

Project documentation

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1 First section

The aim of this project is the study of Yao's protocol [2] and an useful application of it.

More precisely, we will implement Secure multi-party computation; this field has the goal of creating methods for parties to jointly compute a function over their inputs while keeping those inputs private [1]. In this project, the function we decided to implement is the *8 bit sum*.

2 Second section

This is the content of the second section. This section contains the algorithms of my implementation

```
Data: this text
Result: how to write algorithm with LATEX2ε
initialization;
while While condition do
  | instructions;
  | if condition then
  | | instructions1;
  | | instructions2;
  | else
  | | instructions3;
  | end
end
for  $i \leftarrow 0$  to 8 by 2 do
  | Do something
end
```

Algorithm 1: How to write algorithms

2.1 A subsection

A subsection is created to organise some information together within a section. This includes the example of how to include a figure. This shows how we refer to algorithm 1.

References

- [1] Wikipedia contributors. Secure multi-party computation — Wikipedia, the free encyclopedia, 2023. [Online; accessed 10-May-2023].
- [2] Andrew C. Yao. Protocols for secure computations. In *23rd Annual Symposium on Foundations of Computer Science (sfcs 1982)*, pages 160–164, 1982.