Virtual Reality Escape Room

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The Team

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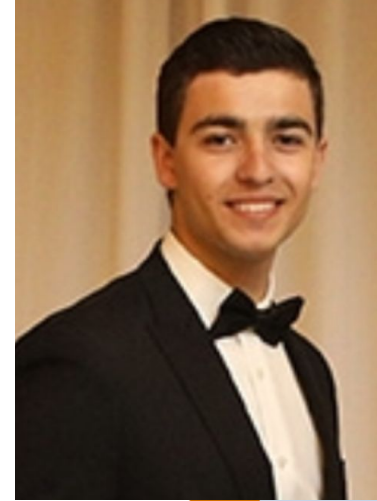Automation &
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Goals

- **Create an educational Virtual Reality** (VR) **escape room**

  - **Teach Science, Technology, Engineering, Mathematics** (STEM) **concepts in creative ways**

- **Build a mobile app for audience participation.**

Equipment

- **VR Headset** (HTC Vive)
- **Backpack PC** (ZOTAC/MSI)
- **Hand tracker** (Leap Motion)
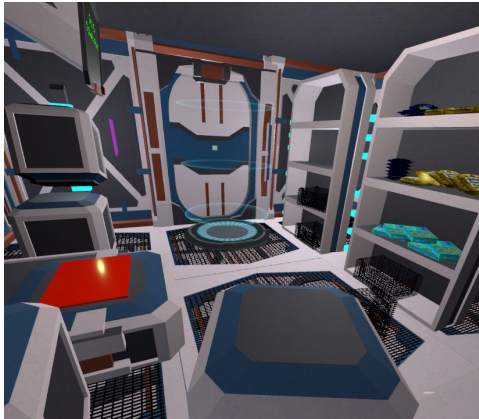- **Wireless HDMI**
- 2 googly eyes

The Game

- The player is stranded on a space station.
  - Collect items to fix a broken escape pod.
- Each room contains a different STEM based puzzle.
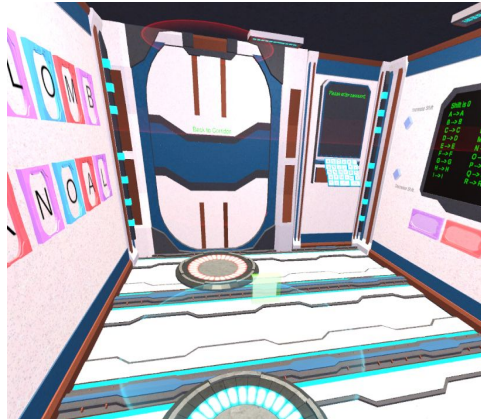- Each puzzle teaches a STEM concept.
  - "Hands On" learning

The Rooms

Foodstock

Teaches adding fractions with different denominators

Communication Room

Teaches simple encryption (caesar ciphers).

Water Room

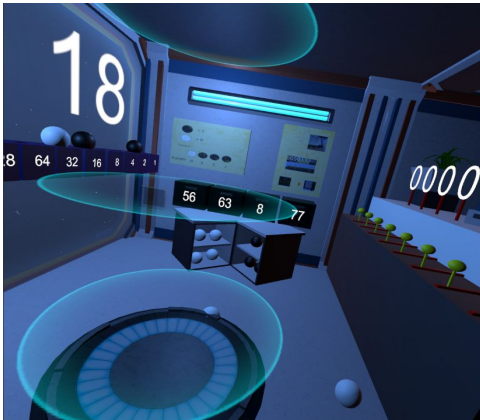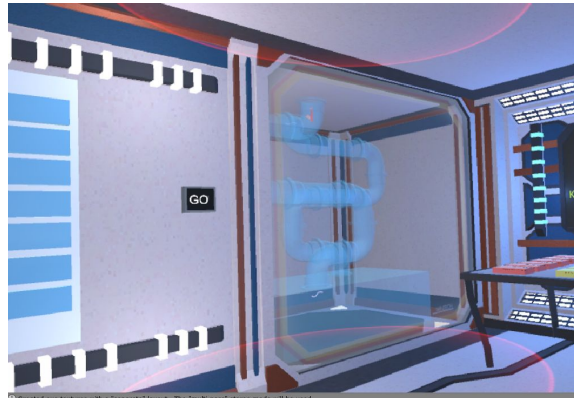**Teaches logic and planning: "Connect pipes from start to end"**

The Rooms

Server Room

Teaches binary numbers

The Aquarium

Teaches basic programming and algorithms
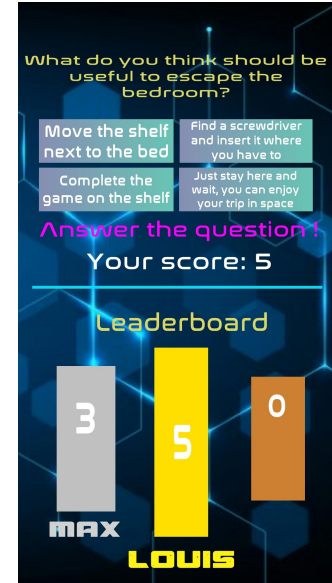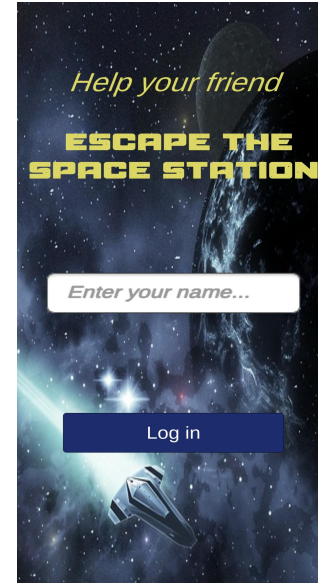

The Spaceship

Final room adds immersion and evaluation

Mobile App (Android)

- **Increase student/classroom involvement**

- **Connects player to peers through mobile devices**

- **Work together to solve puzzles**
  - **Voting system**

Future Goals

- **Extend to multiplayer**
  - ▷ **Rework the room to be designed for 2 players**
  - ▷ **Create player's avatar**
- **Improve mobile app interactivity**
- **iOS integration**
- **More rooms**

THANK YOU!

Questions or Comments?