```
1
2    Dev Mobile 'Flutter' {
3
4        [GDG Dev Bootcamp]
5
6            <
7                👋 I'm Aymene KRIOUDJ (krdj)
8                    - 👨‍💻 Computer Science Engineer
9                    - 🧑‍💻📱 Mobile Developer | Freelancer
10                   - 👨‍💼 Audit, Consulting, Project Management,
11                        SI Engineering, Big Data, ML, BI ...
12           >
13       }
14
```

```
1    Table Of 'Contents'{
2
3
4        Thursday,      Session 1
5        Feb 23th       < Introducing Mobile Dev by
6                       targeting Flutter ...  >
7        Friday,        Session 2
8        Feb 25th       < Introduction to Dart ...  >
9
10       Saturday,      Session 3
11       Feb 27th
                        < Flutter Layouts ... >
12
13   }
14
```

```
1
2      01 {
3
4
5
6          [Session 01]
7
8              < Overview : Let's introduce Mobile Dev
9              by targeting Flutter ...  >
10
11
12      }
13
14
```

```
1    First 'Step' {
2
3        [Most important Skill to have as a Developer]
4
5
6
7                    Googling
8
9
10
11       "Yes, read it right and again ..."
12       <p Knowing what to Google is one of the most important skills you
13       can have as a developer.> </p>
14    }
```
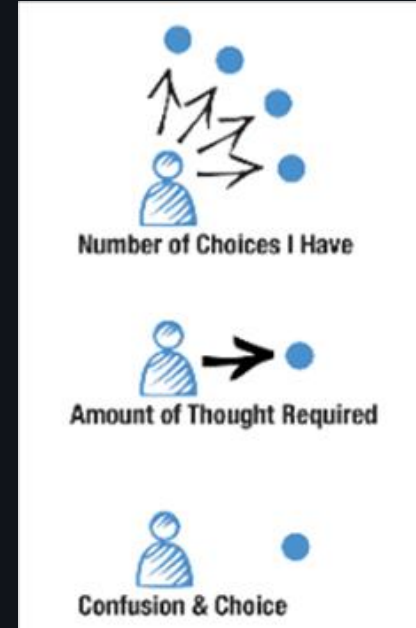
```
1   Before starting 'Mobile Dev' {
2
3       'Some Mobile App
4       Design concepts'
5
6
7
8       [ Minimize Cognitive Load ]
9
10
11
12
13  }
14
```
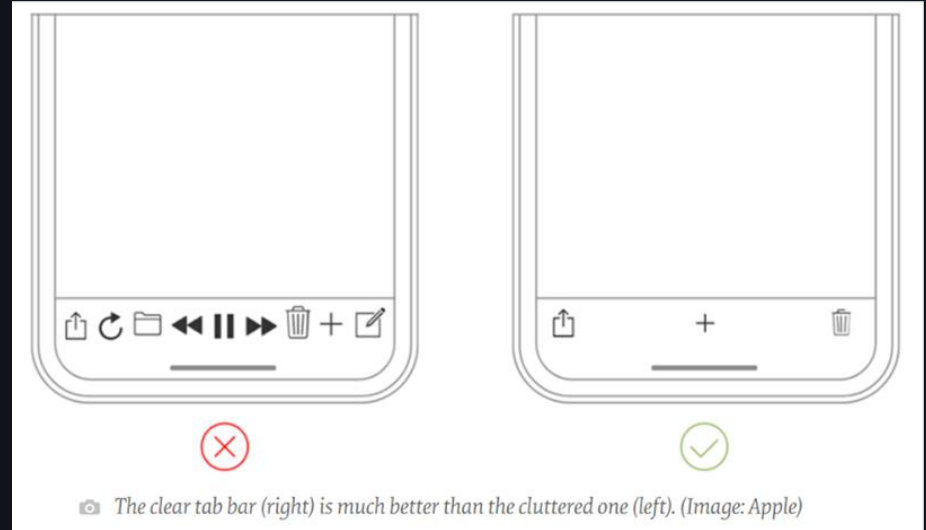

Number of Choices I Have

Amount of Thought Required

Confusion & Choice

```
1   Before starting 'Mobile Dev' {
2
3       'Some Mobile App
4       Design concepts'
5
6
7
8       [ Decluttering ]
9
10
11
12
13
14  }
```


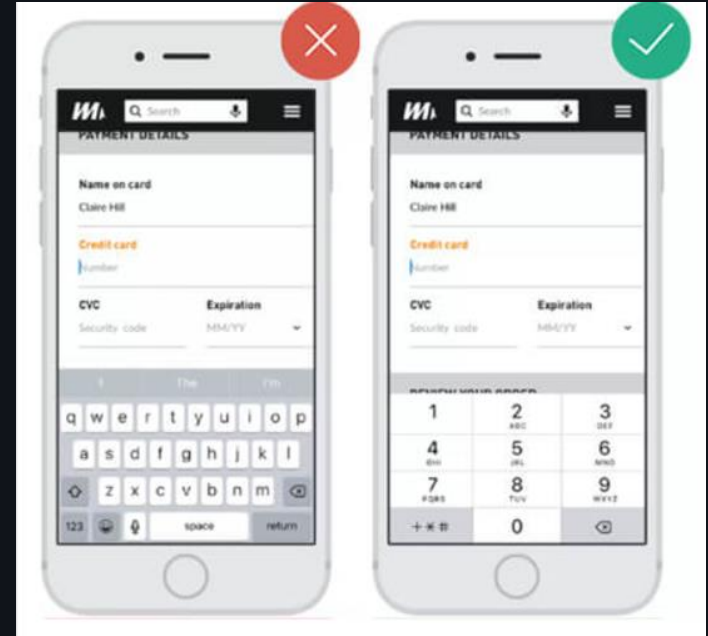
The clear tab bar (right) is much better than the cluttered one (left). (Image: Apple)

1 Before starting 'Mobile Dev' {
2
3   'Some Mobile App
4   Design concepts'
5
6
7   [Offload tasks & Minimize
8   efforts]
9
10
11
12
13 }
14

```
1   Before starting 'Mobile Dev' {
2
3       'Some Mobile App
4       Design concepts'
5
6
7       [ Use familiar
8       screens ]
9
10
11
12
13
14  }
```
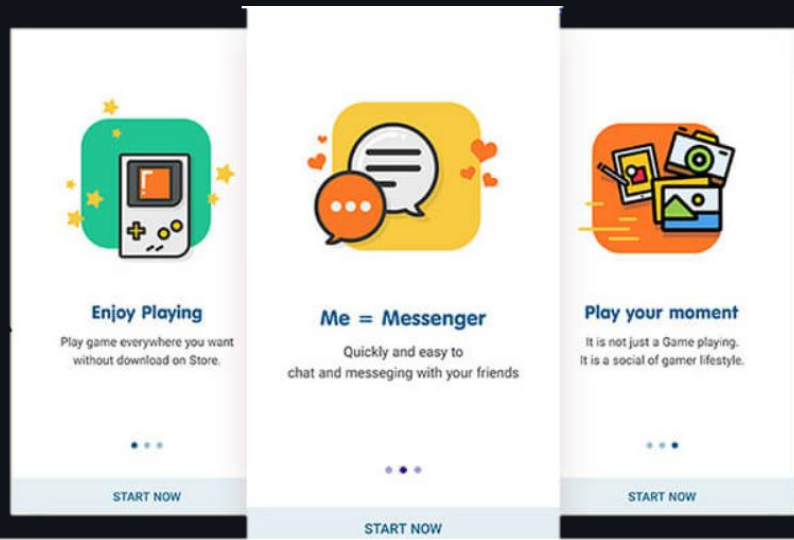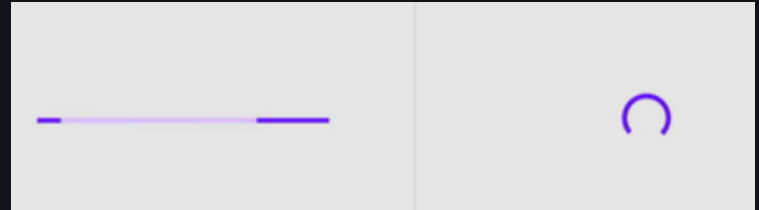
1 Before starting 'Mobile Dev' {
2
3   'Some Mobile App
4   Design concepts'
5
6
7   [Make it clear
8   when loading is
9   occurring]
10
11
12
13
14   }

Current 'Challenges' {

1
2
3   [Challenges of mobile development today]
4
5

	To "the Native" approaches		To "Cross platform" approaches
✓	**High-quality apps** Platform and system integrations	✓	**Fast development** Quick iterations, hot reload
✓	**High-performance UIs** Native code, GPU accelerated	✓	**Portability, reach** Single codebase
✗	**Must fund two apps** Two teams, codebases, & investments	✗	**Poor Performance** Slow, jerky, unpredictable
✗	**Inconsistent brand, features** Different across devices & OEMs	✗	**Non-Native Look/Feel** Users can tell the difference

14 }

```
1    Flutter '2.0' {
2
3            [Flutter offers the best of both worlds]
4
5
6              < "Flutter combines
7          native performance and
8          quality with high-velocity
9
10          development and multi-
11
12             platform reach." >
13
14   }
```

```
1   What makes 'Flutter' special {
2
3
4
5
6
7
8
9
10        < high-velocity          < Expressive and        < Native IOS and
11        development >            Flexible Toolkit >      Android App >
12
13
14  }
```

1 # high-velocity development {
2
3
4   <
5   - Sub-second reload times
6   - Paint your app to life
7   - Iterate rapidly on features
8   - Test hypotheses quicker than
                     ever
9   - More time to experiment &
                     test features
10   - Single-codebase for faster
                     collab
11   - 3X Productivity Gains
12   >
13
14 }
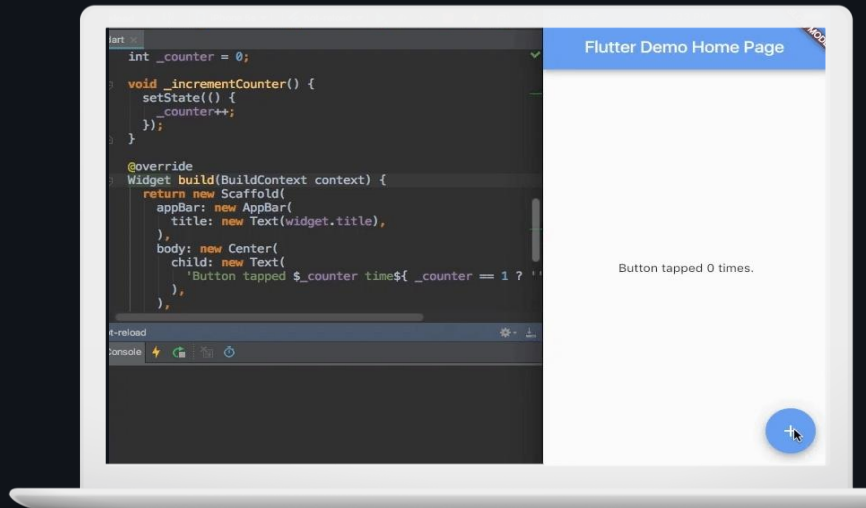
```
1   Flexibility and Control for
2   beautiful UI's {
3
4
5       <
6
7           - Control every pixel on the
               screen
8           - Make your brand come to life
9           - Never say "no" to your
               designer
10          - Stand out in the marketplace
11          - Win awards with beautiful UI
12      >
13
14  }
```
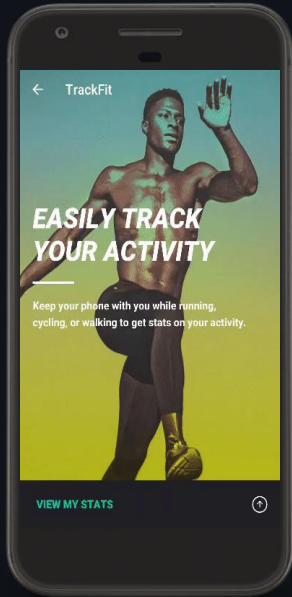
```
1   Natively- Apps for iOS and
2   Android {
3
4
5       <
6           - Compiles  directly  to  native
            ARM   code   Does   not   use  a
7           JavaScript bridge
8           - 60fps, GPU accelerated
            - Smooth animations
9           - Deep platform integrations
10          - Natural look and feel
11          - Critical  platform  differences
            (scrolling, navigation, fonts)
12      >
13
14  }
```


App Render Canvas Events

Compiles to ARM native code,
GPU accelerated graphics
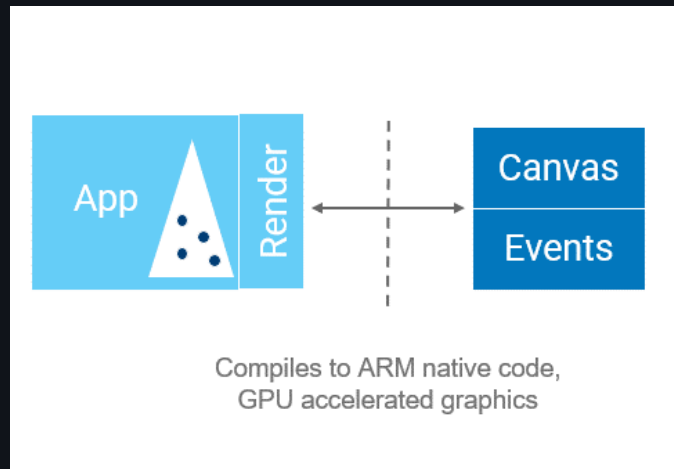
```
 1   4 ways to use Flutter today {
 2
 3        01 : Start a new        Build your new idea in Flutter and reach both
 4        app from scratch        iOS and Android at the same time.
 5
 6        02 : Prototype          Use Flutter to test out an app concept or
 7        a new app idea          idea in record time.
 8        03 : Bring your         You already have an iOS or Android app? Use
 9        app to the the          Flutter to build for the other platform.
10        other platform          Combine codebases when you've proven your
                                  Flutter app.
11        04 : Use Flutter
12        for a part of           Test Flutter in production with one or two
                                  screens in your existing app.
13        your app
14   }
```

Flutter '2.0' {

1
2
3   This   major   update
4   brought official support
5   for   web-based
6   applications   with   new
7   CanvasKit renderer and
8   web   specific   widgets,
9   early-access   desktop
10   application support for
11   Windows,   macOS,   and
12   Linux.   This   release
13   included   sound   null-
14   safety too.

}
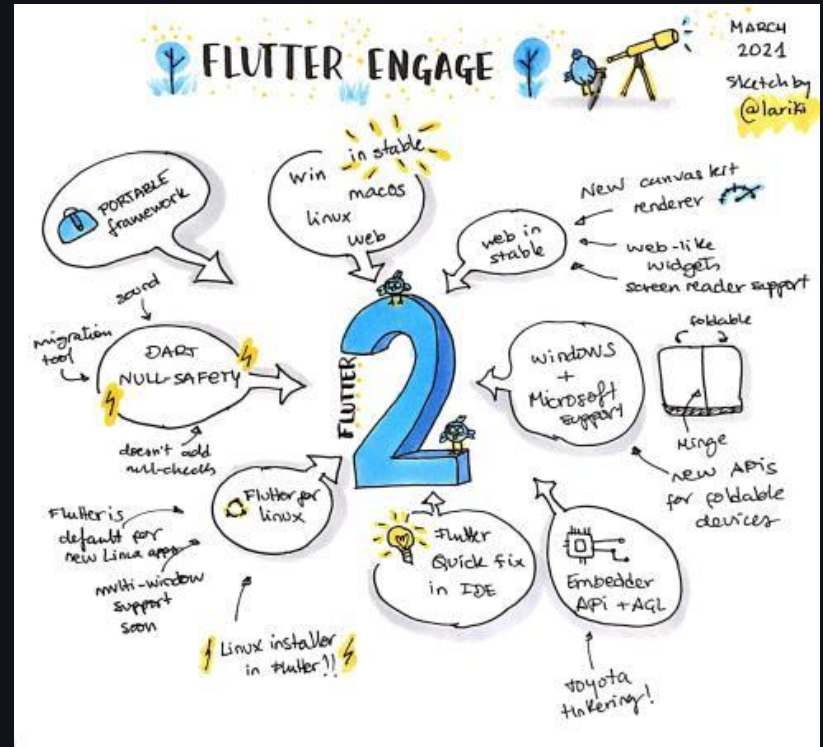
```
1   Flutter '2.8' {
2
3       Top 4 new features :
4
5           * Sign-in widget
6
7           * Be  Faster  and  more
                Productive
8
9           * Causal  game  development
10              with Flame
11
12          * Flutter's      continued
                momentum
13
14  }
```

```
1    Flutter '2.8' {
2
3         Sign-in widget {
4
5              <
6                  - Use Firebase to handle authentication.
7                  - Don't worry about edge cases in the sign-in
                     flow, such as two-factor authentication or
8                    reset password user flow. The widget handle
                     that for you.
9                  - Better support for other auth providers like
10                   Google, Apple, Twitter, or Facebook.
11             >
12         }
13
14   }
```

```
1    Flutter '2.8' {
2
3        Be Faster and more
4        Productive {
5
6                <
7                  - Better  tooling   to  guide  profiling  and
                     optimization.
8                  - Your  app  should  start  faster  and  use  less
9                     memory.
                   - Connect your app easier to back-end services,
10                    such as Firebase and google Cloud.
11               >
12           }
13
14   }
```

```
1   Flutter '2.8' {
2
3       Causal game development with
4       Flame {
5
6               <
7               - 1.0 release of Flame, a modular 2D game
                  engine built on top of flutter.
8               - Flame provides what you need to build game
                  quickly.
9
10              - Features like game loop, component system,
                  animated sprites and image, collision
11                detection, a world camera, an effects system,
                  and gesture and input support.
12              >
13          }
14  }
```

```
1   Flutter '2.8' {
2
3       Flutter's continued
4
5       momentum {
6
7                   <
8                           - There are over 200 000 app built with flutter
9                             in Play Store.
10                          - Top Brands like BMW, eBay, WeChart, SHEIN,
11                            Philips Hue, Norton, trip.com and Greggs,
12                            using Flutter for there UI Screens.
13                  >
14
        }
    }
```

```
1    Aymen's Flutter 'RoadMap' {
2
3        Step 01 : Dart              The initial plan  should be deeply focused over
4        Language                   the language in which you will be building your
                                    app. So focus the mainly over DART LANGUAGE
5
6        Step 02 :                  Explore the Flutter Ecosystem : yaml file,
7        Flutter                    main method, runApp method, MaterialApp,
     Ecosystem                     StatelessWidget vs StatefulWidget ...
8
9        Step 03 :                  You should be knowing the mostly used widgets
     Flutter Widgets              in Flutter. Everything in Flutter is a widget.
10
11       Step 04 : Build            Build your own App by linking Flutter
12       your own                   concepts: screen navigation, code management,
                                    App design.
13   }    creativity
14   }
```

```
 1    Summary; {
 2
 3        "Flutter is an open-source UI software development kit created
          by Google."
 4
 5            <p It is used to develop cross platform applications for Android,
 6            iOS, Linux, Mac, Windows, Google Fuchsia (operating systems such
              as Chrome OS), and the Web from a single codebase.> </p>
 7
 8            <p On December 4th, 2018, Flutter 1.0 was released at the Flutter
              Live event, denoting the first "stable" version of the Framework.>
 9            </p>
10            <p On March 3rd, 2021, Google released Flutter 2.0 during an online
              Flutter Engage event.> </p>
11
12            <p on December 8th, 2021, Google released the final stable release
              of Flutter. "</b Hello and welcome to Flutter 2.8!></b>"> </p>
13
14    }
```

```dart
1   Thanks; {
2
3       'Do you have any questions?'
4
5           ha_krioudj@esi.dz
6           +213 656 12 37 58
7
8
9           linkedin.com/in/aymene-krioudj-685883162/
10          instagram.com/aymen.krdj/
11          facebook.com/aymene19s/ (AymEn Krdj)
12          twitter.com/aymen_krdj/
13          github.com/aymenkrioudj/
14
```