Educational Materials to Assist in Motivating Functional Programming

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Abstract

Functional programming often elicits groans and complaints about its lack of utility in the Java- and C++-dominated "real world." To assist in overcoming student obstinance, we have prepared the following high-quality educational materials.

1 Verbal Notes for The Instructor

Please recite these notes verbatim. Maintaining close accordance to the melody of Depeche Mode's "Enjoy the Silence" will increase the quantity of learning.

Side effect mess
Breaks the soundness
State that's mutable
Frustrates my reasoning
Impure to me
Pointers to free
I can't understand
Why no currying

All I ever wanted
All I ever needed
Is here, in ML.[1]
Loops are very unnecessary
when map will work just as well.

No aversion
To recursion
Functions are first-class
Proofs are trivial
Don't use int main[2]
I/O is lame
State is meaningless
Garbage collectable

All I ever wanted
All I ever needed
Is here, in ML.
Loops are very unnecessary
when map will work just as well.

Enjoy the soundness.

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[1]Standard ML of New Jersey
[2]int main(int argc, char *argv[])

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2   Classroom Materials

The following classroom supplies are required to complete the educational experience:

- guitar (2)
- bass
- drum machine

- synthesizer
- roadies
- groupies

3   Sample Performance

In lieu of the recommended live performance, some educational value remains in a pre-recorded version. We have prepared a sample performance at: `http://www.cs.washington.edu/homes/jeffro/cseband/enjoy.mp3`

Ken Yasuhara, *vocals, guitar, lyrics*
Jeff Hightower, *backing vocals, bass, keyboard, mastering*
Neil Spring, *backing backing vocals, guitar, programming, lyrics*

Vibha Sazawal does not appear on the recording but is a co-author of the lyrics.

4   Related Work

Sazawal, et al. [1] present a novel approach to present information hiding basics using similar techniques. Their work also includes a pronunciation guide, which we omit for brevity.

References

[1] V. Sazawal, K. Yasuhara, and N. Spring. Educational materials to assist in instruction of information hiding basics. In *Proceedings of the 2nd Annual Potentially Computer Science Conference (PoCSci '02)*, May 2002.