Pseudo-Random Noise Generation for FPGA with Python/Amaranth

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slides and references at
https://github.com/oscimp/amaranth_twstft

Outline

1. About Pseudo-Random Noise

2. Python implementation

3. Amaranth implementation

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What is a PRN?

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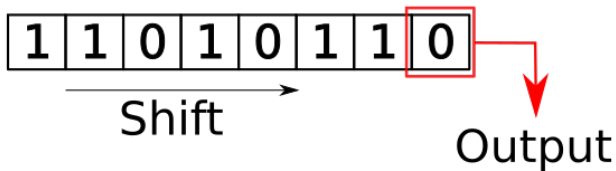
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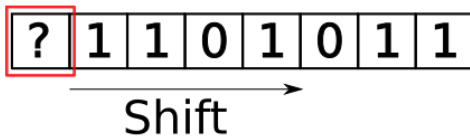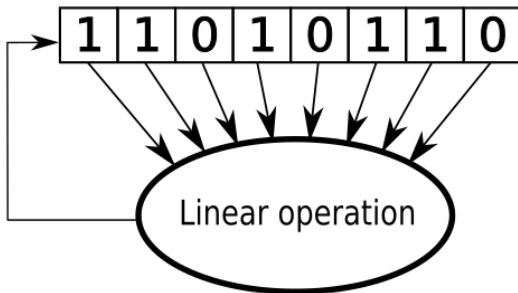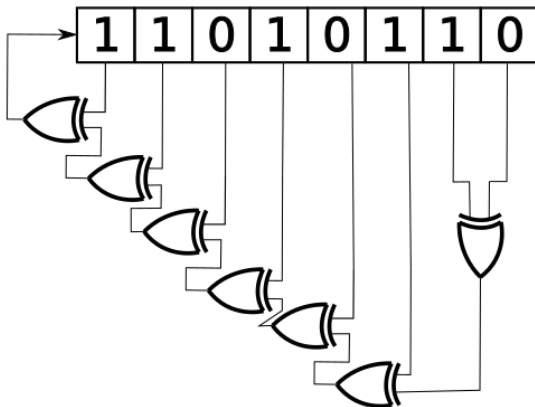- Easy to differenciate from otherly generated PRNs
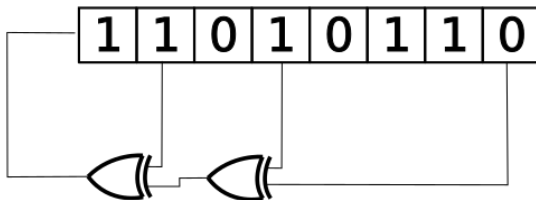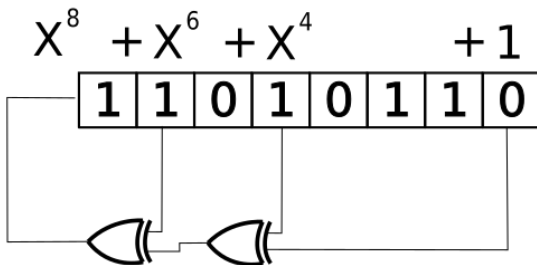
Linear Feedback Shift Register

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$$X^8 + X^6 + X^4 + 1$$

Linear Feedback Shift Register

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In the end...

- Understand the concept of linear feedback shift register
- Code your own version of LFSR
  - with regular python
  - with amaranth for your FPGA