Foundations of Type

Programming in Mathematics

Edward O'Callaghan



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This book is freely available at http://victoredwardocallaghan.github.io/book/

Acknowledgment

Thanks to github...

Preface

Book development

The following people participated in the development of this text.

Edward O'Callaghan

About this book

This is a textbook that I am writing on a number of topics that have a deep unexpected connection. In particular, this book introduces programming and the foundations of mathematics from scratch by way of *homotopy type* and *category theory* and explores aspects of these topics to lead to a new era in high assurance software design and implementations.

Foundations of Type Edward O'Callaghan Australia, Jun 2013

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Introduction

.. foo bar

2 Introduction

Part I Foundations

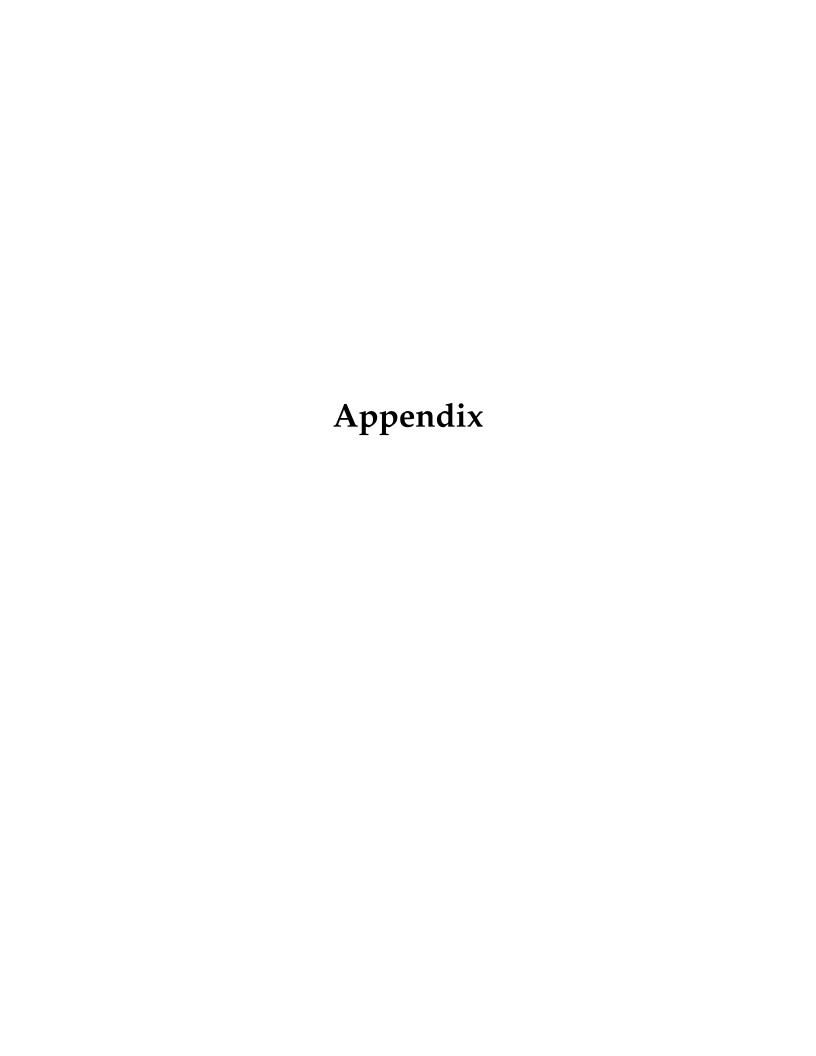
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Part II Mathematics

Chapter 1

Category theory

..



Index of symbols

 $x :\equiv a$

definition, p. 1

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We present *Homotopy type theory* as the corner stone to understanding both mathematics and programming.

Get a free copy of the book at http://victoredwardocallaghan.github.io/book/.