

GDC

March 21-25, 2022
San Francisco, CA

1, 2, 3, Action!

Inspiring Level Design Pacing From Music

Taha Rasouli



#GDC22



Who Am I?

- Lead Game Designer
- Product Manager
- IGDA Board of Directors

Projects involved:



Pacing in Level Design

What do level designers usually do to create a good pace:

- Alternate game mechanics in level chunks
- Use environment and visual variations
- Include narrative elements
- Keep the tension curves in line

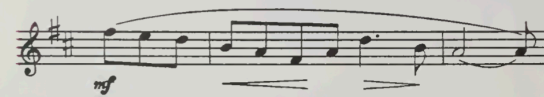
Our Problem

- Limited traverse and puzzle inputs
- No budget to provide a solid narrative in the form of cutscenes or environmental props
- The levels were happening in one screen without scrolling
- Everything was action/input oriented

Inspiring from Music

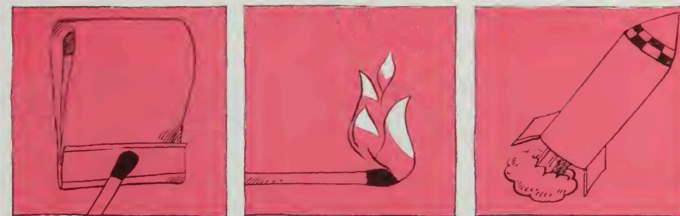
Bernstein talks about a universal pattern in his book (1962).

Well, the same technique works just as well in symphonic themes. For instance, let's just see how Tchaikovsky went about building up that lovely theme of his by simply repeating his ideas in a certain arranged order—what I like to call the 1-2-3 method. In fact, so many famous themes are formed by exactly this method that I think you ought to know about it. Here's how it works: first of all, there is a short idea, or phrase:



16

1, 2, & 3—like a 3-stage rocket, or like the countdown in a race: “On your mark, get set, go!” Or in target practice: “Ready, aim, fire!” Or in a movie studio: “Lights, camera, action!” It's always the same, 1, 2, and 3! There are so many examples of this melodic technique I almost don't know where to begin. But



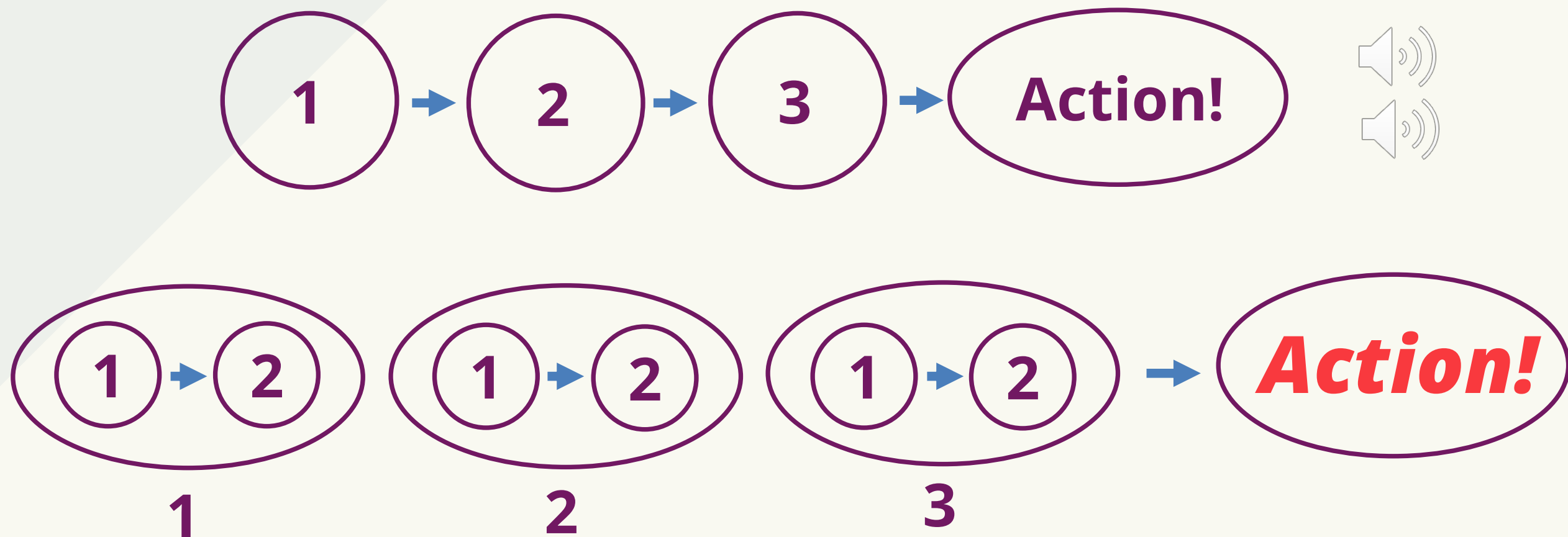
LEONARD BERNSTEIN'S YOUNG PEOPLE'S CONCERTS with the NEW YORK PHILHARMONIC



1,2,3 Action!

“It is like a 3-stage rocket: On your mark, get set, go!”

Leonard Bernstein



Flute | Ch1
M S R

Flute Solo | Ch1
M S R

Flute Solo | Ch1
M S R

Oboe | Ch1
M S R

Clarinet Solo | Ch1
M S R

Bassoon Solo | Ch1
M S R

French Horns | Ch1
M S R

Trumpets | Ch1
M S R

Timpani | Ch1
M S R

String Ensemble | Ch1
M S R

String Ensemble | Ch1
M S R

String Ensemble | Ch1
M S R

String Ensemble | Ch1
M S R

Flute Solo | Ch1
M S R

Flauti
73

Oboi
68

Clarinetti in Si b
71

Fagotti
70

Corni in Mi b
60

Trombe in Do
56

Timpani (Sol, Do)
47

Violini I
48

Violini II
48

Viole
48

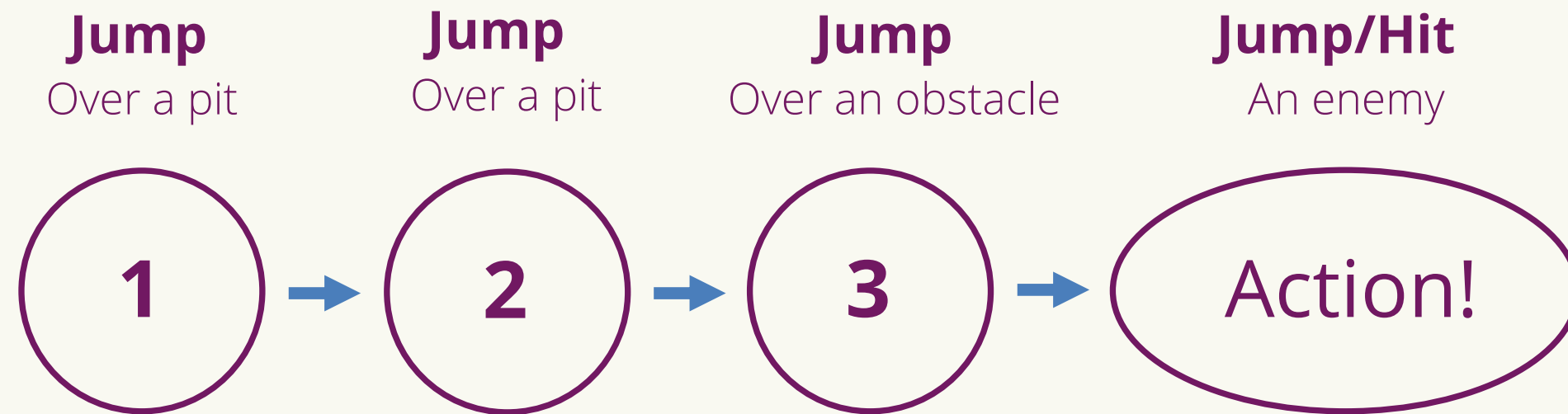
Violoncelli
48

Contrabassi
48

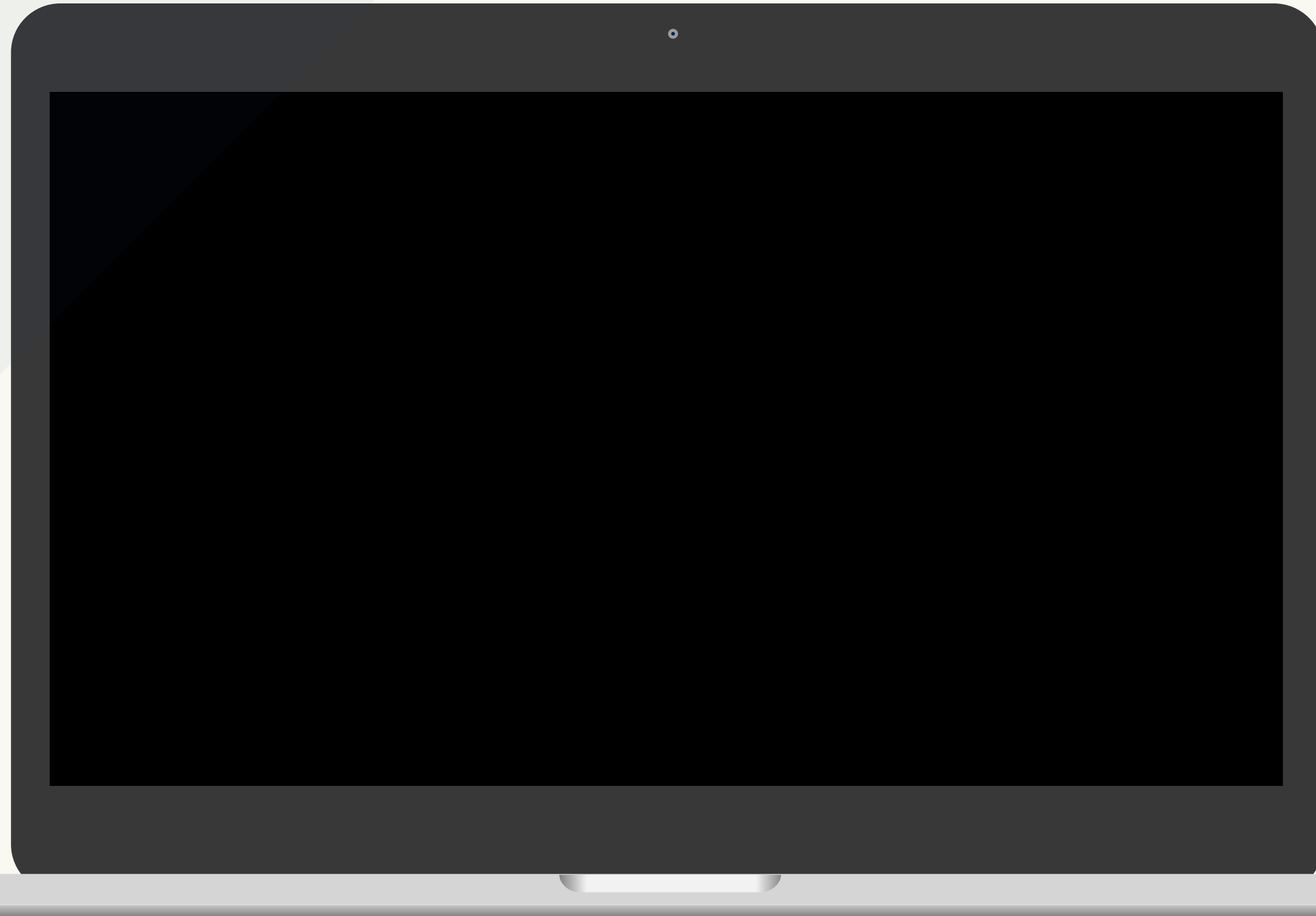
Beethoven's 5th Symphony

1,2,3 Pattern in Level Design

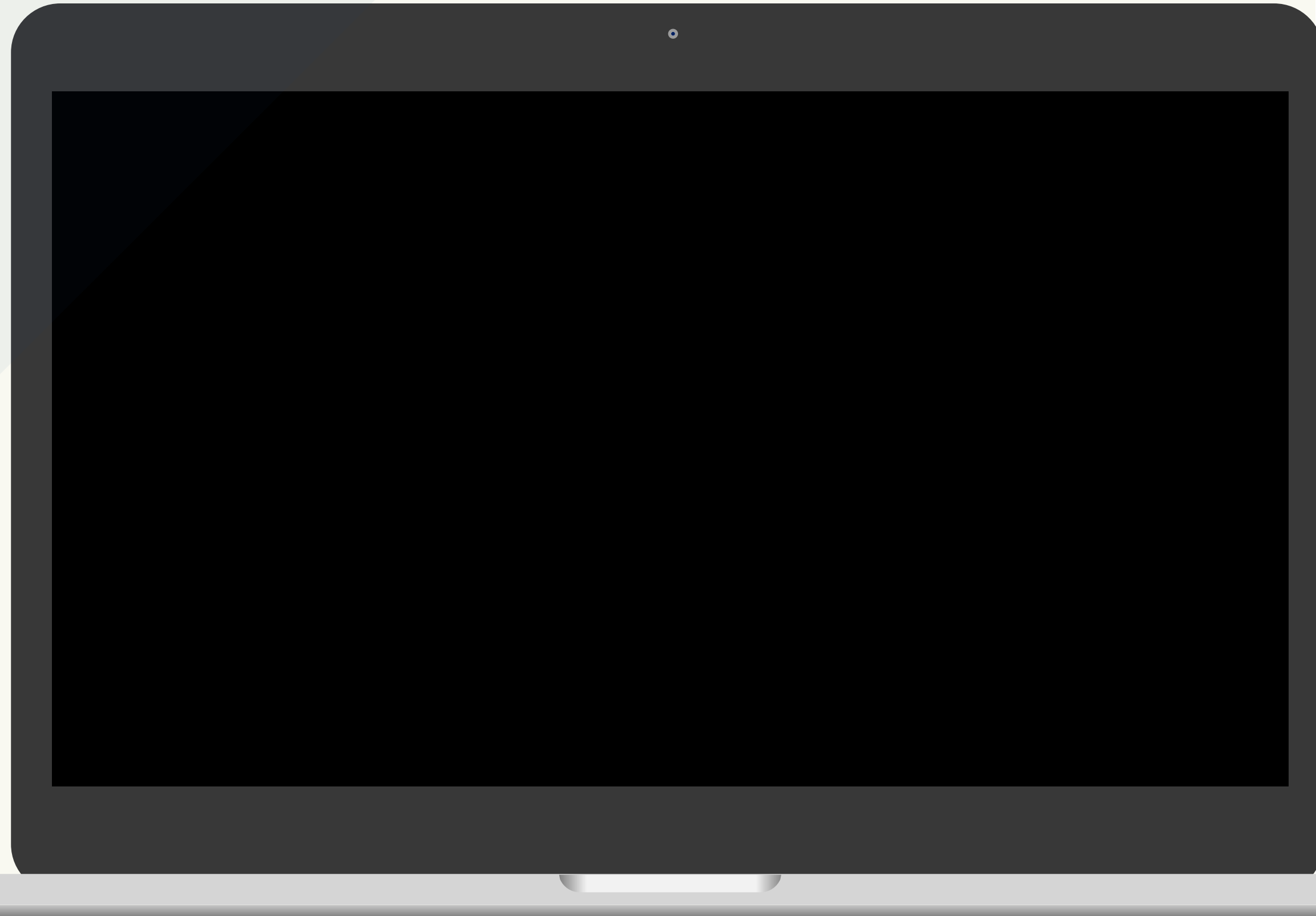
- Isolate the atoms
- Define possible Actions and Conclusions
- Design a 1,2,3 pattern
- Apply!



Example

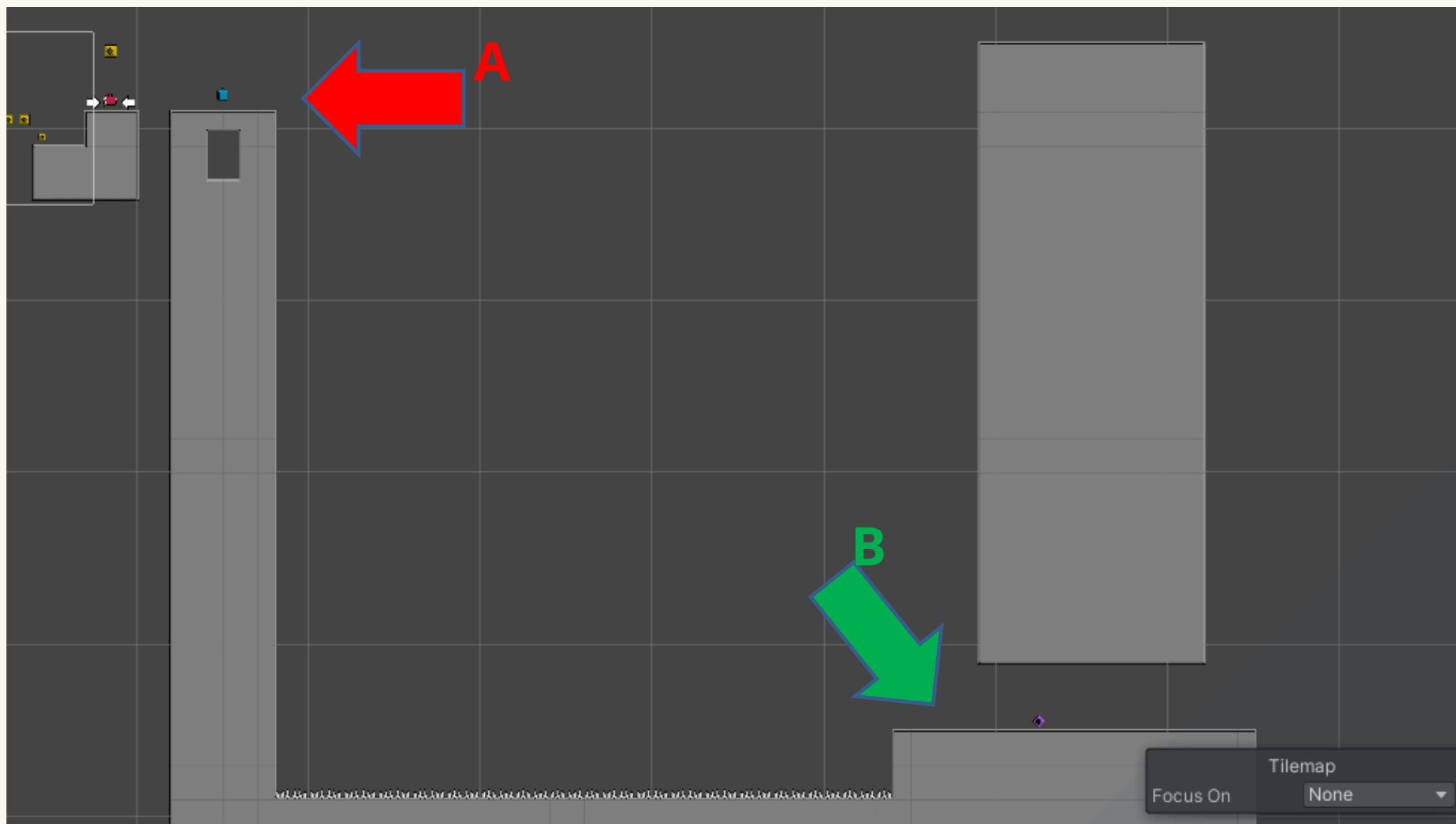


Example

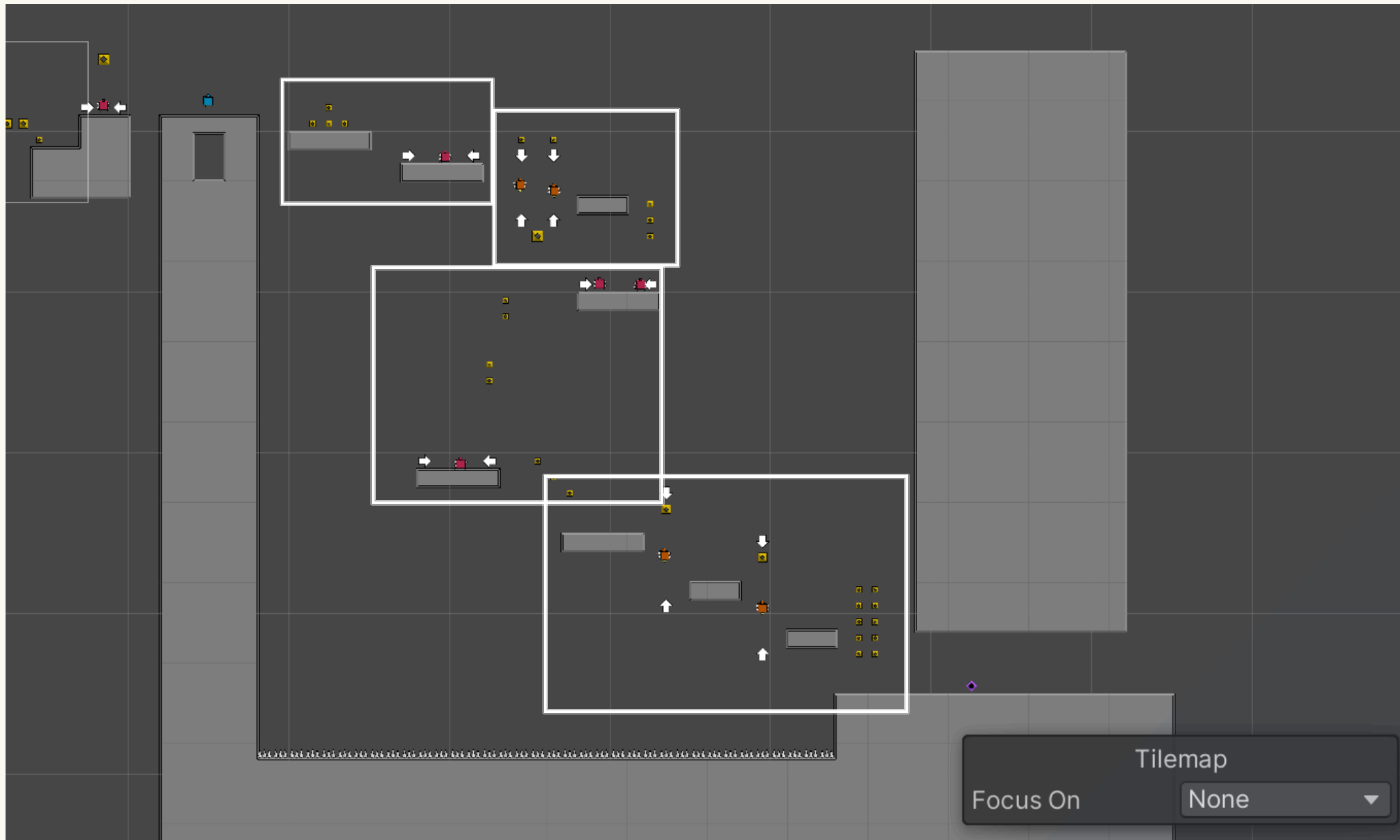


Some Experimental Notes

- You don't need to stick to the pattern completely, it's just for the basic pace creation
- Not every sequence needs an action, but...
- The more you include the 1,2,3 pattern without the conclusion, the more epic it should be!
- You can design the levels based on 1,2,3 action pattern for speed runners!
- Sometimes we break the rules and the rhythm intentionally, based on the context
- It really doesn't matter how you describe your basic parts, it's only important that you can create a rhythm

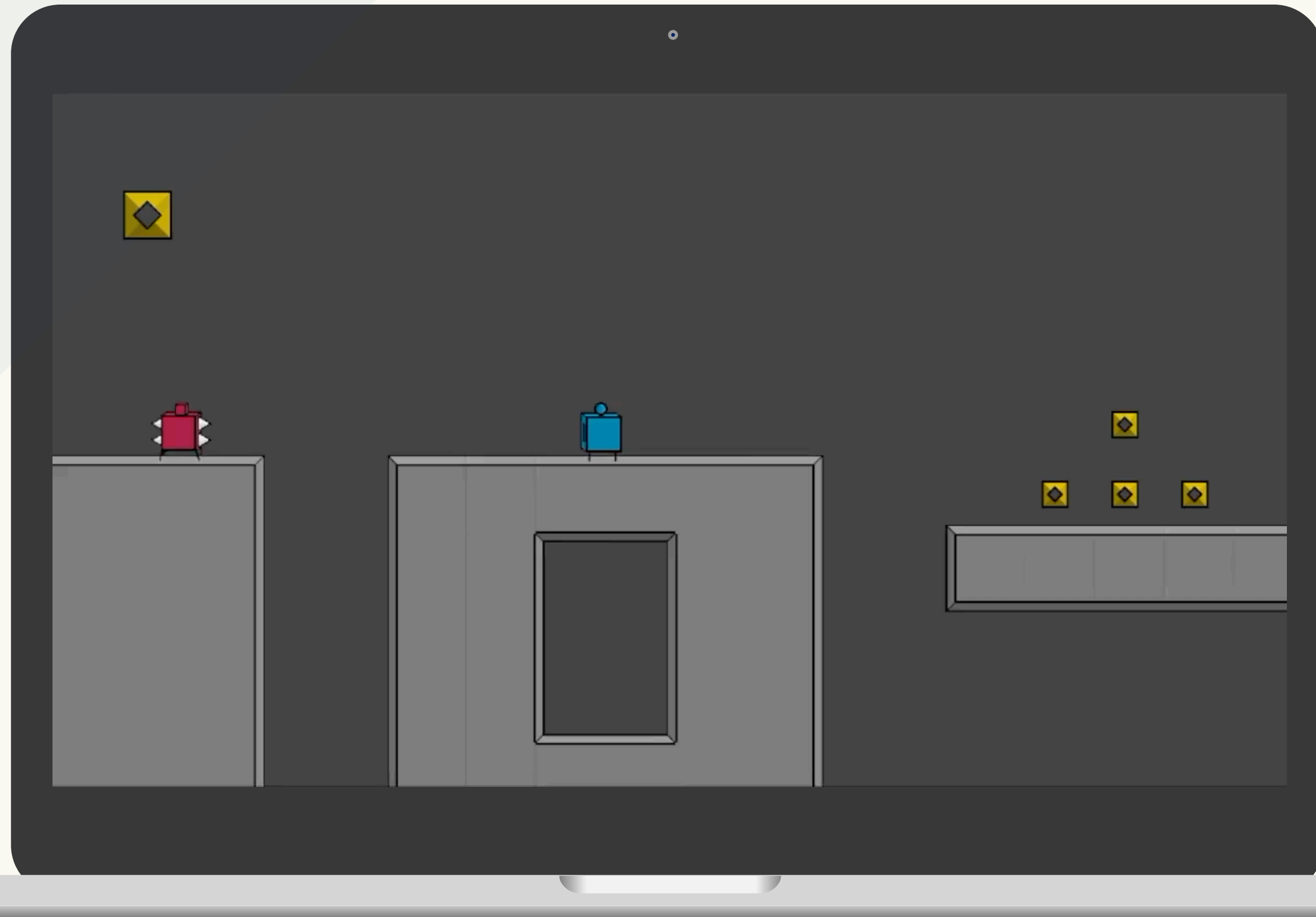


Example:
Long Reach



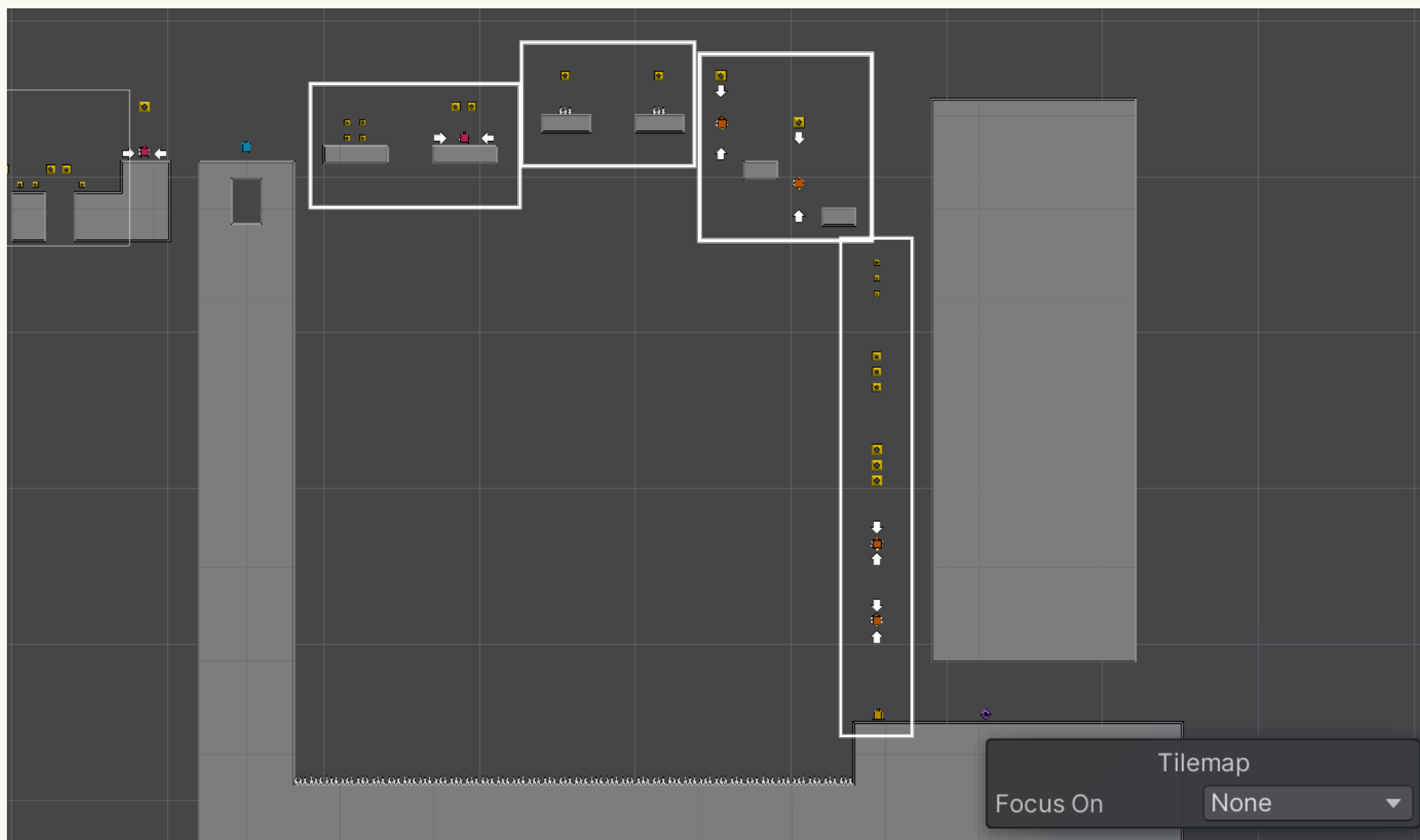
Example:
Long Reach

In Action



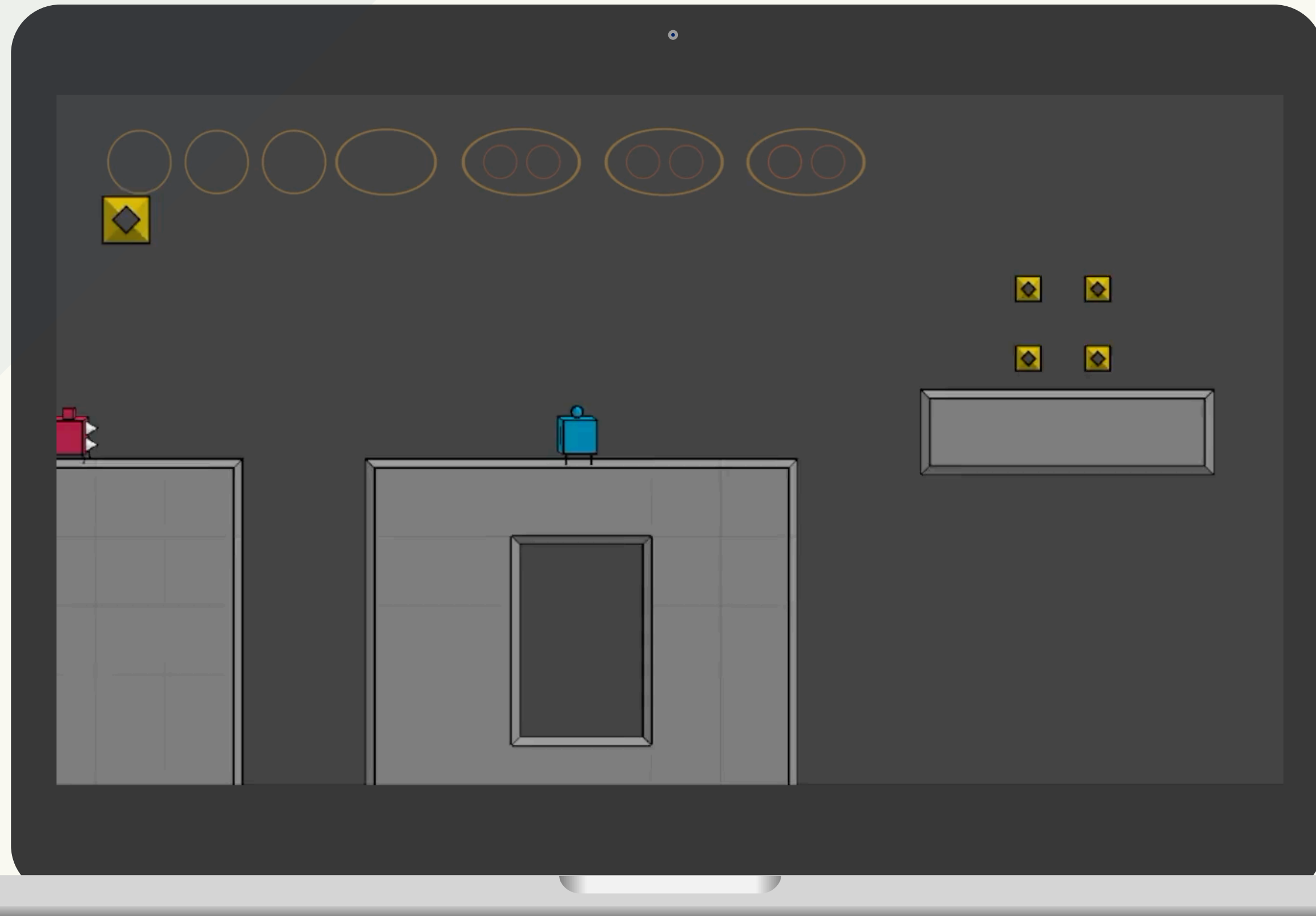
Applying 1,2,3 Pattern

- 1- Keep the 4-chunk structure
- 2- Choose a pattern:
 - 1,2,3, action! (for a good start!)
 - 1,2/1,2 (build up some anticipation)
 - 1,2 (build up more anticipation!)
 - Epic **Action!**
- 3- See how to distribute different enemies and in-game actions to make this happen
- 4- Elaborate on the level



Example:
Long Reach

In Action



Conclusion

- The same pattern can be applied to other genres and levels as well.
- Overuse of this pattern leads to repetitive level structures
- As a level designer, it's up to you at the end to define your pace and your levels.
- There are always other ways to inspire level design from other media and we should explore them.

Thanks for Watching!

- 📧 Email: taha@avagames.ir
- 🐦 Twitter: [@workingtaha](https://twitter.com/workingtaha)