

An Overview of the FUDA Empirical Evaluation

FUDA (Framework API Understanding through Dynamic Analysis) is a framework comprehension technique that generates some pseudo-Java templates that specify the implementation steps that are necessary to realize a desired concept such as a *Context Menu* on top of a desired framework such as the *Eclipse JFace*. In this experiment, we would like to ask you to implement two different concepts in the Eclipse environment: one using the documentation of the concept, and one using the FUDA templates. Then, we would like you to tell us about your experience.

The following steps will be followed during this empirical evaluation:

- 1) We will give you a questionnaire to understand about your background such as your programming experience, your familiarity with the object-oriented software frameworks, your familiarity with the Eclipse environment, and so on.
- 2) Based on your answers in the previous step, we will provide you some tutorials so that we can be sure you have enough knowledge about the technologies involved. These tutorials are mainly about the Eclipse environment, object-oriented software frameworks, and FUDA templates.
- 3) Again, based on your answers to the questionnaire in Step 1, we will assign you two concepts to implement: one with the help of the documentation of the concept, and one with the help of the FUDA templates.
 - a) For each concept, the following things are provided to you in this step:
 - i. A document containing a set of instructions that we would like you to follow during the implementation session.
 - ii. A description of the concept that we would like you to implement.
 - iii. An Eclipse project which is incomplete and we would like you to implement the assigned concept in it.
 - iv. Two sample applications that provide example implementations of the desired concept.
 - v. Based on how you are supposed to implement the concept, either the documentation of the concept or the FUDA template.
 - b) We will define a recommended amount of time for you to try to implement the assigned concept in the provided project. Nevertheless, you may continue the implementation until either you finish it successfully or you come to the conclusion that it is impossible for you to implement the concept successfully. ***You must mark exactly how much time it took you to implement it.***
 - c) All the experiments should be done in the default installation of Eclipse Classic and it is not required to install anything extra.
- 4) After implementing each concept, your task would be to answer a questionnaire to

give us hints on your impressions about the experiment and send us your filled questionnaire together with your implementation project to ahnoori@yahoo.com.

The results of this experiment will be published in academic publications. However, your name is completely confidential and it will not be released wherever the results of the experiment are published.