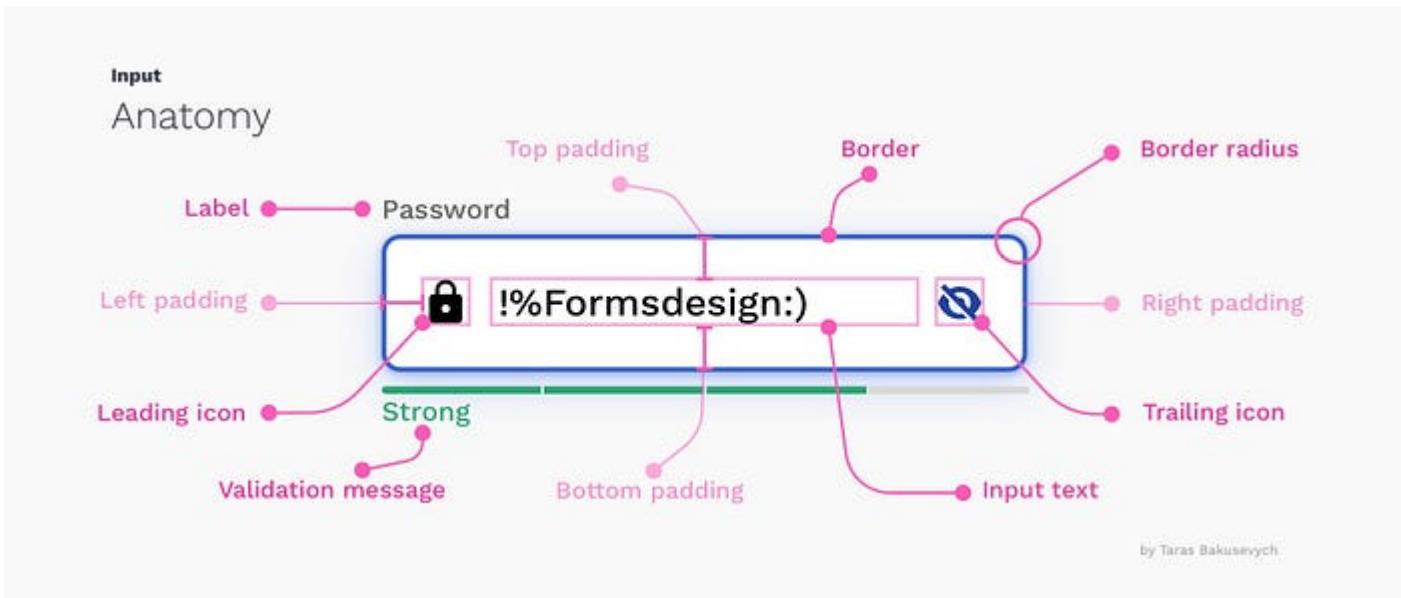
 UX Collective a11y-light ~8 min read · May 25, 2020 (Updated: March 11, 2023) · Free: Yes

Forms have existed for a significant amount of time, greatly simplifying the task of drafting complaints and various other legal pleadings. With the advance of information and its processing, means to gather the data are also evolving. As printed forms were here for years we can learn a few tips from their design.



Text field anatomy

Text fields allow users to enter text into a UI. They typically appear in forms and dialogs. Text field component design should provide a clear affordance for interaction, making the fields discoverable in layouts, efficient to fill in, and accessible.



Here are key elements of the basic Text field:

1. Container – interactable input area
2. Input text – entered into the text field
3. Label Text – tell users what information belongs in a given form field
4. Placeholder text – is a description or example of the information required that is replaced with input text after users provide it
5. Helper or Validation text(optional) – provides additional context or validation message
6. Leading icon(optional) – describe the type of input a text

Text field types

Most of them are based on basic text fields that were modified to better handle specific types of information, like the credit card numbers. Here are just a few examples of input types that are most commonly used throughout UIs we creating:

Input Types

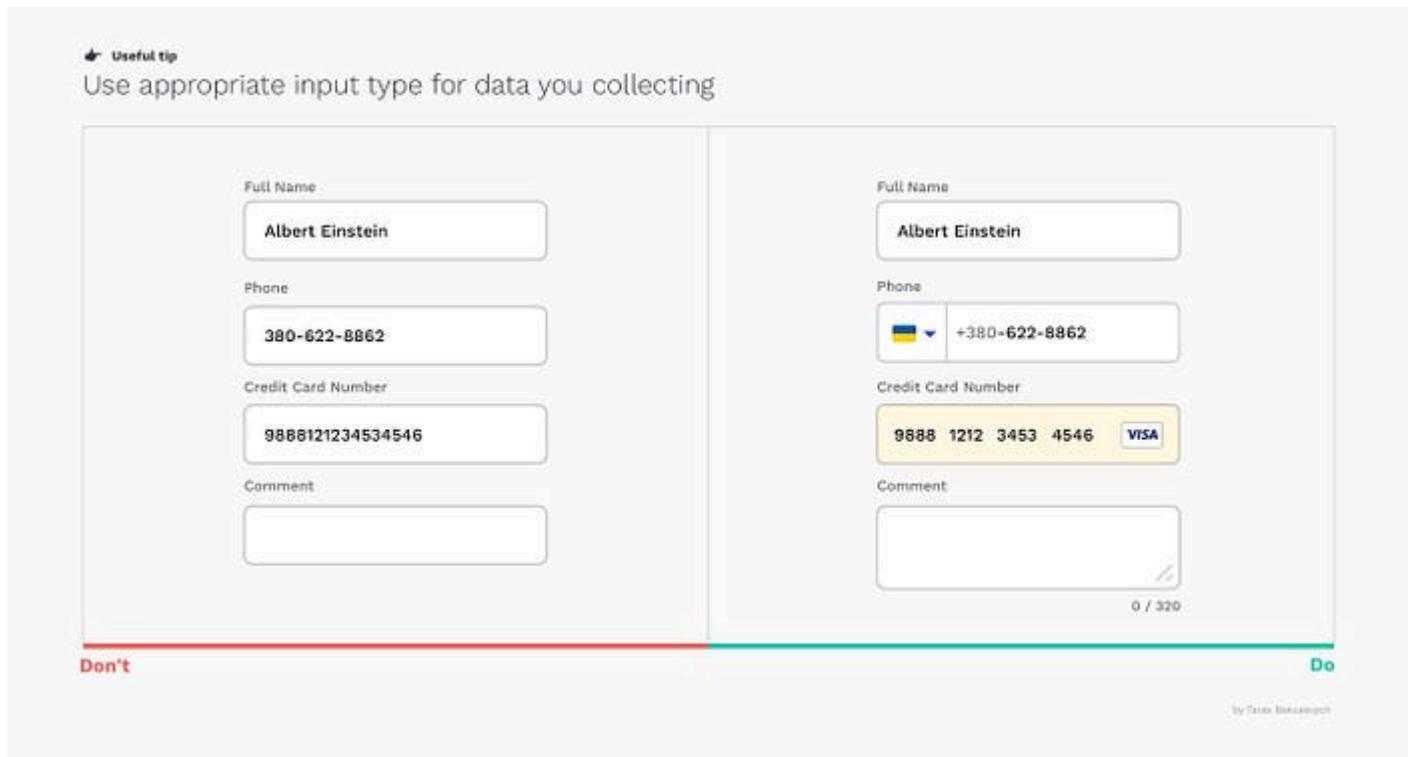
Text input	Search field	Description Type here... 0 / 320
Date mm/dd/yyyy	Nationality Ukraine	Text area input
Date	Selection input	
Phone +380	Send to Edwin S. X Alberta M. X	Quantity 4
Phone Number	Multi-select input	Input with stepper
Password Strong	Credit card 9888 1212 3453 4546 VISA	Label Color Color selector
Password	Number only input	

by Taras Bakusevych

(We specifically are not talking about few input types like checkboxes and radio buttons as we will cover them later in the series)

Use appropriate input type for data you collecting

and efficient as possible.



Text fields have to change their appearance based on state and user interactions

This can be done by providing visual cues that will communicate the state of the text field. Input text fields can have one of the following states: inactive, hover, disabled, focused, validation, error. All states should be clearly differentiated from one another, and consistent throughout the whole form and application. Better to follow best practices to not challenge formed user mental models.

Status

Account name <input type="text"/>	Account name <input type="text"/>	Account name <input type="text"/>
Inactive	Hover	Disabled
Account name <input type="text"/>	Account name <input type="text"/>	Account name <input type="text"/>
Focus/active Alb	Validation Albert Einstein Verification...	Error Albert Einstein ✗ Name taken
		by Taras Nakonovych

Choosing the best text field style

Usually, you will have three main options for label positioning: top, left, and right-aligned. The best style for you will depend on key goals and sizes of the form, components library, and platform you design for. All of them have some advantages and disadvantages.

Input

Label position and styles

Full Name <input type="text"/> Albert Einstein	Full Name <input type="text"/> Albert Einstein	Full Name <input type="text"/> Albert Einstein
Underline	Outlined (adaptive label)	Outlined (top aligned label)
Filled	Outlined (contained label)	Left or Right aligned label
		by Taras Nakonovych

Underline input popularized with original Material design guidelines are not the best option. There were already revised based on the large [Evolution of Material Design's study](#) that I recommend you to check out. Interestingly enough the same study showed that users prefer inputs with rounded corners.

Left-aligned labels

A good choice when the data requested is unfamiliar for users

- **Advantages:** Easily scalable labels, good use of vertical space
- **Disadvantages:** Excessive and variable distance between labels and corresponding inputs increase completion time

The image shows a user interface on the left and an eye-tracking study visualization on the right.

User Interface (Left): A screenshot of a form titled "Left-aligned labels". It contains five input fields with labels aligned to the left of the input boxes. The fields are: "Full Name" (Albert Einstein), "Email" (albert_einstein@gmail.com), "User role" (Admin), "Valid to" (24 Jan 2021), and "Password" (*****). Below the form are two buttons: "Create" and "Cancel".

Eye-Tracking Study (Right): A visualization titled "An eye-tracking study by Matteo Penzo" showing eye movement patterns over a form. The form includes fields for "Your address", "Your city", "Company you work for", and "Number of employees". Blue circles of varying sizes indicate the points of focus and the paths of eye movements between the labels and the input fields. Below this, there is a legend and two sections: "Advantages" and "Disadvantages".

Legend:

- Green arrow pointing down: Advantages
- Red double-headed arrows: Disadvantages

Advantages: Easily scannable input forms.

Disadvantages: Excessive and variable distances between labels and inputs

Right-aligned labels

Have nearly twice faster completion time vs left-aligned labels

- **Advantages:** Text field labels and input are closely positioned that limits number of eye movements resulting in fast completion time
- **Disadvantages:** Harder to quickly scan the form and understand what all information is required

Right-aligned labels

Full Name

Email

User role

Valid to

Password

Create **Cancel**

An eye-tracking study by Matteo Penzo

✓ Advantages
Input label and input are closely positioned, quick completion

✗ Disadvantages
Harder to quickly scan what all info is required, less visually appealing

By Titas Balanovich

Top aligned labels

Fastest completion time and all-around best choice for the majority of the cases.
Work well on mobile as they don't require a lot of horizontal space

- **Advantages:** Allow users to capture input label and input text with one single eye movement, fastest completion time
- **Disadvantages:** Require more vertical space

Forms

Top aligned labels

Full Name

Email

User role

Valid to

Password

An eye-tracking study by Matteo Penzo

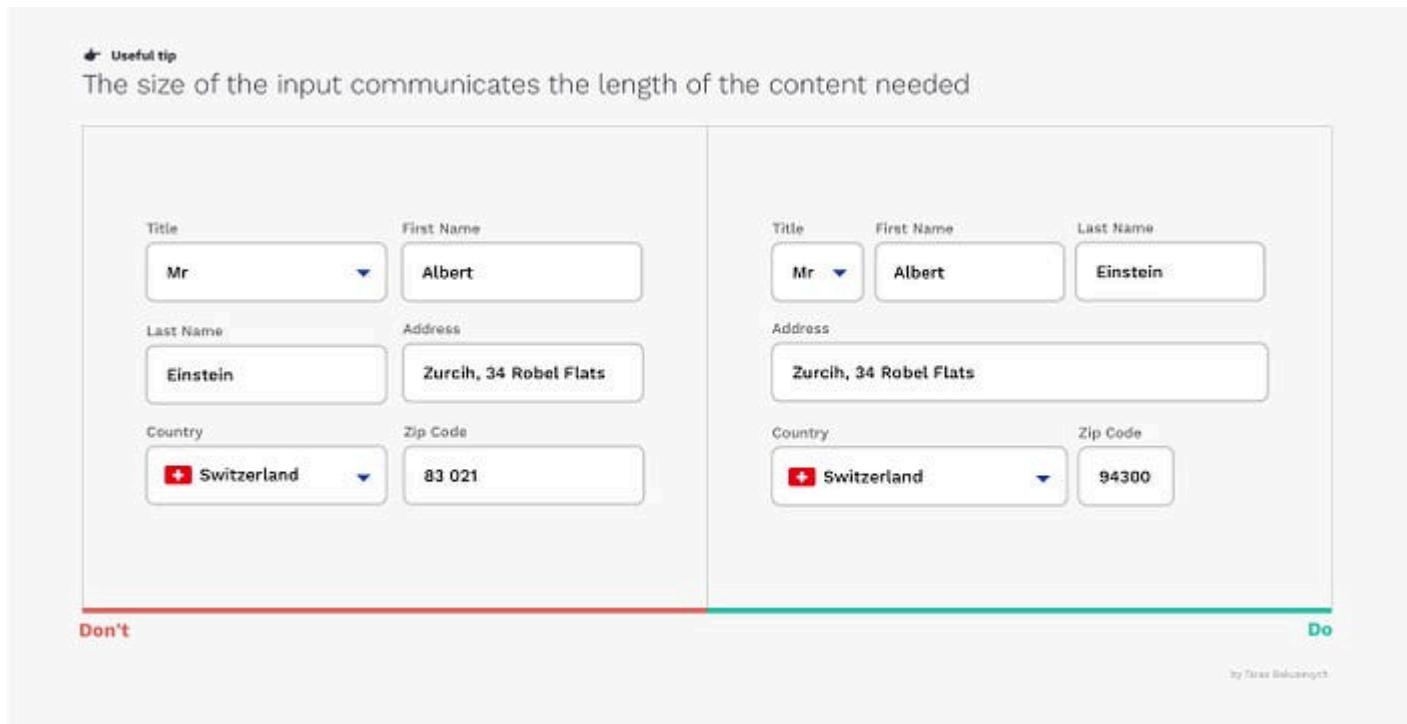
✓ Advantages
Study shows this layout to support the fastest completion of forms

✗ Disadvantages
Forms use more vertical space of the page

By Titas Balanovich

Length of text field should be proportional to the expected user input

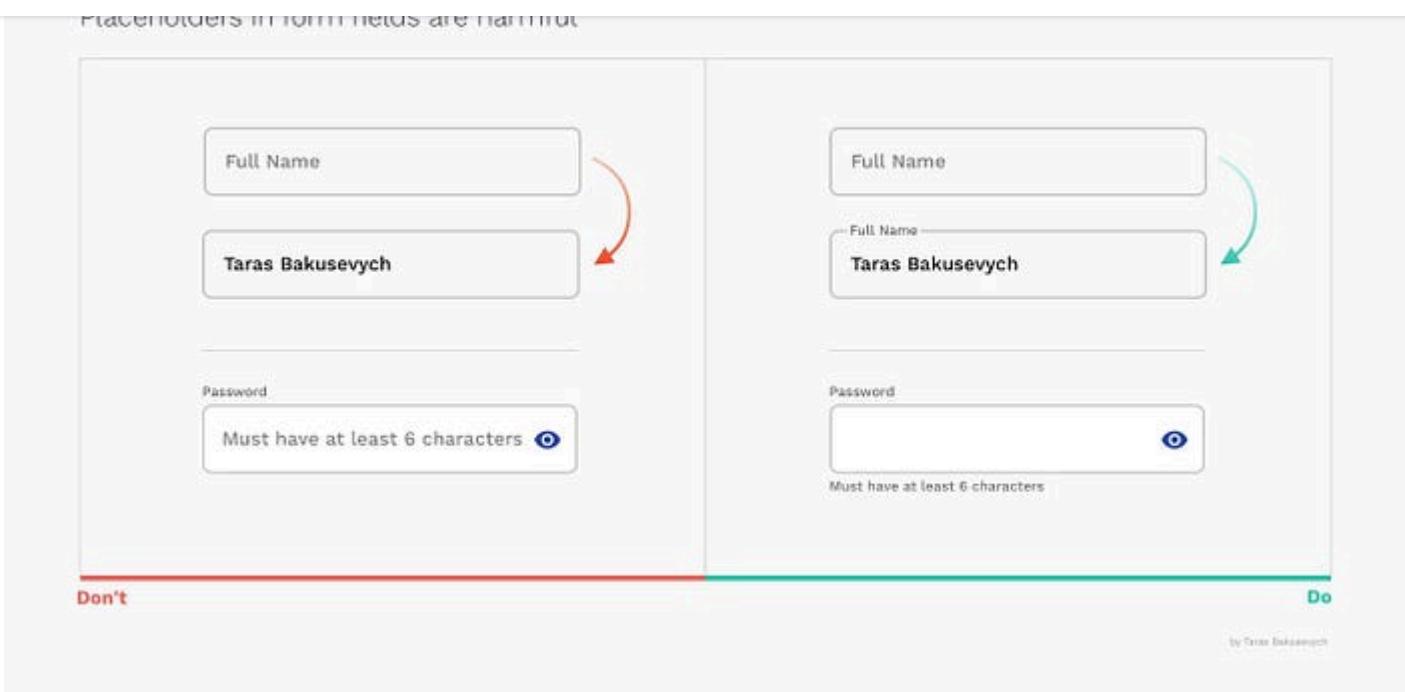
Using identical input length for all text fields in your forms will make them visually pleasing but will be harder to complete.



Placeholders are not replacements for labels

Disappearing placeholder text strains users' short-term memory. Without labels, users cannot check all information they provided before submitting a form. If you want a very minimalist form design you can use the Material design floating labels approach.

Placeholder text inside the form can sometimes confuse users, better to use hint text outside the field.



Help users fill in forms

- Help resolve partial queries with **Auto-Complete**. This happens within the input box where you type and you can press either enter or "right-arrow-key" to accept it.
- Search a virtually unbounded list for related keywords and phrases with **Auto-Suggest**. This list appears as a multiple suggestion list in the form of the drop-down.
- **Pre-fill fields and use smart defaults.** Often you can easily detect a user's country and the city by IP or geolocation. And based on most common scenarios and analytics you can define what should be selected by default. E-Commerce is an exception, don't preselect any preferences related to purchasing like size or color.

ASSIST USERS DURING THE COMPLETION PROCESS

Autocomplete

Autosuggest

✓ Autocomplete and Autosuggest

Find flights

From Geneva (GVA)

TO Country, city, airport

Closest airport to current user location

✓ Smart default values

Transfer amount \$ 1,563

Account balance \$ 2,093

✓ Contextual help and validation

by Faraz Baluchayish

- **Provide contextual information.** If you know that in order to make the right decision or avoid mistakes users will need some additional information like an account balance when making a transfer, don't hesitate to present it.

Use inline validation

"Live inline validation" is where the validity of the user's inputs are checked live as the user progresses through the form, as opposed to checking the inputs in a lump sum when the user submits the form. Implement it correctly to not do more harm:

- **Display validation messages close to the input and all together**
- **Don't shout on users**, error messages should tell users how to fix the problem instead of blaming them
- **Avoid "premature validation"** when the field is marked as invalid before they have finished typing
- Consider using "**positive validation**" it can add a sense of delight and progression

Use inline validation after the user has left the field instead of checking whole form

Don't

Do

by Tania Bokareva

Reduce the number of fields

It will remove the visual and cognitive load, and look much simpler.

- Don't break text like Full name and Date into multiple fields
- Don't ask for the same info multiple times
- Work with labels and hints copy to shorten it as much as possible

Don't

Do

Useful tip
Limit the number of fields and label text

by Tania Bokareva

Hide irrelevant fields

By disclosing information progressively, we reveal only the essentials and help users manage the complexity only when they need to.

Forms
Hide irrelevant fields with progressive disclosure

Email: albert_einstein@gmail.com

Password: ••••••••

2 Step verification

Method: Mobile device

Phone Number: 075-650-0745

By Taras Bukaievych

Use conditional logic

Conditional logic allows automatically show or hide fields and skip pages in a form, based on visitor answers. This approach not only will reduce the number of fields but also make the fill-in process more personalized and conversation-like.

Forms
Conditional forms

What would you like to do?

Play sports Have a snack Get a ride

What sport would you like to play?

Football

Q: What would you like to eat?

A: Play sports

- Football
- Baseball
- Basketball

A: Have a snack

- Pizza
- Croissant
- Burger

A: Get a ride

- Car
- Train
- Piano

By Taras Bukaievych

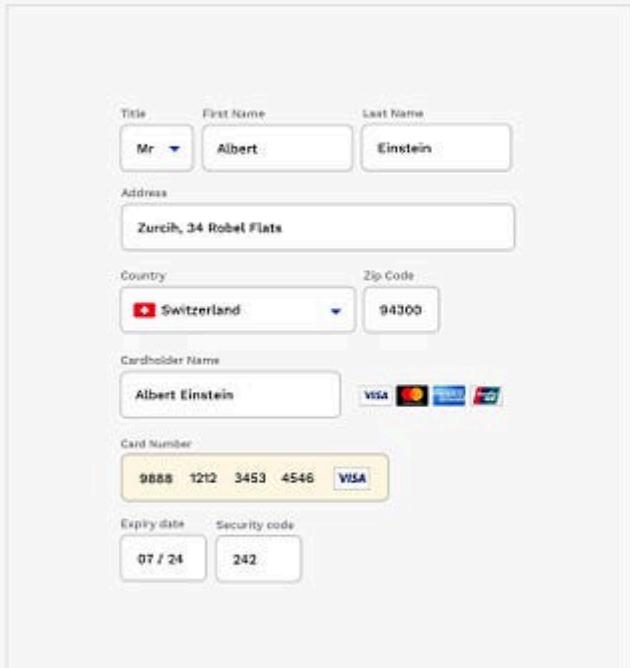
Group related fields

One of the easiest ways to simplify complex forms is to start grouping related fields. There are multiple principles of grouping in Gestalt psychology that help items feel related: Proximity, Similarity, Continuity, Closure, and Connectedness. Grouping dozens of unstructured fields into few manageable sets will significantly increase form usability.

 Useful tip

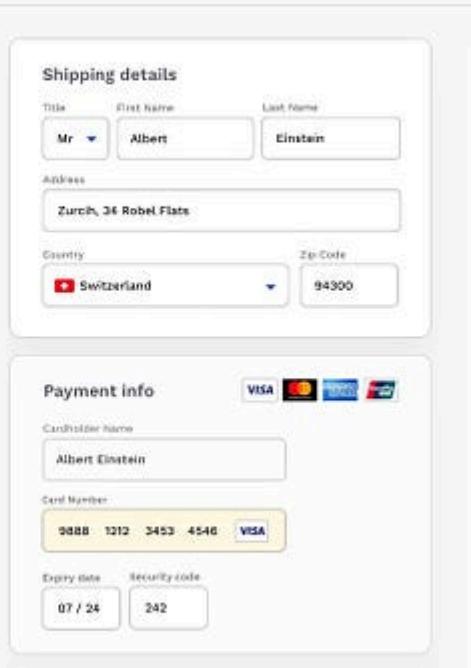
Group related fields

Don't



This screenshot shows a horizontal row of form fields. From left to right, there are: Title (dropdown), First Name (text input), Last Name (text input), Address (text input), Country (dropdown), Zip Code (text input), Cardholder Name (text input), Card Number (text input), Expiry date (dropdown), and Security code (text input). The fields are spread out horizontally, which can be confusing for users as they try to enter information.

Do



This screenshot shows the same set of form fields but organized into two vertical columns. The first column contains: Title (dropdown), First Name (text input), Last Name (text input), Address (text input), Country (dropdown), Zip Code (text input), Cardholder Name (text input), Card Number (text input), Expiry date (dropdown), and Security code (text input). The second column contains: Shipping details (Title dropdown, First Name text input, Last Name text input) and Payment info (Country dropdown, Zip Code text input, Cardholder name text input, Card number text input, Expiry date dropdown, Security code text input). This grouping makes it easier for users to identify related fields and complete the form.

by Taran Bohorovych

Avoid using multiple column layouts

One column layout creates a clear path to completion for the user. Consequences of using a multi-column form layout include users skipping fields where they actually have data to input, inputting data into the wrong fields, or simply coming to a halt that can lead to abandonment.



Break complex forms into a few simple steps

Sometimes even after removing everything unnecessary, some forms can get huge. Breaking up the huge tasks into a series of smaller looks much easier and motivates them to carry out the process to the end.

- **Display the steps and visually communicate progress** user makes, this gives more satisfaction and motivates to move forward
- **Don't granulate the form**, too many steps will not help, just annoy users
- **Carry on a summary of key information provide** to reduce anxiety and need to have review step in the end

BREAK CHUNKY FORMS INTO A SERIES OF SIMPLE STEPS

The diagram shows two examples of step-based form navigation. On the left, a 'Don't' example features a long horizontal progress bar with many small segments, accompanied by a warning: '✗ The more steps included, the greater the chance of user abandonment'. On the right, a 'Do' example shows a vertical stack of four simplified steps, each with a large blue button labeled with a right-pointing arrow. A checkmark indicates: '✓ Keep summary of key info provided'.

by Taras Balakirev

Minimize the ability to navigate outside of the wizard

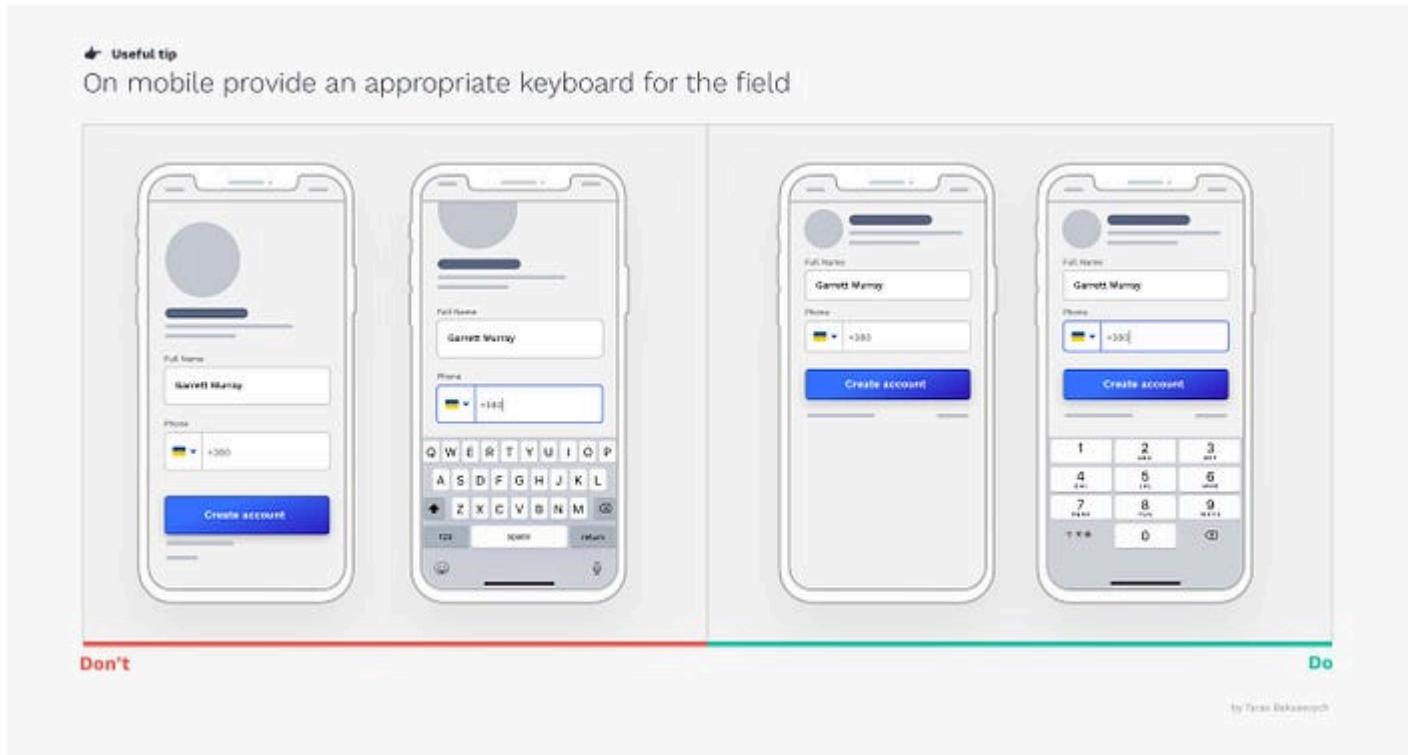
If the form is large enough to break into multiple steps, it deserves a separate clearly focused space to work with it. Exposing general navigation or any links that will disrupt the process will just create confusion. I would also advise against multi-step forms in small Pop-Ups.

A 'Useful tip' section states: 'Minimize the ability to navigate outside of the wizard.' Below, a 'Don't' example shows a large, cluttered window containing a multi-step form with a standard horizontal navigation bar at the bottom. A red bar at the bottom is labeled 'Don't'. To its right, a 'Do' example shows a much cleaner, simplified interface for the same multi-step form, with a clean vertical layout and a clear right-pointing arrow at the bottom. A green bar at the bottom is labeled 'Do'.

by Taras Balakirev

Show the appropriate keyboard type

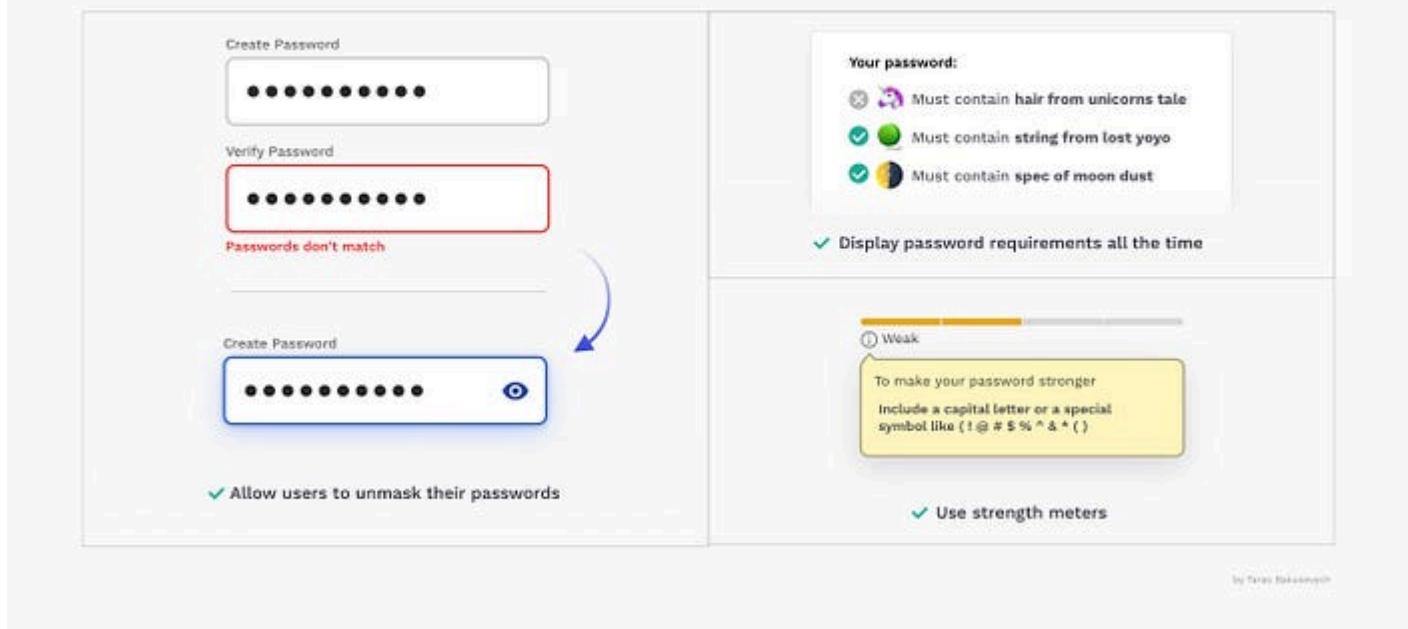
displayed when editing a text field should be appropriate to the type of content in the field. Be conscious of where the keyboard will appear. To not introduce scroll needlessly, position your text fields in the upper area.



Stop ridiculous password creation designs

- Allow users to **unmask their password** instead of asking them to enter it 2 times, It will also work better for password generating apps
- **Display password requirements** all the time, and indicate users' progress towards meeting all the criteria. Try to simplify requirements for the user.
- Use **strength meters** encourage users to create stronger passwords

Stop ridiculous password creation designs



by Tarek El-Khouly

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