CamJam EduKit Worksheet Eight

Project   Create some games!

Description   Computers and electronics are not just about learning and concepts – you can make and play games as well!

Equipment Required

The circuit built in Worksheet Six.

Exercises

In this worksheet, you are not going to be given any code. You are going to be given some <u>ideas</u> for games you can make and play using CamJam EduKit 1, and some hints that you might need.

Hints

Random numbers can be generated by importing the random module (`import random`) then using the `random.random()` to generate a random number. This will generate a number between 0 and 1. To generate a number between x and y you can use `random.randint(x,y)`, as in the following code:

```
import random

print("Random number between 1 and 10:")
print(random.randint(1,10))
```

Game ideas

Game 1 – Reaction Timer

Light the LEDs one at a time, going from Red to Green with one second in-between. After the green has been lit, wait a random length of time (say, between 1 and 5 seconds) before sounding the buzzer. Time how long it takes from the buzzer sounding to the player pressing the button.

Game 2 – Eat the Orange

Randomly choose which LED to light. Light it for 0.2 seconds. If the player presses the button while the Amber LED is lit, they get a point. Record how many points they have earned and time how long it takes for them to win 10 points.

Game 3 – Segment of Orange

Change the colour of the LEDs from red, to amber, to green, to amber and back to red every 0.1 seconds. If the player presses the button when the amber LED is lit, they get a point. Only give them 10 chances to hit the button when the amber is lit.

Feedback to CamJam

If you think of any other games that you can make and play with the CamJam EduKit, or if you have any other feedback, please let us know using the contact form on the CamJam EduKit website at https://camjam.me