

## **Agent-oriented Approach to Software Development**

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### **ABSTRACT**

The paper discusses Agent-Oriented Programming – an extension of a well-known object-oriented software development paradigm. The notion of software agent is introduced and fundamental properties of agents are explained, namely: reactivity, autonomy, collaborative behavior, knowledge-level communication ability, inferential capability, personality, adaptivity, mobility. A belief-desire-intention architecture, which allows to describe internal state and behavior of an agent in terms of mental categories, is then introduced. Finally, a concept of an agent-oriented operating system architecture is put forward. This architecture relies on adaptability and intelligence of agents in order to optimize location and utilization of resources as well as provide convenient user environment.