Product requirement document

1 Context

1.1 Problem

Harfang3D is written in C++. To use Harfang3D you also need to write the code in C++.
A client may not have C++ qualified developers. In this case they would have to either use an other technology or hire new developpers.
It also takes longer to develop a program in C++.

To help alleviate this problem the client wants to bind other languages to Harfang3D. Specifically, the client wants a Rust binding in particular

1.2 Target, User and Stakeholder

Our Target is Harfang3D. The users are Harfang3D, Harfang's client and the users. The Stakeholders are Harfang3D and ALGOSUP.

2 Scope

2.1 Success

- Use the clients software and update it to add a Rust binding.
- Base ourselves on the Go binding to do our own.
- Make sure the binding functions properly.

2.2 Out of Scope

- No polymorphism at runtime.
- Implement another language binder.
- Unit tests must be verified.

3 Key decision / Constraints

3.1 Sizing

We are not projecting any budget need as of today January 6, 2023.
The project needs to be delivered on the February 17, 2023. The Deliverable project will also include a presentation in front of the stakeholders, functional specifications and technical specifications.

3.2 Solution proposition

The solution selected is to use the client's existing C++ binding generator. This binding generator already supports GOlang, Python and LUA. We plan to inspire ourselves from the Golang binding implementation to do our Rust implementation.