

Using Visual, Block-Based, Event-Driven Language to Teach Coding Skills

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WHAT IS TAP?

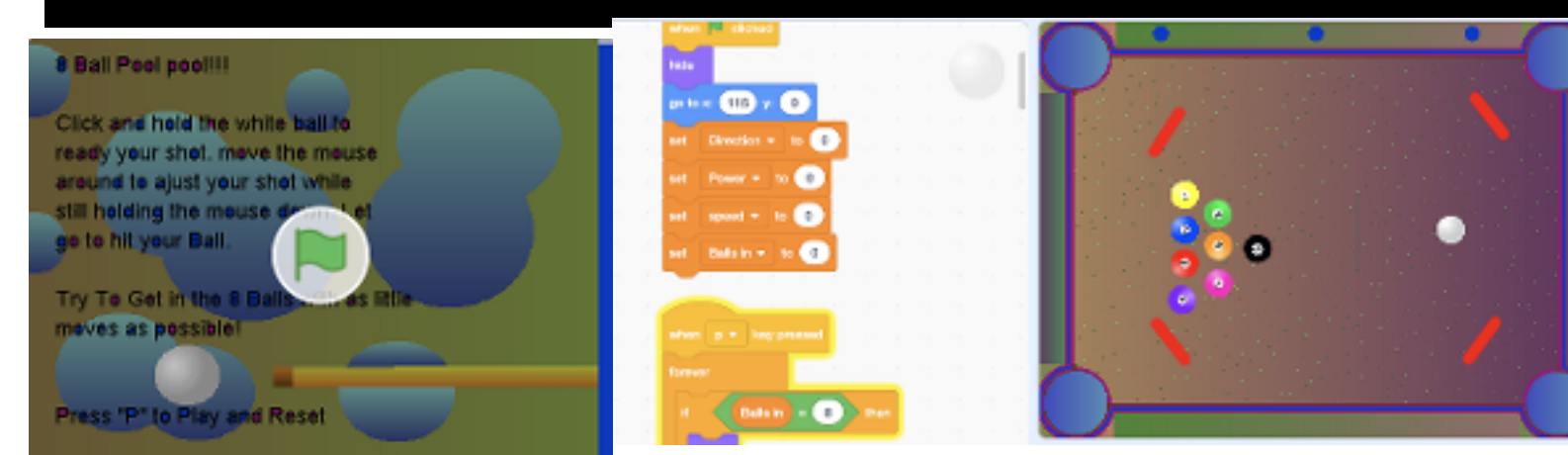
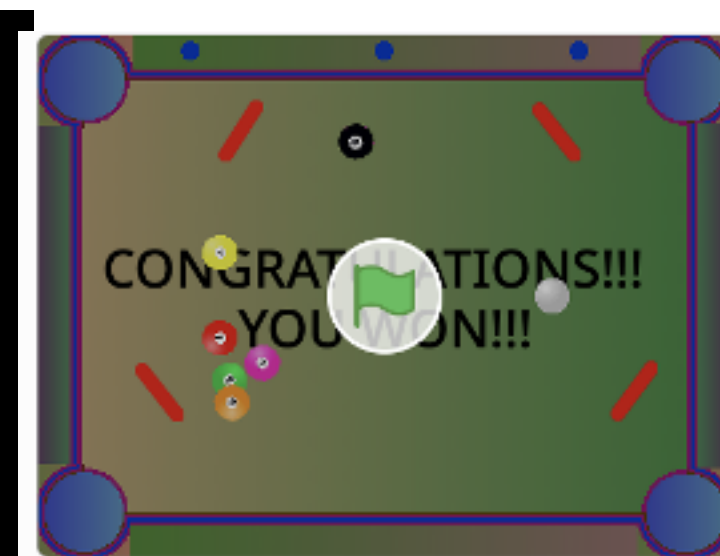
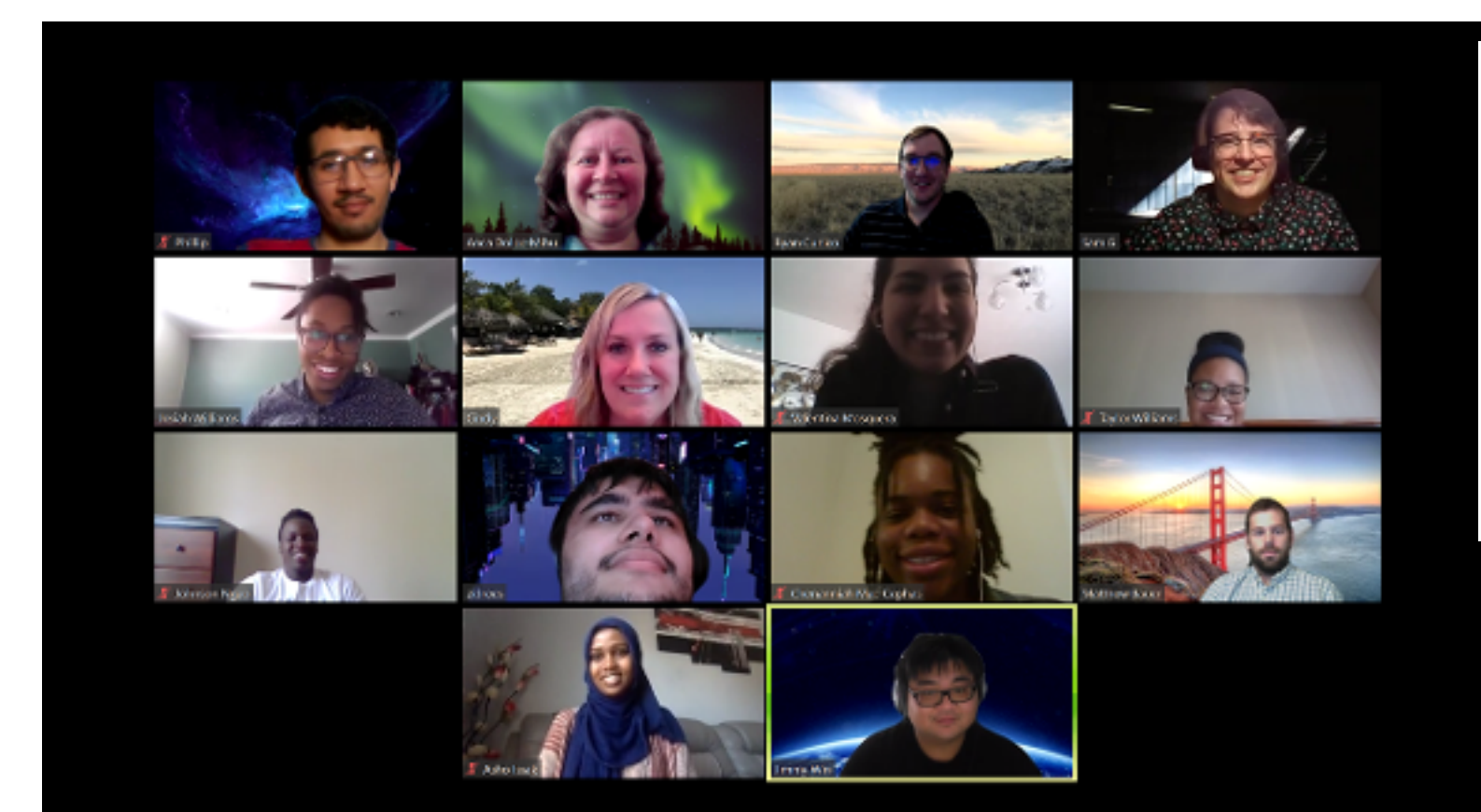
- The Technology Ambassadors Program is a program that offers students opportunities to learn more about technology, and help them develop creativity, leadership, communication, and teamwork skills.
- Through this program, students participate in outreach events to get participants of all ages interested in technology

OUR PROJECT GOALS

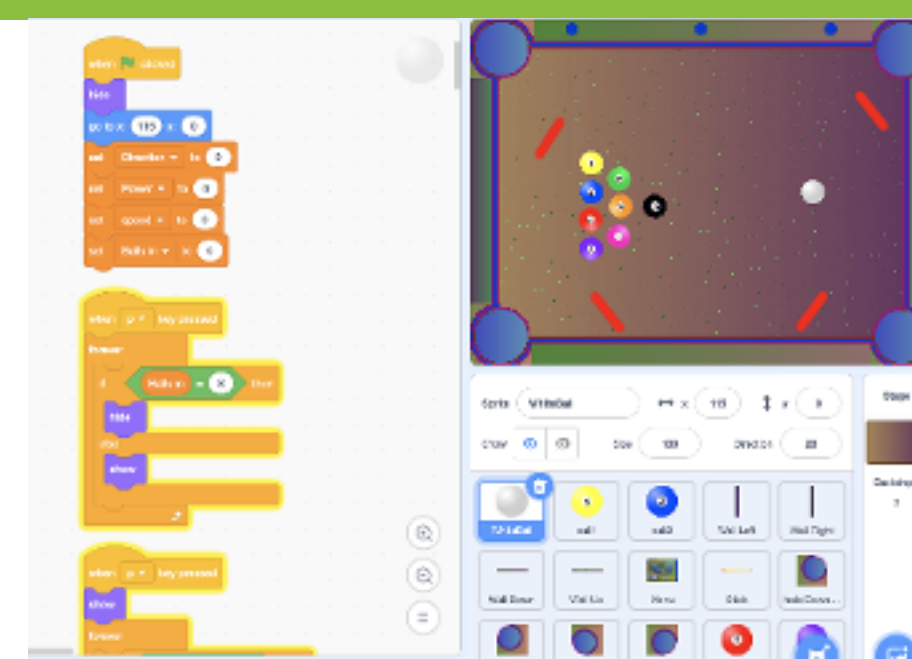
Using **Scratch block code** to create a fun and engaging pool game that introduces programming basics such as 'if-statements' and 'while loops'.

PROJECT DESCRIPTION

- MaKey MaKey Pool is a game teaches students coding skills using "if-statements", "while loops", and building blocks using the Scratch programming language
- The MaKey MaKey Invention Kit was used in place of the computer mouse/keyboard mouse pad.
- We conducted an online learning workshop for digital media students at GGC.
- We used blackboard to host the live collaboration and showed the students how they can make changes to the pool game



TECHNOLOGIES

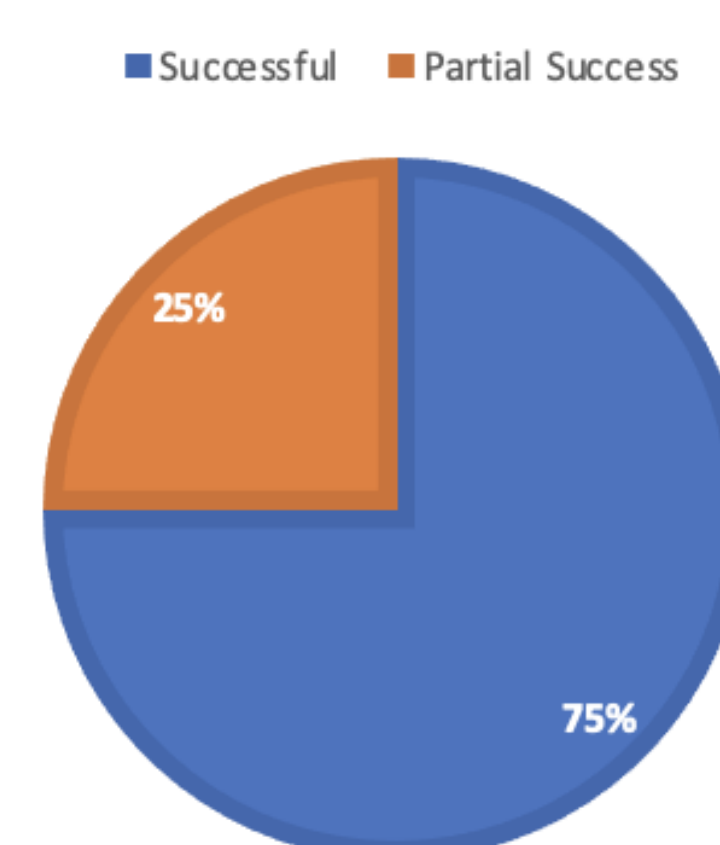


- We used scratch programming to create our pool game.
- We wanted to use makey makey as a keyboard but due to quarantine we weren't able to use it.

RESULTS

- We presented to 72 students during the online workshop.
- 90% of our participant were not IT majors.
- Only 10 % of Our participant were IT Majors.
- Our participants ages ranged from 18 years to 58 years old
- 8 students submitted their new game to us
- We were able to verify their understanding of if-else and while loops as shown by their game

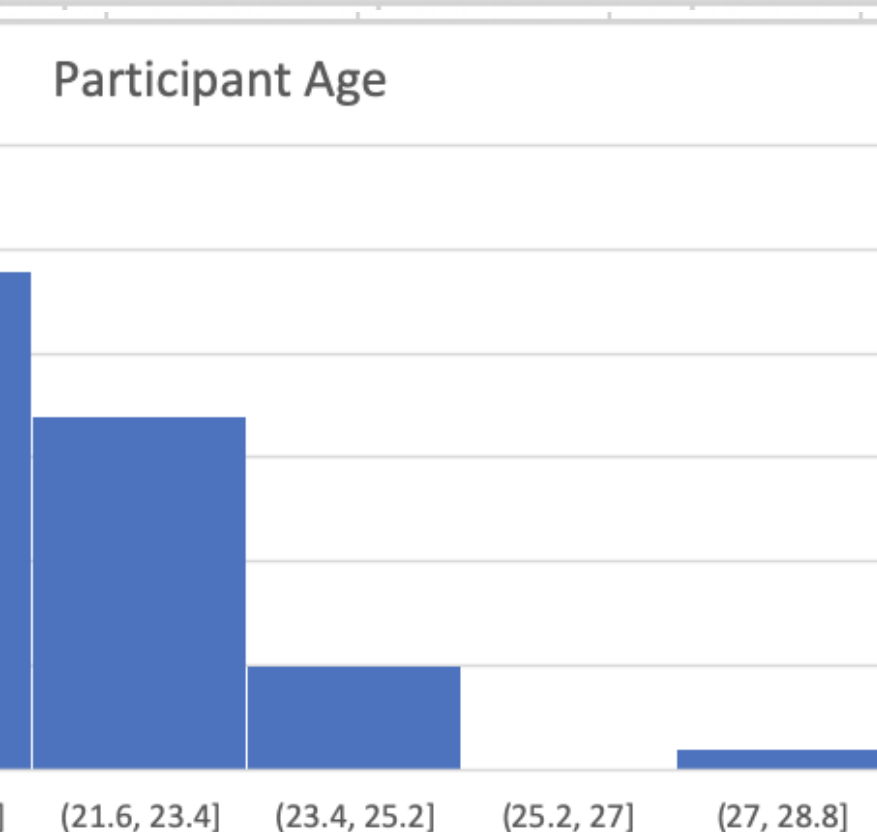
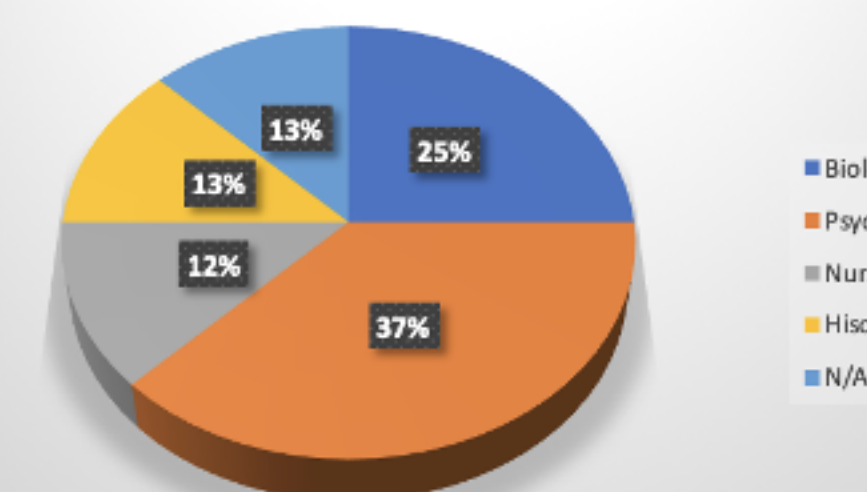
SUCCESS RATE



This chart shows the success rate of the 8 students who made changes to the our game. 75% of the understood what they were doing and there for they were very successful. Only 25% of them were partially successful because they made very simple changes.

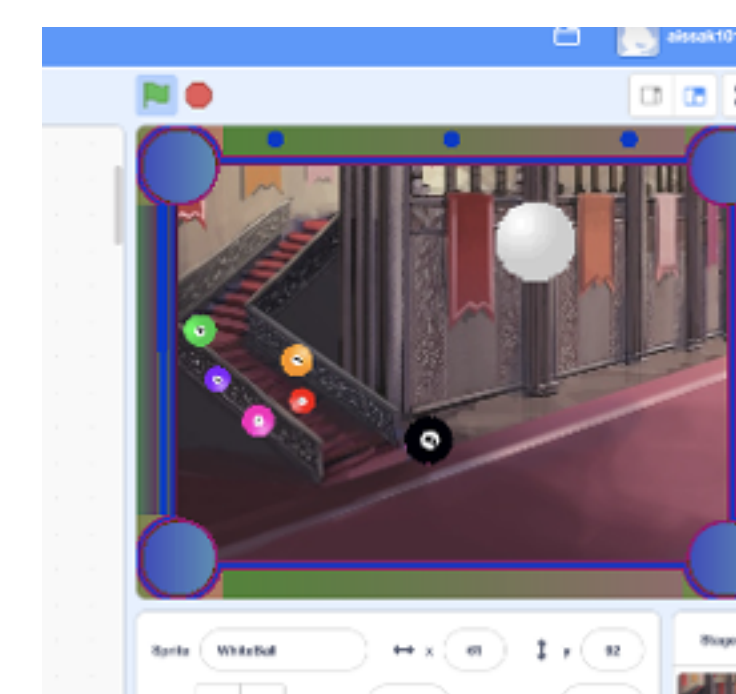
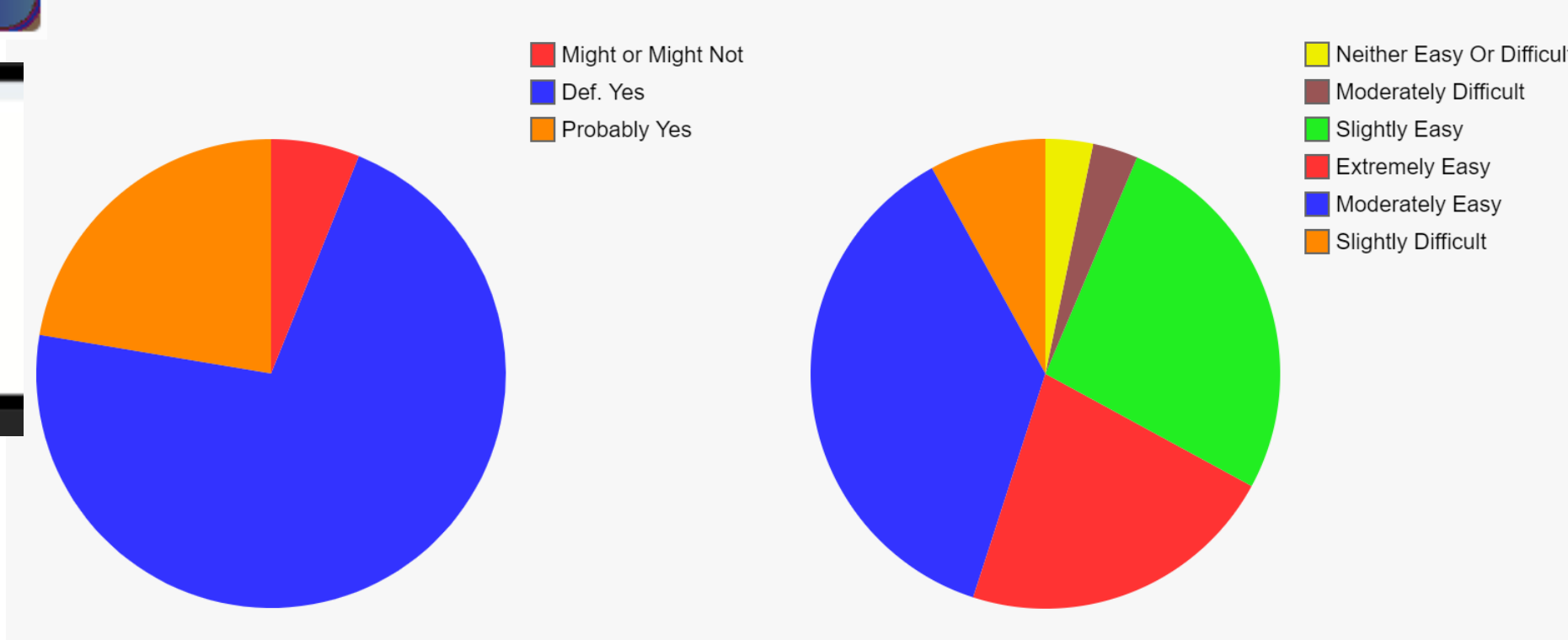
-All the eight student participants were none ITech majors. Majority of them were psychology major and they make 37% of the chart. The second highest was Biology majors they made 25% of the chart. The rest were Nursing, history and undecided

Majors of the 8 participants

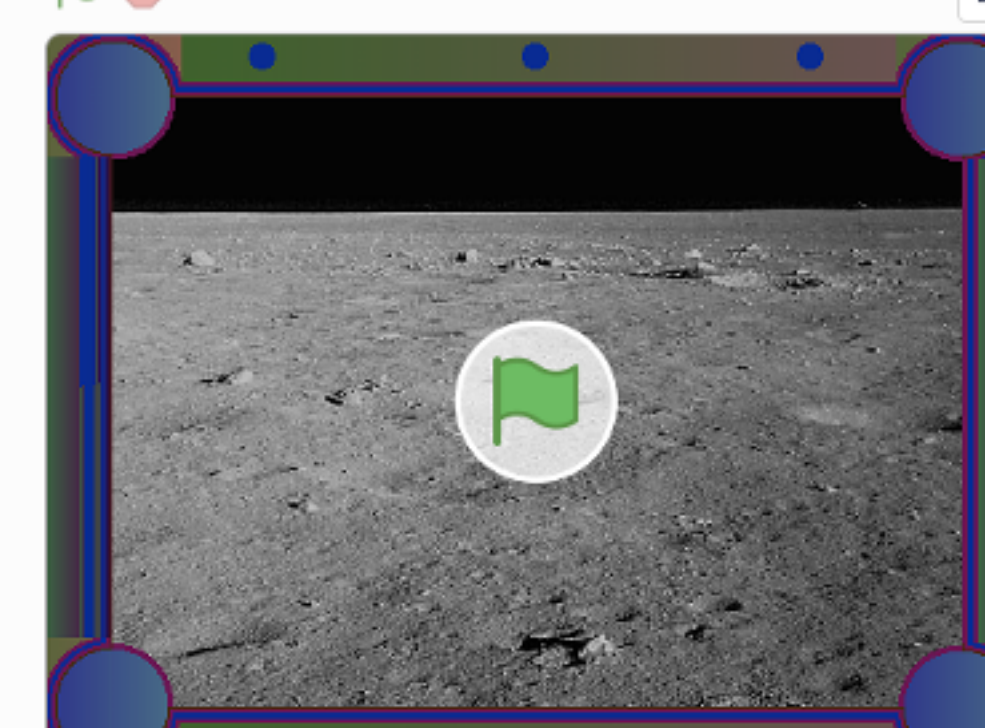


- This chart shows our participant s age

Did You Enjoy Learning New Technology How Difficult Did You Find Learning The New Technology

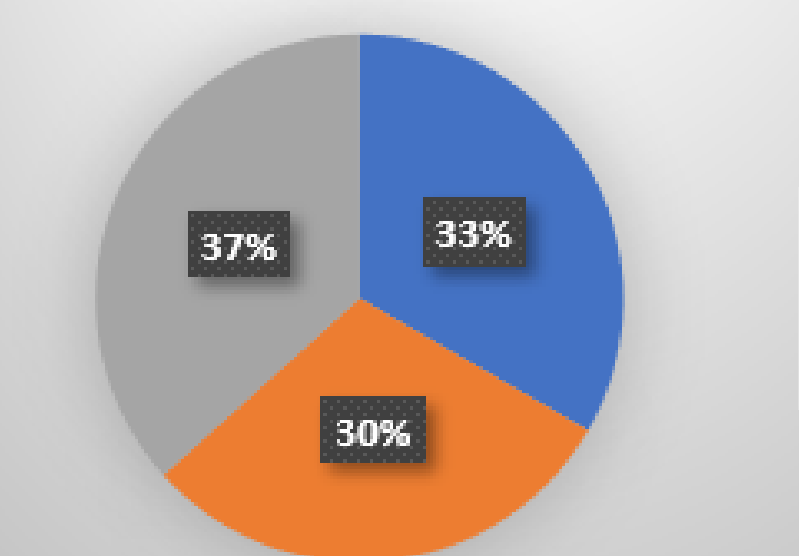


One of our participants made this change. He changed the game background and increased two balls size. He made this change using if else statements and while loops.

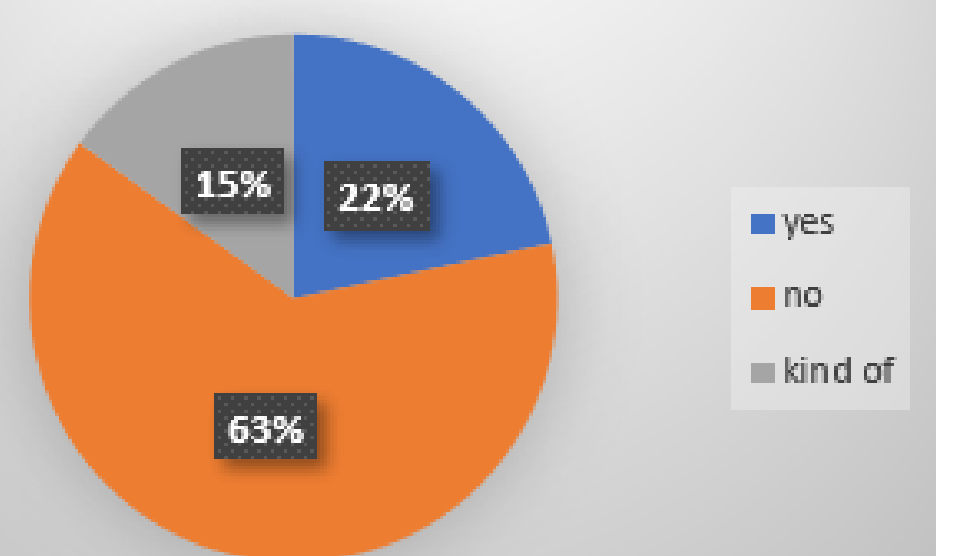


Changes made by students

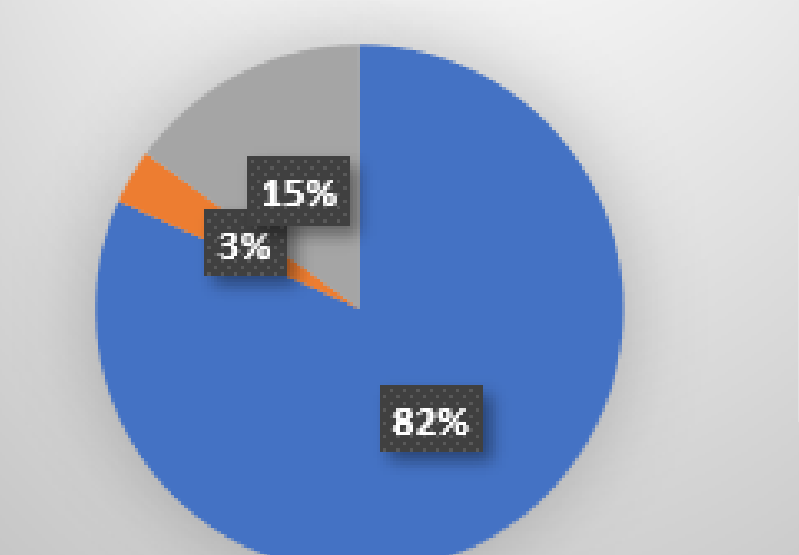
understood if - else before



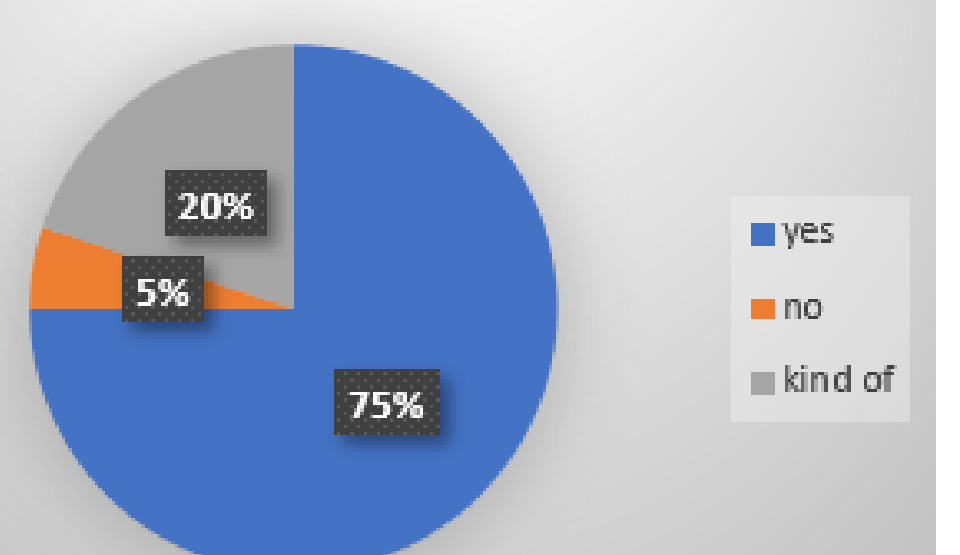
understood while loops before



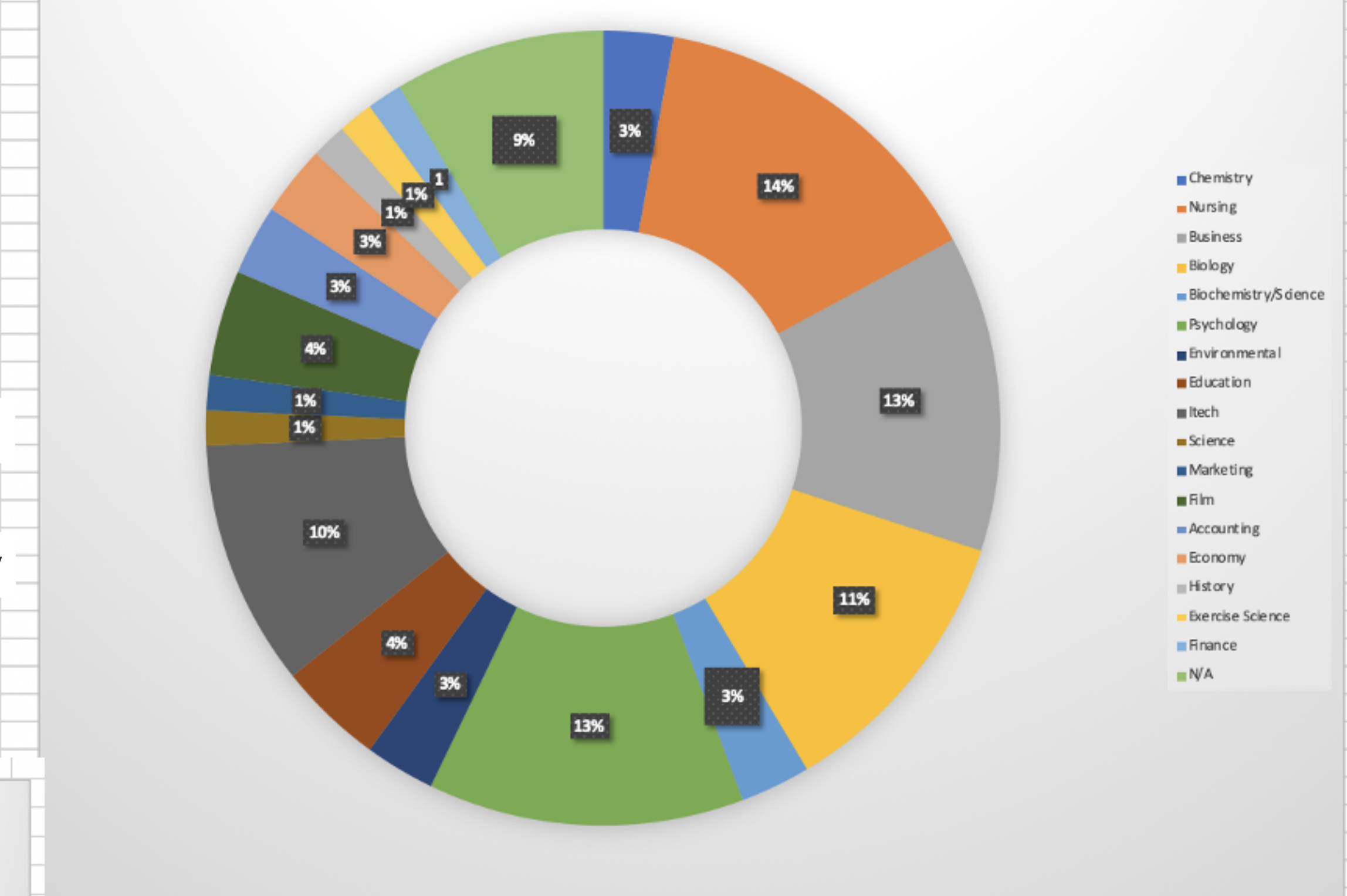
understood if - else after



understood while loops after

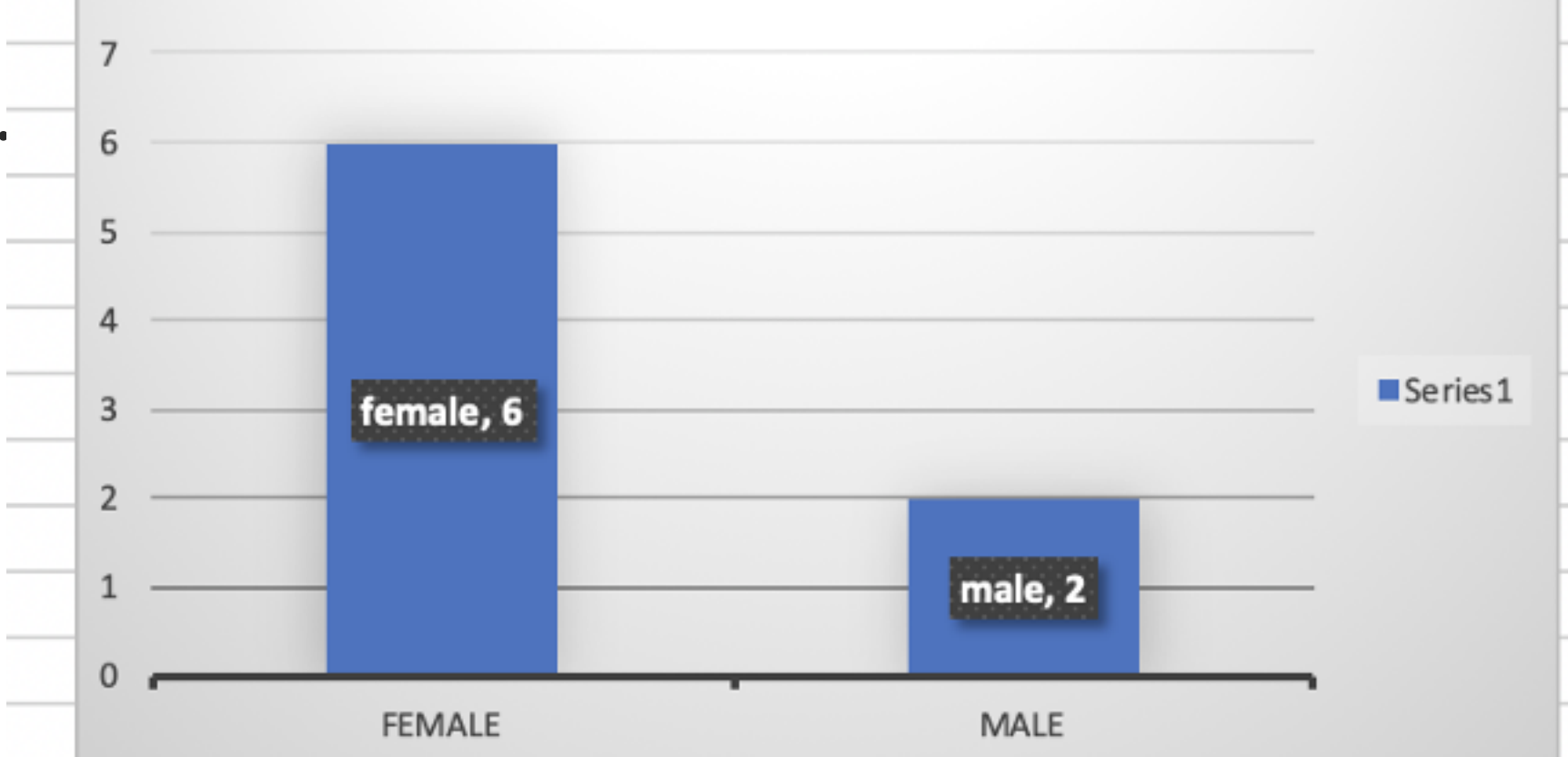


Majors



- This graph shows how diversified the student major was for our participants.

Gender of participants



Out of all those 8 students participants 6 were female and 2 were male

ACKNOWLEDGMENTS

- MIT Media Lab
- STARS Alliance