Universidade de São Paulo
Instituto de Matemática e Estatística
Bachalerado em Ciência da Computação

Rafael Mota Gregorut

Título da monografia
se for longo ocupa esta linha também

São Paulo
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Monografia final da disciplina
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Orientadora: Prof. Dr. Ana Cristina Vieira de Melo

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Resumo

Elemento obrigatório, constituído de uma sequência de frases concisas e objetivas, em forma de texto. Deve apresentar os objetivos, métodos empregados, resultados e conclusões. O resumo deve ser redigido em parágrafo único, conter no máximo 500 palavras e ser seguido dos termos representativos do conteúdo do trabalho (palavras-chave).

Palavras-chave: palavra-chave1, palavra-chave2, palavra-chave3.

Abstract

Elemento obrigatório, elaborado com as mesmas características do resumo em língua portuguesa.

Keywords: keyword1, keyword2, keyword3.

Contents

Chapter 1

Concepts

1.1 Statecharts

A software specification is a reference document which contains the requisites the program should satisfy. It can also be understood as a model of how the system should behave. A specification may be developed with natural language, with user cases for example, or usisng formal software engeering techniques.

Statechats are a type of formal software specification based on finite states machines (FSM) specially used in complex systems modeling, such as reactive systems and were defined in [1]. Similar to an automaton, a statechart has sets of states, transitions and input events that cause change of state. However, a statechart has additional features: orthogonality, hierarchy, broadcasting and history.

1.1.1 Nondeterministic finite automata

Definition: A nondeterministic finite automaton is a quintuple $M = (K, \Sigma, \Delta, s, F)$, where:

- K is the set of states
- Σ is the input alphabet
- Δ is the transition relation, a subset of $K \times (\Sigma \cup e) \times K$, where e is the empty string
- $s \in K$ is the initial state
- $F \subseteq K$ is the set of final states

Each tripe $(q, a, p) \in \Delta$ is a transition of M. If M is currently in state q and the next input is a, then M may follow any transition of the form (q, a, p) or (q, e, p). In the later case, no input is read. A configuration of M is an element of K^* and the relation $\vdash$ (yields one step) between two configuarions is defined as: $(q, w) \vdash (q', w') \Leftrightarrow$ there is a $u \in \Sigma \cup e$ such that $w = uw'$ and $(q, u, q') \in \Delta$.

Further information and formalism regarding finite automata can be obtained in [2].

1.1.2 A nondeterministic automaton example

1.1.3 Statechart models

1.1.4 Orthogonality

1.1.5 Hierarchy

1.1.6 Broadcasting

1.1.7 History

1.1.8 A statechart example

Appendix A

Título do apêndice

Texto texto.

Bibliography

[1] David Harel, Amir Pnueli, Jeanette Schmidt, and Rivi Sherman. On the formal semantics of statecharts. In *Proceedings of Symposium on Logic in Computer Science*, pages 55–64, 1987. 1

[2] Harry R. Lewis and Christos H. Papadimitriou. *Elements of the Theory of Computation*. Prentice Hall, Inc, 2 edition, 1998. 1