

POVZETEK

V prvem delu diplomskega dela so predstavljeni osnovni pojmi in prijemi objektnega programiranja. Opisan je "model objektov", ki ga pozna večina objektnih jezikov (turbo pascal, C++,...). Ta model temelji na pojmu razreda, s katerim opišemo družino podatkov-objektov.

V nadaljevanju še matematično formuliramo sestav podatkovnih tipov, ki opisuje objekte. Najprej definiramo algebraičen opis. Z njim lahko zapišemo tiste (abstraktne) lastnosti objektov, ki so neodvisne od njihovih vsebin in imen. Potem spoznamo še mehanizme konstruiranja (to so dedovanje, klientstvo in oženje), s katerimi lahko gradimo nove opise iz že poznanih. Nazadnje definiramo še razred. Objekti, ki pripadajo določenemu razredu, imajo svoja imena in vsebine. Lastnosti teh objektov pa so v razredu zapisane tako, da upoštevajo te vsebine. Analogno kot za opise tudi za razrede definiramo tri mehanizme konstruiranja.

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Key words: object, inheritance, signature, algebraic specification, object algebra, class

LITERATURA

1. Breu R.: ALGEBRAIC SPECIFICATION TECHNIQUES IN OBJECT ORIENTED PROGRAMMING ENVIRONMENTS, Lecture notes in computer science, Springer-Verlag, 1991
2. Broy M., Wirsing M.: PARTIAL ABSTRACT TYPES, Acta informatica 18, 47-64, 1982
3. Broy M., Möller B.: ALGEBRAIC IMPLEMENTATIONS PRESERVE PROGRAM CORRECTNESS, Science of computer programming 7, 35-53, 1986
4. Breu R., Zucca E.: AN ALGEBRAIC COMPOSITIONAL SEMANTICS OF AN OBJECT ORIENTED NOTION WITH CONCURRENCY, ¹ 405, Springer, 131-142, 1989
5. Cardelli L.: A SEMANTICS OF MULTIPLE INHERITANCE, International symposium on semantic of data types, LNCS¹ 173, Springer, 51-67, 1984
6. Ducournau R., Habib M.: ON SOME ALGORITHM FOR MULTIPLE INHERITANCE IN OBJECT ORIENTED PROGRAMMING, ECOOP'87, LNCS¹ 276, 291-300, 1987
7. Ducournau R., Habib M.: INHERITANCE HIERARCHIES IN KNOWLEDGE REPRESENTATION AND PROGRAMMING LANGUAGES, John Wiley & sons, 223-244, 1991
8. Geser A., Hussmann H.: A COMPILER FOR A CLASS OF CONDITIONAL TERM REWRITING SYSTEMS, LNCS¹ 308, Springer, 84-90, 1989
9. Gougen J.A., Burstall R.: CAT, A SYSTEM FOR STRUCTURED ELABORATION OF ..., Computer science lab, sri international, 1980
10. Goldberg A., Robson D.: SMALLTALK-80 : THE LANGUAGE AND ITS IMPLEMENTATION, Addison-Wesley, 1983
11. Ehrig H., Kreowski H.-J.: ALGEBRAIC IMPLEMENTATION OF ABSTRACT DATA TYPES, Theoretical computer science 20, 209-263, 1982
12. Hewitt C.E., Bishop P., Steiger R.: A UNIVERSAL MODULAR ACTOR FORMALISM FOR ARTIFICIAL INTELLIGENCE, in proc. of the the 3rd IJCAI, Stanford, California, 1973
13. Hewitt C.E., Jong P.de.: OPEN SYSTEMS, AI MEMO 691, AI Lab, Mit, Cambridge, Massachusetts, 1982

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14. Minsky M.: A FRAMEWORK OF REPRESENTING KNOWLEDGE, in P. Winston, Editor, The psychology of computer vision, 211-281, McGraw-Hill, New York, 1975
15. Masini G., Napoli A., Colnet D., ...: OBJECT ORIENTED LANGUAGES, Academic press inc., San Diego, A.P.I.C. series No 34, 1991
16. Novobilski A.J., Cox B.J.: OBJECT-ORIENTED PROGRAMMING, second edition, Adison-Wesley publ. company, 1991
17. Sannella D.T., Wirsing M.: A KERNEL LANGUAGE FOR ALGEBRAIC SPECIFICATION AND IMPLEMENTATION, LNCS¹ 158, Springer, 413-427, 1983
18. Tichy W.F.: WHAT CAN SOFTWARE ENGINEERS LEARN FROM ARTIFICIAL INTELIGENCE, Computer, 20(11), 43-54, 1987
19. Touretzky D.S.: THE MATHEMATICS OF INHERITANCE, Morgan Kaufmann publishers, California, 1986
20. Turk Ž., UVOD V OBJEKTNO PROGRAMIRANJE IN C++, Mladinska knjiga, Ljubljana, 1991
21. Wirth N.: ALGORITHMES + DATA STRUCTURES = PROGRAMS, Prentice Hall series in automatic computation, New Jersey, 1976
22. M. Wirsing M., Hennicker R., Breu R.: REUSABLE SPECIFICATION COMPONENTS, LNCS¹ 324, Springer, 121-137, 1988