Toward a New Generation of Semantic Web Applications
(Implementation of **AI** in Web Applications)

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Abstract— **Implementation of AI in Web Applications is an idea which is implemented already but not properly as it can be. It is partially implemented by few software companies. In this research paper it is presented as with another aspect which can help the development companies to exploit the possibilities to keep their development teams boosted up and keep them with them for a long time with the perspective of an expert system. But obviously this is not only an expert system but an idea which can enable a web application to debug or maintain itself better than a traditional KBS.**

Index Terms — **AI Implementation in Web Applications, Self Maintenance Web Solutions, Developer friendliness of Web Semantics**

I. INTRODUCTION

THIS research paper will highlight those aspects which can be exploited to speed up the development process as well as to keep the coding pattern same as we want or even better than that. Early researches on Semantic Web are taken from the Heterogeneity point of view especially for data. It is obvious that when we talk about Web so the basic purpose comes in mind is information sharing, so Semantic Web revolves around data. But another aspect which is not primarily important from a common user perspective is web application development and change in scope of project which ultimately effect or can affect a common user. Change in trend of usage of application. And further change in data which is coming from world wide to the application database.

"AI researchers realized that the fundamental problem of understanding intelligence is not the identification of a few powerful techniques, but rather the quest of how to represent large amounts of knowledge in a fashion that permits their effective use."

So I have taken this statement as the concrete and adequate reason to continue this which is already in practice by few software companies in their applications in market but to some extent. That can obviously be expanded and web development world can be benefited from this as well.

We have a main example of JAVA which brings its libraries and all the required resources and facilitate the developer with all possible bubble tips on calling functions, libraries and beans. Although, JAVA is enough to be quoted but me should mention widely used PHP server side scripting language which is available with a comprehensive .chm manual. Now we have talk about an application which is initially designed and implemented for a small no. of users. But when it goes online for world wide and becomes famous so the common trend is to down it for maintenance, go for a massive development phase with more team members. Another common practice is to use a framework with heavy footprints. These are not the available options but these are practiced options. I want to present another option which can enable a web application to understand that how it should handle itself if any unexpected situation occurs.

Basic idea behind this feasibility is the KBS, if we accept that JAVA and PHP both have a lot of functions and their description or even working examples in manuals. Exception handling is the same direction towards handling of unexpected situation. When we call a function in our program so our IDE is much intelligent which find that function and include relevant class automatically. It's just mentioned to support this feasibility.

As IDE's available are intelligent enough to include proper and correct class, libraries so Semantic Web can go beyond this to exploit that knowledge according to the demanded or requested information.

II. LITRATURE REVIEW

An application which will be available for a particular usage for example for consensus and polling will obviously not available for status update like twitter or social networking like facebook. In fact whenever we will talk about to automate a process, still we need decide the directions of that solution. And we are discussing it relevant directions which can be handled by that application automatically.

If we see it from Web Development perspective so we can enjoy the taste of a particular coder's code by the algorithms

defined by him and his application which will further code itself in the same style and will maintain the pattern.

Let's continue the discussion about a consensus website which is a Web based information collection service. How can this solution be out of scope if a web development team is working on it? As the circumstances world wide are changing rapidly, a web application which was developed a decade ago will require re-development now because taste of visitors is changed now. Information requirements are different and social networking changed the required fields concept a lot.

What if a development team is asked to re-develop a web application with millions of records in it. Traffic is gradually decreasing for the website and it can't be down for more than a couple of minutes. But visitors are not satisfied too. There is a need of fresh taste, new questions, and selectable answer options. Few open comments boxes or whatever is in the mind of your audience which is dynamic and you can never predict it so you can't design your application once for a decade. You have tools, you have team but you can't take risk always by sacrificing daily basis business online. We have examples of main giants of web as facebook, youtube and google. User is unpredictable but they are running beyond the demands. Facebook is not doing much magic like youtube and google but it is successful yet in engagement of its users. They are not going down for a while, they are rapidly adding more features and implementing more functionalities to be the best. Youtube is adding more data storage on weekly basis, providing more features in player, facilitating in automated related data lists. Google is fulfilling every need which can be fulfilled or even can be partially fulfilled.

Same like this, we can implement AI at least a little which can prevent a normal size but important web based solution from unexpected downtime beyond syntax error, not found error or server side issues. The term Semantic Web is coined by Tim Berners-Lee, the inventor of the World Wide Web and director of the World Wide Web Consortium ("W3C"), which oversees the development of proposed Semantic Web standards. He defines the Semantic Web as "a web of data that can be processed directly and indirectly by machines." Semantic Web is essentially required to line up the problems to be solved.

III. PROBLEM STATEMENT

Every web based business, application or service can not afford downtime for maintenance or enhancement for months, days or sometimes for hours. That's why it is a problem that how any additional feature, change in design of unexpected or un-predicted situation can be handled in a running application without any extra ordinary input from web development team.

IV. PURPOSED SOLUTION

Such un-expected situation can be handled by enriching the application with a touch of ES including sufficient directions towards reasoning and rules.

Let's talk about a web based polling system which is really demanded now days. But users want more options in questions, better synonyms in questions or want more interaction so how a busy website can fulfill these demands overnight when the administrator and moderators are getting emails form users. There is possibility that a large no. of users will not even email but will go to other web sites.

Application should be capable to analyze the words entered by the user in input fields. Then break them in parts. Compare them and improve question statements. If few words are really repeating world wide so include them as answering options or whatever the style of polling. Analyze the demand and check either its informative, comparative, contradictive, analytical etc. Use appropriate library, code another public page based on either comparative, informative or whatever trend is going on. Then check its rating. Application will maintain its demand and will automatically fulfill the user's requirements.

V. CONCLUSION

Purpose is not to code such an application which will be a developer itself but a little backup coder with the same pattern and style and can support the development team to understand the changes in requirements and demands of users. This solution can help in ambiguous requirements situation as well, by implementing Semantic Web from development perspective will help to generate a large no. of reports on demand basis. Future work of this idea is to highlight the portion of coding style & pattern of original developer by which we can have multiple projects in the same coding style within time.

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