

ABSTRACT

This work proposes a method for designing applications for Smart Phone devices. This method is used to derive User Interface Flow (UIF) diagrams from the application requirements to define the application look & feel as well the overall user interaction for the application. The method uses these UIF diagrams also to derive the application architectural structure presented as standard UML conceptual class diagrams.

The development method is extended to include aspects of the component based development. This is achieved by re-defining some activities of the UIF methods for designing applications as multiple independent or semi-independent modules to form the full application.

The development method proposed in this dissertation also includes performance assessment method which can be used to evaluate and optimize some aspects of user interaction. This performance assessment method is using the UIF diagrams along side with the class diagrams to estimate the flow performance while switching user interface screens during normal operations of the application.

The method can be used with development environment offering similar attributes as Smart Phone development environment does. The main requirement for the development environment is that it needs to offer development environment that is using standard sets of well defined components from which the applications are mainly constructed from.