Mobile Application Framework for all types of Mobile Platform

Shashank singh[1]
Department of Computer Science
[1]Monad University Hapur

I. INTRODUCTION

My aim to produce a mobile framework called mApp Framework. It has two parts:

1.) Desktop Application.
2.) Client Side Application

Destop Application enables user to develop and design Device specific Application which is saved in the form of XML, which later can be deploy in the Handheld Device.

As an initiative process, I have decided to come out with generic framework mainly to reduce the development time and effort in an efficient way thus increasing the productivity.

I have identified some of the most commonly required functionalities which are not present in other products available in the market.The output of the application is in the form of the form of XML.This output is provided as an input to Client Side Application which read this XML and generate the Application as designed on Desktop Side on Client Side. Since the Project is stored in the form of XML, compiling and retrieving the project is fast.

The remaining components will be brought out in an incremental development manner.

II. PURPOSE

The objective of this system is to come out with easy and efficeint Framework which enables Developer to create and design Mobile Application with less coding knowledge. This helps developer to create application in much faster and easier way hence saving developer's time and improving efficiency.

III. SCOPE

The application is mainly for the developers who need to design mobile applications.Taken care developer's ease and to improve efficiency we have come out with this initaitive.

Features

- Use of XML will make the application light and fast in running and in compiling.
- Providing Form templates for easy and fast designing.
- Providing Thumnails to give created Form Preview.
- Providing configuration settings to create device specific application

IV. DEFINITIONS AND ACRONYMS

Specific terms, acronyms and abbreviations used in the project

Acronyms	Explanation
PDA	Personal Digital Assistence
WM	Windows Mobile

VI. GENERAL DESCRIPTION

This section describes the general factors affecting the software and its requirements.

System Perspective

The framework will be developed as a common interface to work on Windows operating system in general. Since, it is planned to adopt the incremental development methodology, the system perspective for an incremental development will be as given below:

Phase I(Completed)

- Desktop Side-The creation of UI and providing basic functionalities which makes it user friendly and work efficient. Basic functionalities like Undo/Redo, Copy/Paste, Delete Controls by Del Key, Adding Controls by Dragging and Dropping and some Extra Functionalities like Fullscreen Mode, Thumbnail Preview of created Forms, Generating and Saving project in form of XML.

- Client Side- To make client side to read the XML irrespective of name provided as Input and Draw the application on Handheld Devices as designed in Desktop Framework. Client Side Application would be smart enough to manage resolution conflict and draw the application according to the device resolution. Adding Orientation Functionalities (Landscape / Portrait).

Phase II

In Phase II we have encounter some essential and efficient functionalities which will help in making the application more User friendly and more efficient.

- Desktop Side- To make it more efficient by adding some more user friendly fucntionalities like providing Pre-Designed Templates(Mobile Forms), Customizable Custom Controls, Security Options, Configurable Device list which would help in easy addition of new Device Configuration. Coustomizing file extension, Adding events to the Framework, Providing various special Fill effects like Gradient Controls and Transparency Controls, Providing Kiosk mode functionality, Configuration of Hardware Controls, Providing functionality to easily invoke native application of the Target Device. Also to add and provide DATABASE Component to the the Framework.

- Client Side- To make client side application properly waorkable and synchronized with all the amendments and changes made at Desktop Side.

System Environment

Target Environment

Desktop Side :

Hardware	:	Pentium Processor With 512 MB RAM and 40GB HDD (min)
Operating system	:	Windows XP / 2000
Software	:	.Net Framework. 2.0 or higher

Client Side :

Operating system	:	Windows Pocket PC or Windows Mobile

Hardware	:	ARM Processor
Software	:	Microsoft Dot Net Compact Framework 2.0 or higher

Development Environment

Desktop :

Operating system	:	Windows XP/Vista
Software	:	Visual Studio 2005.
Hardware	:	Pentium IV processor PC With 2 GB RAM and 120 GB HDD

Client :

Operating system	:	Windows Pocket PC or Windows Mobile
Hardware	:	ARM Processor
Software	:	Microsoft Dot Net Compact Framework 2.0

User Characteristics

- The application developer will be the only Actor of the Desktop Application framework.He should posses basic knowledge Coding knowledge

- Client Side application user may be End User or Developer.

Externalizable Parameters

The XML File is to be Deployed where mApp Client Application is stored.

General Constraints

- The framework will generate an Xml File which is to be Deplyed at client   side.
- The Client Side i.e Handheld Device contains mApp Client Application
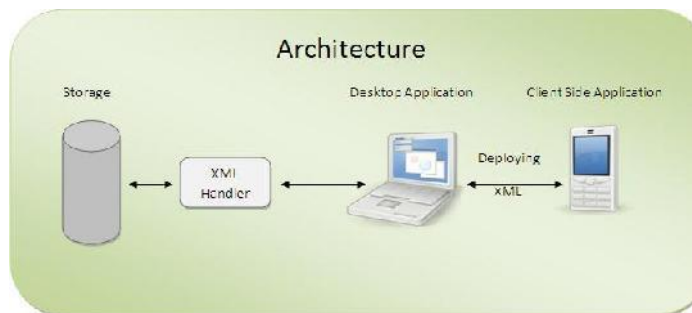
Assumptions, Dependencies and Risks

Dependencies:
- This Framework will work only with a support of Dot Net Framework 2.0 of higher and on Client Side Dot Net Compact Framework 2.0 or higher.

V. SYSTEM ARCHITECTURE

Conventions and Standards Followed

Notation is to be followed as a standard for representation of the modeling elements.

Design Considerations and Constraints

The following are the considerations and constraints taken into account while preparing this document:
- XML is used to maintain the Backup and for creating Output of Desktop Edition.
- Desktop Application will Deploy the XML in Device which contains the Client Application.
- The Client Application in Device will read and render the Deployed XML and generate the Output.

VI. CONCLUSION

The conclusion of this system is to come out with easy and efficeint Framework which enables Developer to create and design Mobile Application with less coding knowledge. This helps developer to create application in much faster and easier way hence saving developer's time and improving efficiency.

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