CS Masters' Thesis Defense

Title: *Developing Google Android Mobile Clients for Web Services*
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Abstract:
Web Services, by far the most popular implementation of Service Oriented Architectures, have been standing out for some years as the leading technology in the world of Distributed Computing has come to its third generation. It's therefore clear that the ability of accessing and consuming Web Services is definitely a feature a mobile device should have nowadays. Web Services (and the Service Oriented Architecture they implement) as the evolution of distributed systems, describing the basic model and architecture and the standards involved, with a special focus on SOAP.

Earlier we have expenses tracker application with local database, in this case users can save his personal data on his mobile. If the mobile crashes or mobile lost there is no way to take the backup of the data. So if the mobile data is saved in some centralized location the user can save or backup his data even if the mobile is lost or crashed. This is not the only one advantage of this, as we have the centralized database, the development architecture is different. Here we are maintaining SOA(Service Oriented Architecture), which means once if we have a web service in remote server with centralized database then we can use the same web service for different clients either it may be Android, iPhone, Blackberry, Windows Phone, Bada, Java Phones, Symbian phones etc. Different clients can use the common web service to save or retrieve the data. We can also take backup/restore the database from database end. For this to implement the main resource needed is IIS (Internet Information Server) Web Server. For this SOA process the current database MS SQL Server database can also be replaced by other databases like MySQL, Oracle, Postgre etc.

Building an Android application that runs on mobile phones for tracking expenses. The application will store data locally and as well as on the server using web services. Users can enter expenses using the app like name of the expense, category of the expense, amount spent, date etc. Users can view expenses both in table form and in graph form. This application provides flexibility to users by Calculating monthly, yearly and as well selected category wise budget. Many people are unaware of costs and waste scarce resources. Expenses tracker is the way to calculate the total costs of purchasing and utilization of the product and helps to control and reduce costs to plan for the future in regards to the budget. The main aim of the projects is to provide Google Android mobile platform as client, illustrating its architecture, main features and philosophy, with some final considerations about its relationship with Web Services.