

A decorative graphic on the left side of the slide consists of white and light blue lines forming a circuit-like pattern. These lines branch out from the left edge, with small circles at various points, resembling a stylized circuit board or data flow diagram.

# ARCANE ARCADE

TEAM TERABITES

# TEAM MEMBERS

- Dzilafho Mulugisi
- Gershom Maluleke
- Elton Tom
- Christiaan Nel

# CLIENT

- Tony van der Linden, Executive at BBD
- Sponsored by the research and development team of BBD



# SCOPE

- Potential employees should be able to complete programming challenges in an esoteric language, or "esolang"
- Users will write and run the code to complete the challenges
- Results from the challenges will be used to determine the users' skills
- Users should be able to complete the challenges from their web browser or tablet

# REQUIREMENTS

- Performance is the main desired quality attribute
- Developing a compiler to compile the user's input
- Challenges should increase in difficulty and make use of some programming principles such as arithmetic, condition checking, iteration, etc.
- User challenges should make use of gamification principles
- Administrator functionality, such as altering the esolang and challenges
- Back-end functionality should be programmed in C# or Java
- Front-end functionality should be HTML and JavaScript

# SOFTWARE ARCHITECTURE

- Important quality attributes are:
  - Reliability
  - Performance
  - Maintainability
- Potential architectural pattern to be used is the client-server pattern
- Offload as much of the heavy work (compiling the code) to the server
- Favors performance on the user's end
- Devices in a disconnected state might prove challenging to deal with if too much is offloaded to the server