

Notes on

Foundations of Programming Languages

Mann Malviya
mannmalviya15@gmail.com

These notes provide an introduction to Foundations of Programming Languages. The primary sources used to write these notes were:

- CSE 114A: Foundations of Programming Languages — UCSC

Please report any errors to mannmalviya15@gmail.com

Contents

Lecture 1	3
What is PL?	3
What do PL people do?	3

Lecture 1:

What is PL?

For starters PL here doesn't mean programming languages as in the tools one uses to express computer programs (like C or python), it means programming languages the subfield of computer science. So what is the field of programming languages?

PL is one of the most misunderstood areas of computer science, it's even misunderstood by other computer scientists who are not specialists in PL. This is because when people hear "programming languages", they think of particular programming languages, languages they might have used or heard of. But the essence of the field is not about the details of this or that programming language.

What do PL people do?

- PL people consider the **programming language** to have a central place in solving computing problems.

This might sound kind of obvious, "like of course we use programming languages to solve computing problems, what else would we do?" But this is actually an unusual and niche point of view, among computer scientists.