

HIGHER TECHNICAL INSTITUTE

**COMPUTER STUDIES
DEPARTMENT**

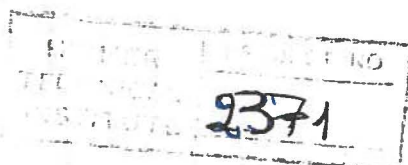
DIPLOMA PROJECT

**ANALYSIS, DESIGN AND IMPLEMENTATION
OF A SOURCE CODE ANALYSIS AND
VERSION CONTROL SYSTEM
ON PERSONAL COMPUTERS**

CS/126

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Summary

Analysis, Design And Implementation Of A Source Code Analysis And Version Control System on Personal Computers

Loukas S. Arvanitis

This project was initiated as an effort on building a tool that would analyze the source code of programs written in Pascal, Basic, or C. From the very beginning, it was something totally new for us as far as the approach to the solution is concerned. The four months of work time seemed rather inadequate to allow for "wishful thinking". This of course was also due to the fact that apart from the system itself, a graphical user interface with a full implementation of menus, mouse support, and more was also due.

What seemed that would be a problem was the programming language to be used. We needed a language with an adequate support of text processing, and advanced graphics functions. Pascal and C were the two candidates, with Pascal being our selection at last, since we had gained a lot of experience working with it.

It is true, that we started from scratch, building our interface, and collecting as much material as possible to understand how the system could be built. At some point, we felt like working on two projects. We were "inventing" algorithms for our graphical interface, and we were working on the algorithms that would accomplish the objectives of the project, simultaneously. At the same time, we were doing our analysis which also was something totally new for us, as far as its organization is concerned. As you will see, we haven't followed the classic method of work that is denoted from the Systems Development Life Cycle. We are making a description of the algorithms and the way we built our system.

Source Code Analysis And Version Control was definitely an extremely difficult task, but it was surely worth the effort.

Contents

| | |
|--|-----------|
| Acknowledgments | 1 |
| Summary | 2 |
| Introduction | 3 |
| CHAPTER 1 | |
| Introduction To Programming And Programming Languages | 4 |
| 1.1 Programming..... | 4 |
| 1.2 Programming Languages..... | 5 |
| 1.2.1 Machine Languages..... | 5 |
| 1.2.2 Assembly Languages..... | 7 |
| 1.2.3 High-Level Languages..... | 9 |
| 1.2.4 Fourth-Generation Languages..... | 11 |
| 1.2.5 Major-High Level Languages..... | 13 |
| CHAPTER 2 | |
| The PASCAL Programming Language | 18 |
| 2.1 The Origins And Features Of PASCAL..... | 18 |
| 2.2 Standards And Extensions..... | 19 |
| 2.3 Reserved Words..... | 22 |
| 2.4 Standard Identifiers..... | 23 |
| 2.4.1 Standard Constants..... | 23 |
| 2.4.2 Standard Types..... | 23 |
| 2.4.3 Standard Files..... | 23 |

| | |
|--|-----------|
| 2.5 Standard Functions..... | 24 |
| 2.6 Standard Procedures..... | 26 |
| 2.7 PASCAL Operators And Symbols..... | 28 |
| 2.8 Precedence Of Operators..... | 29 |
| 2.9 A PASCAL Program Example..... | 30 |
| CHAPTER 3 The BASIC Programming Language | 35 |
| 3.1 Introduction To BASIC..... | 35 |
| 3.2 History Of BASIC..... | 36 |
| 3.3 Variations In BASIC..... | 37 |
| 3.4 Some Advantages Of BASIC..... | 38 |
| 3.5 Summary Of Standard BASIC Statements..... | 39 |
| 3.6 Summary Of Standard BASIC Library Functions..... | 41 |
| 3.7 Summary Of Standard BASIC System Commands..... | 43 |
| 3.8 Precedence Of Operators..... | 44 |
| 3.9 Structure Of A BASIC Program..... | 45 |
| 3.10 An Illustrative BASIC Program..... | 46 |
| CHAPTER 4 The C Programming Language | 50 |
| 4.1 Introduction To C..... | 50 |
| 4.2 History Of C..... | 51 |
| 4.3 The Features Of The C Language..... | 52 |
| 4.4 Identifiers In C..... | 55 |
| 4.5 Comments In C..... | 56 |
| 4.6 Constants In C..... | 57 |
| 4.6.1 Integer Constants..... | 57 |
| 4.6.2 Floating Point Constants..... | 58 |

| | |
|---|----|
| 4.6.3 Character Constants..... | 58 |
| 4.6.4 Character String Constants..... | 59 |
| 4.6.5 Enumeration Constants..... | 60 |
| 4.7 Data Types And Declarations In C..... | 60 |
| 4.7.1 Definitions Vs Declarations..... | 60 |
| 4.7.2 Basic Data Types..... | 61 |
| 4.7.3 Derived Data Types..... | 62 |
| 4.8 Expressions..... | 62 |
| 4.8.1 Summary Of C Operators..... | 63 |
| 4.9 Storage Classes And Scope..... | 64 |
| 4.9.1 Functions..... | 65 |
| 4.9.2 Variables..... | 66 |
| 4.10 Statements Of The C Language..... | 67 |
| 4.10.1 Compound Statements..... | 68 |
| 4.10.2 The break Statement..... | 68 |
| 4.10.3 The continue Statement..... | 69 |
| 4.10.4 The do Statement..... | 69 |
| 4.10.5 The for Statement..... | 70 |
| 4.10.6 The goto Statement..... | 70 |
| 4.10.7 The if Statement..... | 71 |
| 4.10.8 The Null Statement..... | 72 |
| 4.10.9 The return Statement..... | 73 |
| 4.10.10 The switch Statement..... | 74 |
| 4.10.11 The while Statement..... | 75 |
| 4.11 Preprocessor Statements..... | 75 |
| 4.11.1 The #define Statement..... | 76 |
| 4.11.2 The #if Statement..... | 77 |

| | |
|---|-------------------------------|
| 4.11.3 The #ifdef Statement..... | 78 |
| 4.11.4 The #ifndef Statement..... | 79 |
| 4.11.5 The #include Statement..... | 79 |
| 4.11.6 The #line Statement..... | 80 |
| 4.11.7 The #indef Statement..... | 81 |
| 4.12 Standard C Library..... | 81 |
| 4.13 A C Program Example..... | 84 |
| | |
| CHAPTER 5 | |
| Maintenance Of Compressed Program Versions | 86 |
| 5.1 Introduction..... | 86 |
| 5.2 Data Compression..... | 86 |
| 5.3 Version Control..... | 90 |
| | |
| CHAPTER 6 | Designing The System |
| | 93 |
| 6.1 Introduction..... | 93 |
| 6.2 An Overview Of The System..... | 94 |
| 6.3 Selecting A Programming Language..... | 95 |
| 6.4 Designing The User Interface..... | 97 |
| 6.5 Graphical User Interfaces (GUIs)..... | 99 |
| | |
| CHAPTER 7 | Programming The System |
| | 103 |
| 7.1 Introduction..... | 103 |
| 7.2 Borland Pascal Units..... | 103 |
| 7.2.1 What Is A Unit ?..... | 103 |
| 7.2.2 A Unit's Structure..... | 105 |
| 7.2.3 Interface Section..... | 107 |

| | |
|--|------------|
| 7.2.4 Implementation Section..... | 108 |
| 7.2.5 Initialization Section..... | 110 |
| 7.2.6 How Are Units Used ?..... | 110 |
| 7.2.7 Units And Large Programs..... | 113 |
| 7.3 Project Organization..... | 115 |
| 7.4 The User Interface : A Closer View..... | 116 |
| 7.5 How The Interface Is Built..... | 117 |
| | |
| CHAPTER 8 Setting Up The Graphical Interface | 121 |
| 8.1 Introduction..... | 121 |
| 8.2 Graphics Display ? YES !!!..... | 122 |
| 8.3 Which Graphics Display..... | 124 |
| 8.4 The Graphics Unit..... | 125 |
| | |
| CHAPTER 9 System Security | 128 |
| 9.1 Introduction..... | 128 |
| 9.1.1 Physical Security..... | 129 |
| 9.1.2 Logical Security..... | 130 |
| 9.1.3 Behavioral Security..... | 130 |
| 9.2 Security In SCAAVC..... | 132 |
| 9.3 The LOGIN Unit..... | 133 |
| | |
| CHAPTER 10 The Analysis Process | 153 |
| 10.1 Introduction..... | 153 |
| 10.2 Analyzing A Pascal Program..... | 160 |
| 10.3 Analyzing A BASIC Program..... | 171 |
| 10.4 Analyzing A C Program..... | 180 |

| | |
|--|------------|
| 10.5 Statistical Results..... | 190 |
| 10.6 The Utils Unit..... | 198 |
| CHAPTER 11 Version Control | 202 |
| 11.1 Introduction..... | 202 |
| 11.2 An Algorithmic Approach To Version Control..... | 203 |
| CHAPTER 12 User Information | 206 |
| 12.1 The User Unit..... | 206 |
| CHAPTER 13 Libraries | 214 |
| 13.1 Introduction..... | 214 |
| 13.2 Creation Of Libraries..... | 214 |
| 13.3 Pseudocode For Libraries..... | 217 |
| CHAPTER 14 Reports Generation | 218 |
| 14.1 Introduction..... | 218 |
| 14.2 The Reports Unit..... | 219 |
| CHAPTER 15 Options Provided | 245 |
| 15.1 An Overview..... | 245 |
| 15.2 Displaying The Current Date..... | 246 |
| 15.3 Displaying The Current Time..... | 248 |
| 15.4 Executing MS - DOS Commands..... | 249 |
| 15.5 Starting Borland Pascal..... | 254 |
| 15.6 Starting Borland C..... | 256 |

| | | |
|-------------------|-------------------------------------|------------|
| CHAPTER 16 | Information About The System | 258 |
| 16.1 | The Info Option..... | 258 |
| 16.2 | The Info Unit..... | 259 |
| | | |
| CHAPTER 17 | How The System Works | 262 |
| 17.1 | SCA.PAS..... | 262 |
| 17.2 | How The Keyboard Works..... | 265 |
| 17.3 | How The Mouse Works..... | 273 |
| 17.4 | Units : A Listing..... | 284 |
| | | |
| Conclusion | | 285 |
| | | |
| References | | 286 |