

Data Visualization & Design

Week 10

(VR Demo)

PRINCIPLES OF GAMIFICATION

Reference: <https://uxplanet.org/>

1. The App Experience Evolves with the User

It's important to think about your product as multiple experiences. In gaming, players generally go through a tutorial first, and then for days or weeks after, are given basic missions and slowly ramped to more difficult ones.

2. Identify the “Core Loop”

This is the heart of gamification — building systems that reward and incentivize player, so they feel some accomplishment for engaging in these main actions.

*Example: **LinkedIn***

Profile Strength: **Advanced**



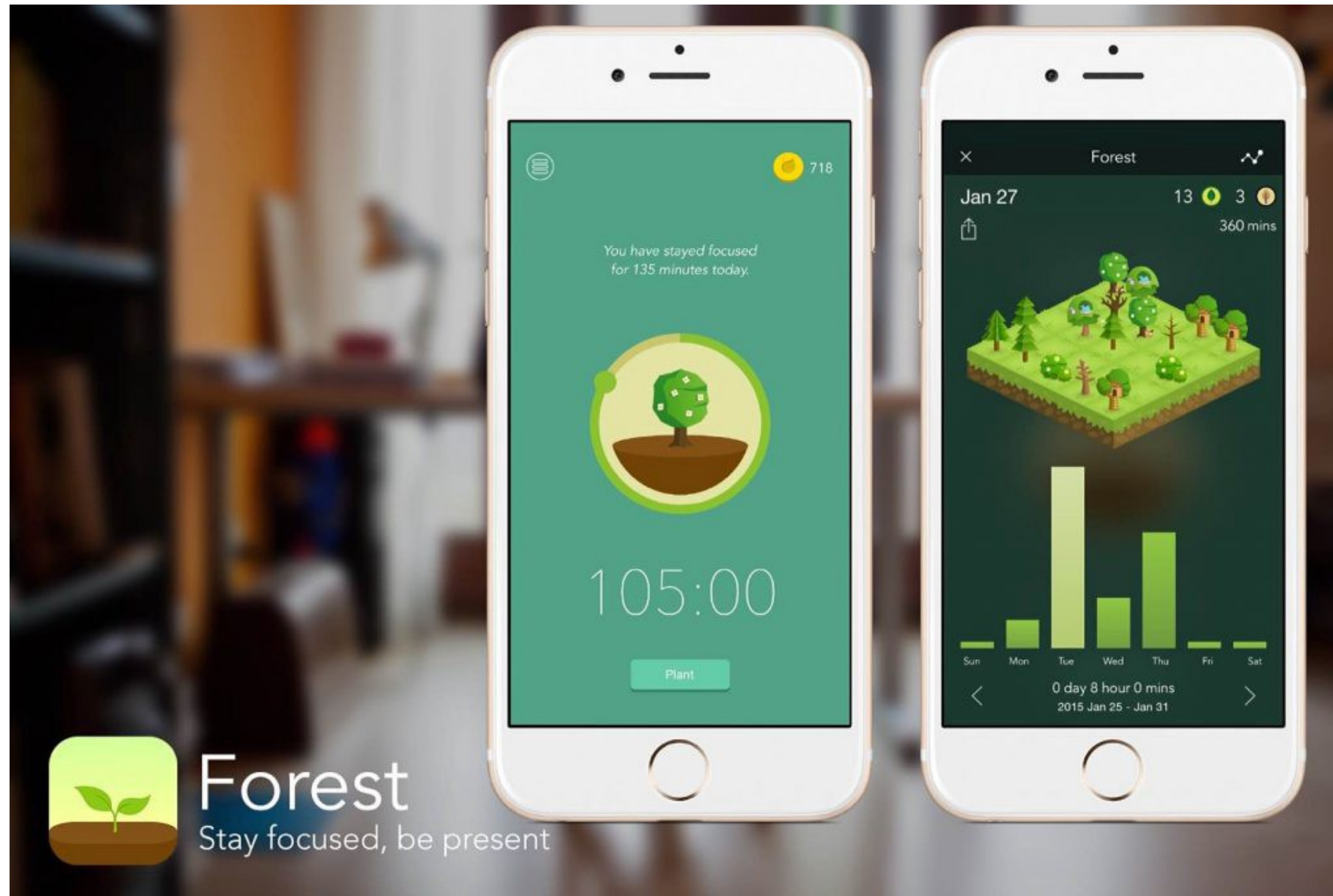
3. Limited Resources

Users crave to be smart, and by constraining or limiting actions based on resources available, players will naturally try to maximize their experience.

4. Instill a Sense of Ownership

If players are able to personalize something, then they will have a greater affinity for the product as a whole.

*Example: **Forest***



5. Integrate Social to your Experience

For engaged users, social is hyper important instill a sense of belonging to your app, website, or service.

By designing incentives to complete a desired action, users will be more likely to complete the action in the future.

VR DESIGN CONSIDERATIONS

Reference: <https://www.google.com/design/spec-vr/designing-for-google-cardboard/a-new-dimension.html>

Designing for a new dimension is hard.

In virtual reality, best practices are informed by **physiological considerations**, along with human perception and cognition.

1. Avoiding simulator sickness

Mismatches between physical and visual motion cues can give rise to nausea.

2. Familiarity

Because a virtual reality canvas is infinite, it is important to provide the user with cues for focus and attention as they explore a new environment.

PROGRAMMING CONCEPT— **FOR-LOOPS**

FOR-LOOPS

```
print("hello");
```

```
print("hello");
```

```
=hello
```

```
myArray = [1,2,3,4,5];
```

```
print(myArray);
```

```
print(myArray);
```

```
= [1, 2, 3, 4, 5]
```

```
print(myArray[0]);
```



```
print(myArray[0]);
```

=1

```
print(myArray[0]);  
print(myArray[1]);  
print(myArray[2]);  
print(myArray[3]);  
print(myArray[4]);
```

```
print(myArray[0]);  
print(myArray[1]);  
print(myArray[2]);  
print(myArray[3]);  
print(myArray[4]);
```

=12345

```
for(int i=0; i < 5; i++)  
{  
    print(myArray[i]);  
}
```

```
for(int i=0; i < 5; i++)  
{  
    print(myArray[i]);  
}
```

=12345

```
for(int i=0; i < myArray.length; i++)  
{  
    print(myArray[i]);  
}
```

```
for(int i=0; i < myArray.length; i++)  
{  
    print(myArray[i]);  
}
```

=12345

Introduction to VR with **A-FRAME**

[https://github.com/emilyfuhrman/
datavis_design/blob/master/2017_Fall/
Studios/05_Introduction_to_VR_with_A-
Frame.md](https://github.com/emilyfuhrman/datavis_design/blob/master/2017_Fall/Studios/05_Introduction_to_VR_with_A-Frame.md)

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