

PicoRubyを はじめる グッドタイミング

RubyWorld Conference 2025

@hasumikin



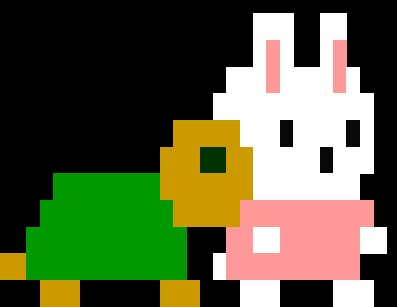
きょうは三部構成

1. PicoRubyとは – PicoRuby, what?
2. なぜいまPicoRubyなのか? – Why now?
3. PicoRuby最新情報 – News



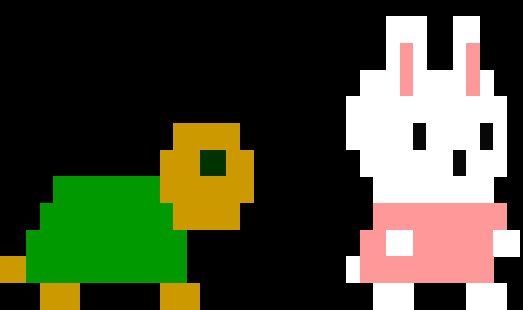
第1部

PicoRuby とは - PicoRuby, what?



なにができるか

- ✿ まじめなIoT - Serious IoT product
- ✿ 役に立つ電子工作 - Useful DIY
- ✿ 役に立たない電子工作 - Trivial DIY
- ✿ コンピュータ学習 - Learning computer



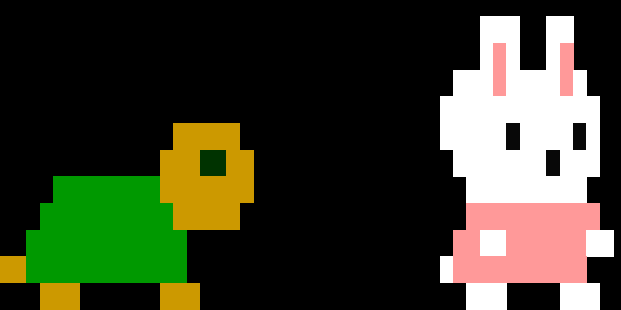
Demoします

PicoRuby

チカ RTA

(L-chika == LED blinking)

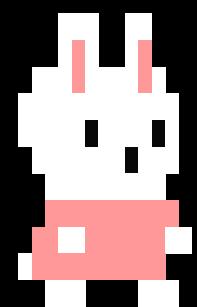
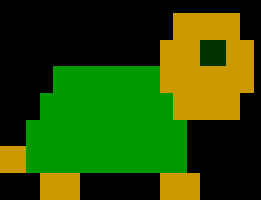
picoruby.org/setup



やった人にしかわからない

Lチカのよさ
L-chika is good

是非やってほしい
You should

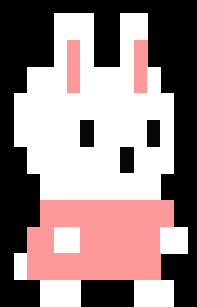
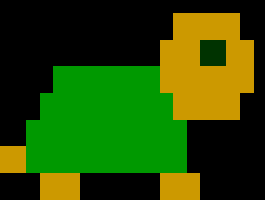


PicoRubyなら

1分で

Lチカできる

L-chika in one minute



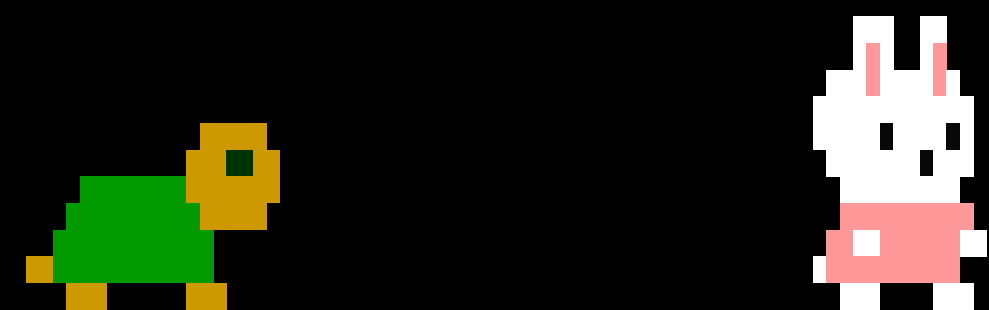
L-chikaのよさ

心に火が灯る感じ

Lighten your heart

計算機とわかりあえる感じ

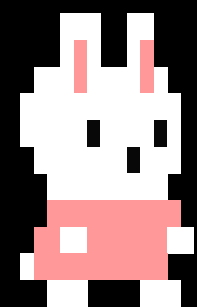
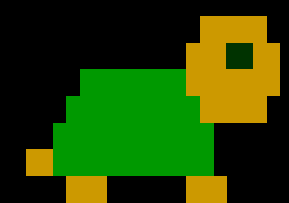
Feel like connected with computer



L-chikaとは、言わば

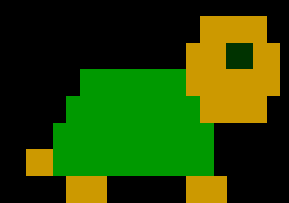
情操教育

Aesthetic Education



ここで

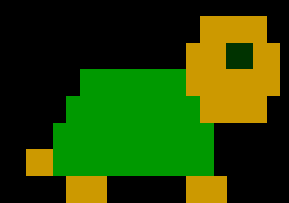
スペシャルゲスト
Special guest!



大事なことなので - As important

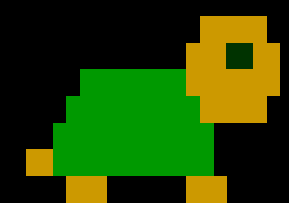
もういちど言います - Again,

「L-chikaは情操教育」
Aesthetic Education



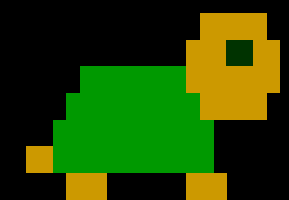
第2部

なぜいまPicoRubyなのか？
Why PicoRuby now?



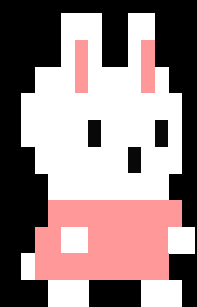
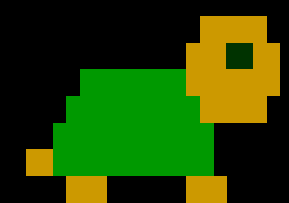
Why PicoRuby now?

=> 大人気だから
Because very popular



PicoRubyが

どのくらい
人気かと言うと、
How popular?

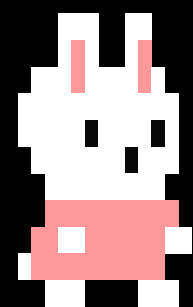
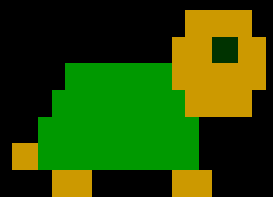


Creator of mruby

嫉妬

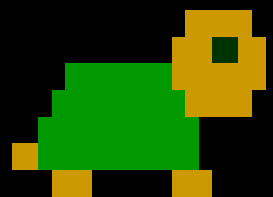
Envies

するくらい人気



きょうDay2の

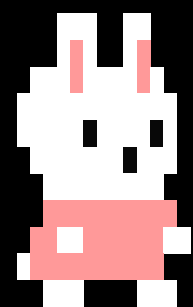
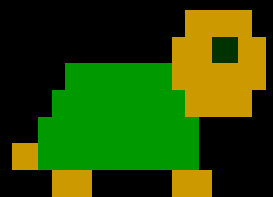
PicoRuby sessions



基調講演は別として
(Aside from the keynotes)

75 min / 135 min

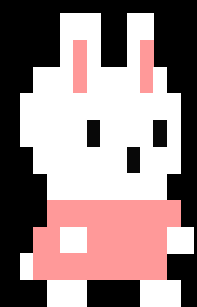
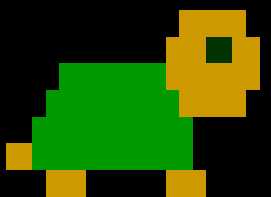
=> 55 %



PicoRubyist in RubyWorld

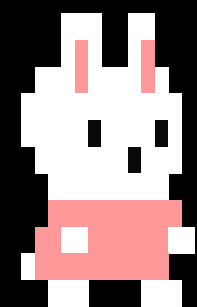
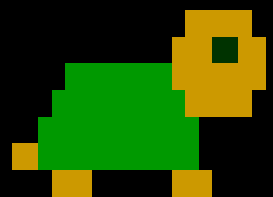
9 speakers out of 16

=> 56 %



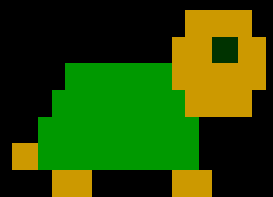
事実上の - De facto

PicoRubyWorld Conference



PicoRuby Overflow会議

July 2025 in Osaka



Ito Koichi さんによると、

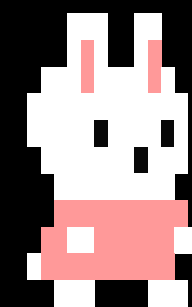
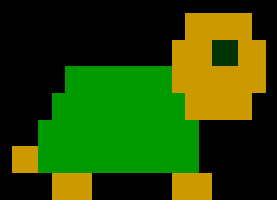
CRuby以外の処理系

では**世界初**の

Community主催

によるRubyカンファレンス

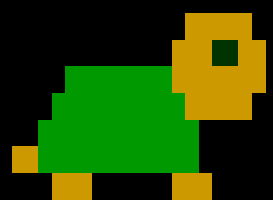
The first Ruby conference
other than CRuby



”PicoPicoRuby”

Users' community of PicoRuby

Tokyo近郊の人はずぜひ参加を



mruby Girls

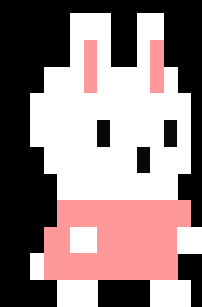
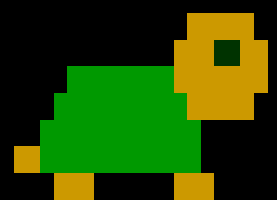
in Matsue

(実質PicoRuby Girls)

あした11/8

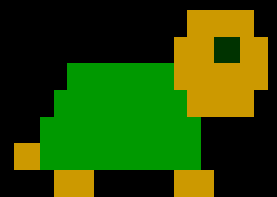
Open Source Lab, Matsue

見学できる (かも)



PicoRubyはなぜ人気? - Why popular?

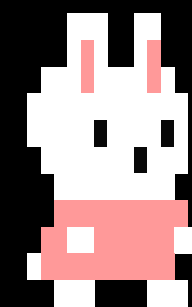
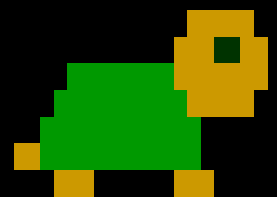
答え「かんたんだから」
Because it's easy



mruby, mruby/cは難しい - Difficult

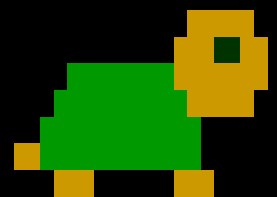
- ✳ 本体は言語実装のみ - Language only
- ✳ マイクンLibraryない - POSIX only
- ✳ 必要な知識と作業が多い - Lot to do

You need to integrate by yourself



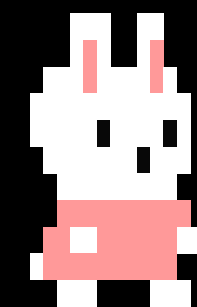
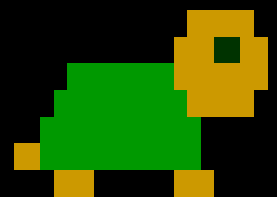
PicoRubyはなぜ人気? - Why popular?

答え「標準ライブラリの充実」
Standard library



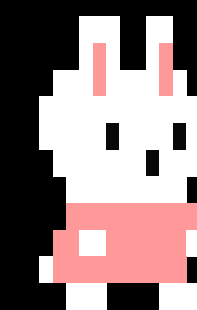
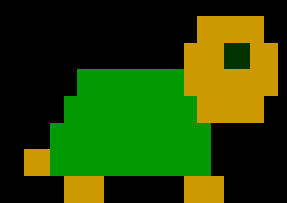
このつづきは - For details,

このあと13:35~の
Kimuraさんの
Sessionにて (maybe)



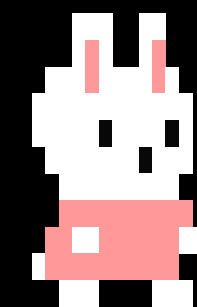
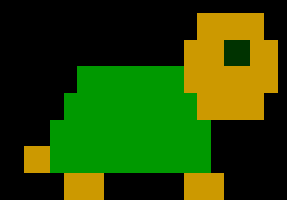
第3部

PicoRuby最新情報 News



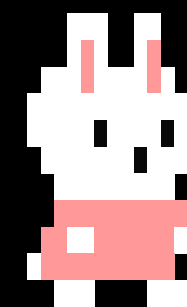
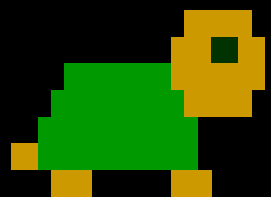
最近の開発 - Recent patches

- ✦ ESP32
- ✦ Timezone in R2P2
- ✦ jobs, fg, pipe
- ✦ Logger, RotateLogger
- ✦ Rapioco



R2P2: UNIX-like shell

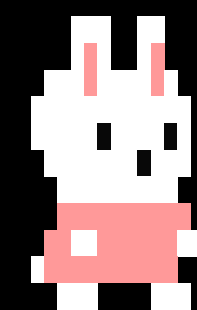
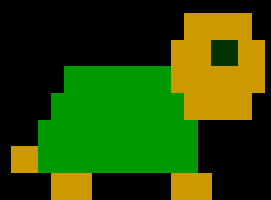
- ✿ 時間あればdemo
- ✿ Timezone `ENV['TZ']`
- ✿ Pipeline `ls -l | tail -3`
- ✿ `jobs`, `fg`



Logger for microcontroller

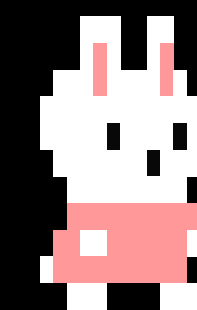
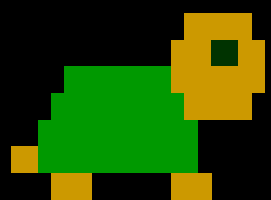
- ✱ あくまでDebug用
- ✱ しかしROM is small and slow
- ✱ Small fileも1 sector消費する

Flash ROM challenges



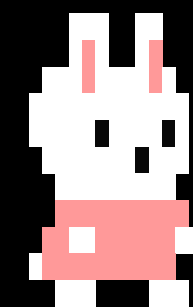
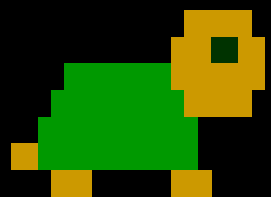
Logger for microcontroller

- ✦ infoはRAM buffer (Array)に溜めるだけ
- ✦ Buffer limit超えたらdelete
- ✦ warn以上でbufferごとflush
- ✦ flush_levelの前後だけflush



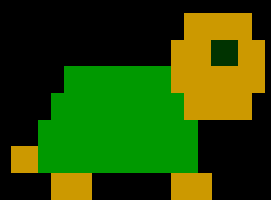
Log rotation in microcontroller

- ✿ Dailyじゃない。なんならsecond単位
- ✿ class RotateLogger



[AD]PicoRuby公式ボード

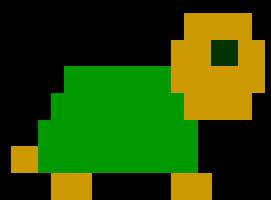
- ✿OSS-VisionさんがBulk販売
- ✿Noveltyとして再配布OK
- ✿Ruby AssociationへのDonationにもなる



To: 小～高、高専、Education各位
(もしいらっしゃれば)

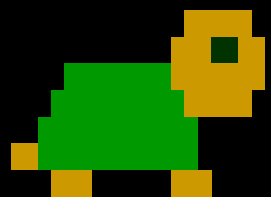
PicoRuby公式ボードの教育現場
導入を支援します！

I will support introducing
PicoRuby official board



まとめ - Conclusion

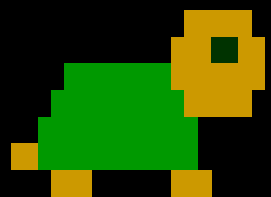
✿ L-chika + UNIX-like shell in 1 minute



Lチ力は - L-chika,

情操教育

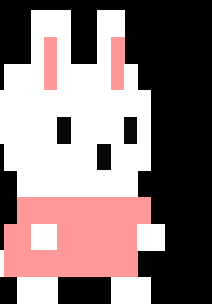
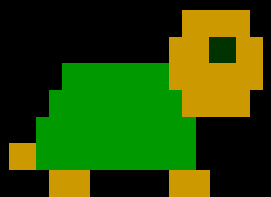
Aesthetic Education



いいかい学生さん

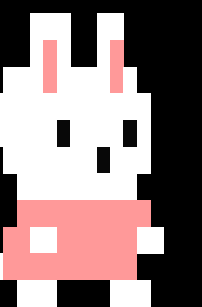
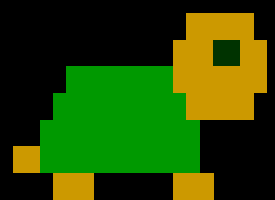
L-chikaをな、

1 min でできるように なりなよ



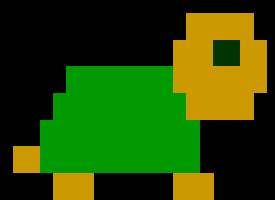
Why PicoRuby now?

- ✿ Newbiesがたくさんいる。情報交換できる
- ✿ Communityがある - PicoPicoRuby
- ✿ PicoRuby自体が成長過程 - Growing
- ✿ 教育方面は作者が支援 - Will support you



おまけ: 中級者向け for experienced Rubyist

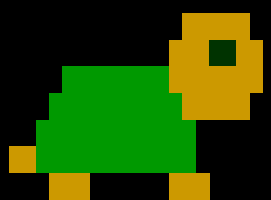
- ✦ Language impl 入門に最適
- ✦ CRuby よりずっと Simple
- ✦ 開発に参加しやすい - Easy to join
- ✦ 未実装機能がたくさん - Easy to commit
- ✦ CRuby に応用可能 - Applicable to CRuby



After this session,

PicoRuby関連トークふたつあります
活用のヒントがたくさんあるはず

So many clues in PicoRuby talks
the rest of today



おしまい。self.inspect

- ✦ 羽角 均 (HASUMI Hitoshi)
- ✦ Creator of PicoRuby
- ✦ Committer of mruby and mruby/c
- ✦ CRuby IRB team (dormant)
- ✦ ANDPAD inc. 建築業界をDXしています

twitter.com/hasumikin

github.com/picoruby

