

Re: Steps towards writing a computer algebra system

Source: <http://sci.tech-archive.net/Archive/sci.math.symbolic/2005-01/0130.html>

From: Richard J. Fateman (fateman_at_eecs.berkeley.edu)

Date: 01/18/05

Date: Tue, 18 Jan 2005 09:06:53 -0800

Read Peter Norvig's Paradigms of AI Programming for a description and code for pattern matching, parsing, symbolic simplification, integration.

This will show you how to build a demonstration "system" albeit hackish. You will also learn to program in Lisp, which makes it feasible to do this program in 20 or 30 pages.

RJF

Mike wrote:

> *Hi*
>
> *I am a self-taught programmer and have always been fascinated with*
> *computer algebra systems (CAS) such as Mathematica. For a hobby I*
> *thought that I would like to have a crack at writing my own (very*
> *simple) CAS but I am rather lost on where to start.*
>
> *Looking at source code to currently available open source packages is*
> *pretty scary when one is simply trying to get started. Does anyone*
> *out there have tips on where to get started?*
>
> *I have all the time in the world to do this – its for fun and*
> *education after all so if someone with experience with writing a CAS*
> *code were to email me and say something like*
>
> *"You may be biting off more than you can chew – try implementing xxx*
> *using yyyy as a start because that will help you learn some basic*
> *concepts" then I would be more than happy.*
>
> *Basically I guess I am asking for mentors who can help me navigate*
> *through the problems that I need to solve. If I make progress then*
> *maybe I could document what I go through to help others learn about*
> *the ideas.*
>
> *All help and advice would be gratefully received*

sci.math.symbolic: Re: Steps towards writing a computer algebra system

> *Thanks*

> *Mike*