

Planimals: Play, then Learn!



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WHAT IS TAP?

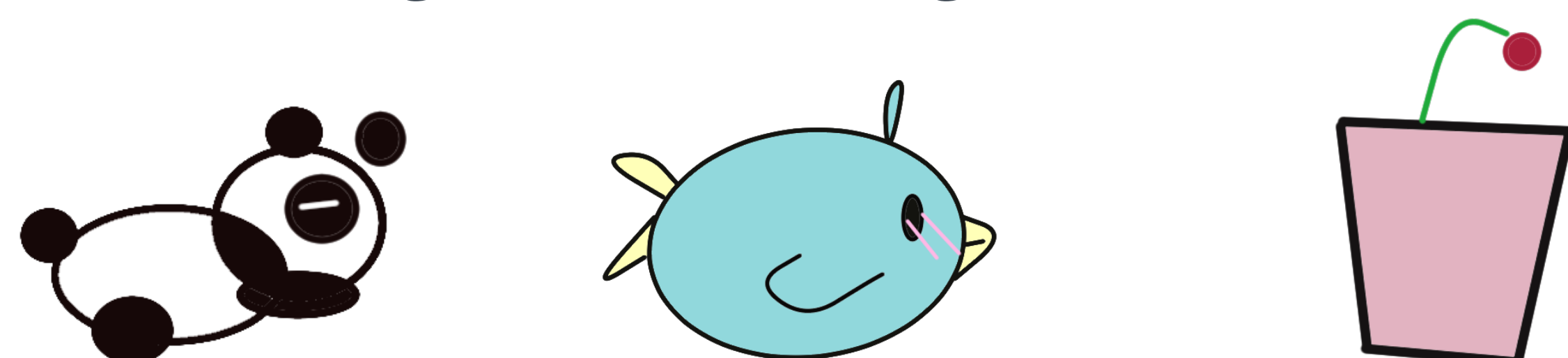
TAP (Technology Ambassador Program) is a program that encourages youths to form an interest in technology and programming through fun workshops.

PROJECT GOAL

Learning any new language can be difficult, but after learning the main words and the proper way to structure sentences, it becomes easier to catch on to. This concept can also be applied to programming; teaching people the main structures and formulas will grant the ability to write and dissect different codes. The main objective of Planimals is to engage people with little to no programming skills with the appeal of a simple structured game that can teach the practicalities of programming. In return, we hope they feel encouraged and confident enough to program independently after engaging in its workshop.

PROJECT DESCRIPTION

We are using Scratch to implement our workshops. Scratch uses simple-to-use block coding, which is easy for new programmers to follow. We also used Clipart studios to design the characters, items, and background for our game.

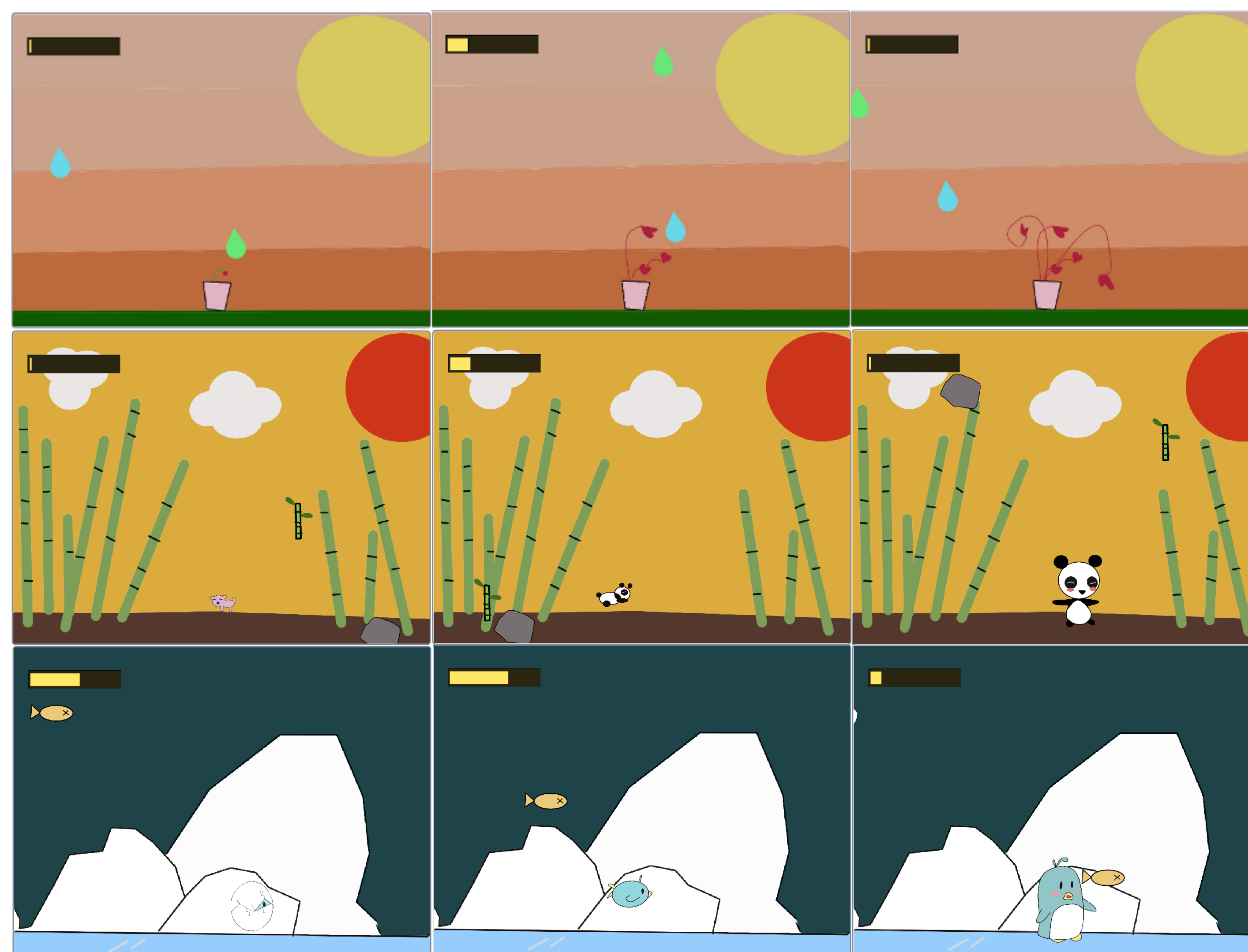


WORKSHOP DESCRIPTION

We are presenting our workshop at several events: TAP Expo, STARS, and CREATE Symposium. We will also present our workshop in three general education classrooms. During these workshops, we teach participants the basics of coding and game development through the creation of their own game. Precisely, our workshop teaches if statements and loops. First, participants will see how we developed the game and then learn the programming skills to develop their own. We will assess our goal from the survey results obtained from the participants during the workshops.

GAMEPLAY

Players begin by choosing a character (panda, plant, or penguin) and then they need to collect enough resources to evolve through three different life stages. The challenge is that players also have to avoid harmful resources. If they collect the wrong resource too often, they will regress to their former stage and eventually lose the game. Otherwise, if they evolve through all of the character's stages, they win!



If Statement Example

```
when I receive Phase Change
if Phase = 3 then
  switch costume to sprout large
else
  if Phase = 2 then
    switch costume to sprout medium
  else
    if Phase = 1 then
      switch costume to sprout
```

The code shows how the character evolves throughout the game. The phases account for the characters reaction to the resources. If the phase increases, then the character progresses. If the phase decreases then the character regresses.

ACKNOWLEDGMENTS

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