

Computing for Human Services

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Electrical and Computer Engineering-IIUM University

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Chapter 11

New Model for Software Engineering Ethical Principles

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11.1. Introduction

In previous chapter we introduce the importance of software engineering in building all computerized applications. We find that development of Software applications is a complex, expensive, and ethical engineering task which requires professionally and ethically qualified software engineers. Literatures and studies show that software engineering professionals are still facing several problems concerning ethical aspects. Analysis shows that the Islamic sources (Holy Qur'an and Sunnah) are the highest standard of ethical principles for individual, communities and national (Ummah) levels. Islamic ethics are universal, stable, comprehensive, fair and standard which are suitable for all nations and times; and when followed leads to creation of an ethically great society. To effectively solve ethical problem in computer and software engineering field; we propose a new model, which is mainly based on integrating an Islamic based solution to solve ethical related problems. This chapter offer more details for this model.

11.2. Modeling New Software Engineering Principles

In the previous chapter we introduce the ethical related problems in software development. To solve such problems and to help Muslims to understand the Islamic ethics we proposes this framework for modeling software engineering ethical principles based on Islamic values as shown in Figure 1 and Figure 2.

The main objective of this framework is to offer a comprehensive solution to overcome current ethical problems by providing a set of targets and modules, which can be summarized as:

- a) Enhanced version of standard code of ethics for software engineering professionals based on Islamic ethical values.
- b) Advising (warning) tool for software engineering professionals to avoid direct or indirect participation in harming innocents or destruction of health, wealth and environment.