PS2 - LFSR + Image Magic

Boost unit testing INCLUDE code!
XOR
Image encryption + decryption
RNG
LFSR concept itself - seed + tap

seeds

pixel manipulation

parsing arguments
image file shift

lossless
PNG - Uncompressed

JPG - lossy
BMP - not compressed

algorithm part - seed + tap
PSO - Hello World w/ SFML

"Big green circle" libraries
sprite - texture -
modify sprite model coord
install SFML windows & events
set up Linux env. / Mac VBox -

PSI - Sierpinski's Triangle - where?

recursion
1st MakeFile
overloading draw
derived from Drawable
const -> PSI

own triangles design
illuminate Sierpinski

- Math -
  - original math
  - hexagons
  - circles

draw effects
SFML
finding cool features
PS3 N-body

PS3a Static Universe

"Body" class
members: astro x, y
conv -> pixel coords

Vector of pts to Body's

redirect from std:io
to load world file

<<
>> scientific notation

Body
  x, y
Image - file
  (Texture: load from file)
  Spike

Copy constructor issue

const

for each Body:
  Body::update();
  Body::draw();
PS3: Physics 1111.

Physics & motion

didn't result net forces
i & j for each body
\( \vec{F} \) forces from every other body

> net force

Vector of forces

\( \Rightarrow \) acceleration (\( \vec{a} \))

\( \Rightarrow \) \( \Delta \vec{v} \) vel change

\( \Rightarrow \) \( \Delta \vec{x} \) pos change
PS4 DNA alignment

Valgrind - memory analysis
massif

space time

compiler optimization 30% improvement

Data viz - include image of your
#871 data

\[
\begin{array}{cccc}
C & A & T & - \\
G & & & - \\
A & & & - \\
T & & & - \\
\end{array}
\]

\[
N^2
\]

\[
2N
\]
PSX - select + cpplint

PS5 Ring Buffer / Guitar Hero

PS5a

Exception handling / std::exception

Cpplint

Boost unit testing

Internal representation

first, last, ptrs / "full", boolean

first, size

wrapping

enqueue / dequeue O(1)

no dynamic memory after construction
PS3/PS Vita
Guitar Hero
Guitar String

Main - SFML, Sound, Sound Buffer

Guitar String

Ring Buffer

EarPlus - String algorithm

Event - Keyboard

Cevr - Key Board