A Tool to Facilitate Requirement Elicitation for Web Applications

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ABSTRACT: Requirement Engineering is the initial and critical stage in the development of software. The major aim of requirement engineering process is gathering of requirements. Developersare facing several problems while gathering client requirements. Most of the developers utilize methods to identify requirements like as surveys, interviews, but when web developers deploy the application, the necessities they gather remain not met. Our major purpose of research is to develop aweb requirement elicitation toolto conquer the difficulty of prerequisite elicitation method used for web applications through the mixture of interview and (JAD) Joint Application Development among clients and web developers. The proposed method got better prerequisite elicitation procedure and facilitates developers and clients when they describe their needs in a web application, and reduced the time when develop an application.

KEYWORDS: Requirement Elicitation, Technique, Web Application

I. INTRODUCTION

Software engineering is a procedure where through client server platforms develop an application that based on client requirements despite web platforms. When engineering an application, the requirements procedure is an essential phase. [1] In the requirements engineering procedure important phases are the eliciting, understanding, specifying, and validating user and customer's requirements.Interviews offer a competent method to gather huge quantity of data rapidly.[2] During the conditions while online meetings, face-to-face interviews are not feasible among stakeholders, then make use of the questionnaires. Domain analysis has completed through investigative the current and corresponded documentation and applications toward gather at an opportune time necessities also reusable parts and ideas.

II. REVIEW OF LITERATURE

Elicitation of Requirements is a problematicprocedure involvingmany activities through a variety of available approaches, techniques, and tools used for performing them. [4] One of the most significant features of developing a huge Web-based plan is getting the accurate requirements from the customer. Money and time can be lost if the necessities are inaccurate or incomplete. In the process of requirement development, the requirement elicitation is a very important action and it determines the requirements of end users. Full and controlled requirements can construct projects extra reliable. [5] The mainly ordinary confront faced through the market analyst in elicitation process are to assurance effective communication among stakeholders and gaining of understood information. Observational, Conversational, Synthetic and Analytical are existing elicitation.

[7] The accuracy means application planned tasks because defined through its specification. This research discussing that, if poor requirements are not implementing in the application here is a number of complex existing in the application. For these troubles, a few solution techniques provided like verifying techniques of requirements, documentation, and use case of completeness validation. Eliciting the requirements is an importance stage in software engineering procedure. This research gives the requirements elicitation method to use for meeting requirements from the elderly within order to resolve the difficulty to designing and develop the usability cell phone user interface used for the elderly [8].Requirements elicitation is the initial crucial phase of a requirements engineering procedure, which intends to discover, get and elaborate requirements used for software systems. Once software startups are troubled, requirements elicitation is mostly challenging due to the huge ambiguity that a startup has tackled [9].The findings expose that the requirements elicitation procedure in startups is ancient and mostly informal, and it is a continuing process alongside through product development. Software startups perform makes use of recognized requirements elicitation techniques as well as prototyping, interviews, brainstorming [6].[9] In lack of technical support, tools, and inertia has been familiar as the three major causes of the distance between industry and research. This appears to propose that the reliable attention in developing tools based on present technologies to support the elicitation procedure is the right way to track [10].

Requirement elicitation is an imperative advance into building up any new application. This article will inspect the way of life impact on prerequisite elicitation in creating nations. This extraordinary research will take a gander at prerequisite elicitation process in 10 unique parts of the world. The conclusion is that culture impact profoundly the procedure to decide for necessity elicitation [11].

III.   PROBLEM STATEMENT
The designers/analysts usage many techniques of requirement elicitationlike as surveys, interviews questionnaire, prototyping, brainstorming and joint application development, but in the last session when the developers develop an applicationfor the user, the requirements we gathered are not met. This is the main problem in the requirement elicitation techniques.

PROPOSED TECHNIQUE: The focus of this research must find out the problems in requirement elicitation procedure of huge web projects. Along with classification of techniques that have facilitate the analysts in requirement gaining and resolution toward the problems [4]. [3]This research helps to conquer the complexity of requirement elicitation method for web application between clients and developers. This method improves the requirement elicitation procedure to facilitate clients and developers to evidently define their needs in a web application.

In this research, a WRET (Web Requirement Elicitation Tool) tool for requirement elicitation for web has proposed to join parties in talking about necessities in acollaborative way. It has determined that web developers with the interview technique and team approach bring a more correct and useful web application. Tool consists of three major parts; User who gives the necessitiesare the first part, and web developers that develop the web application as another part. Tool has store information as of developers and users obtain requirements consequently. Interface element that comprise graphical user interface (GUI) in favor of workers to cooperate among parties and feedback unit to make query. The feedback module has to generate question according selected domain. It has proposed that web developers with the interview technique and team method with analyze in a web eliciting requirement tool bringsadditional functional and perfect web applications.
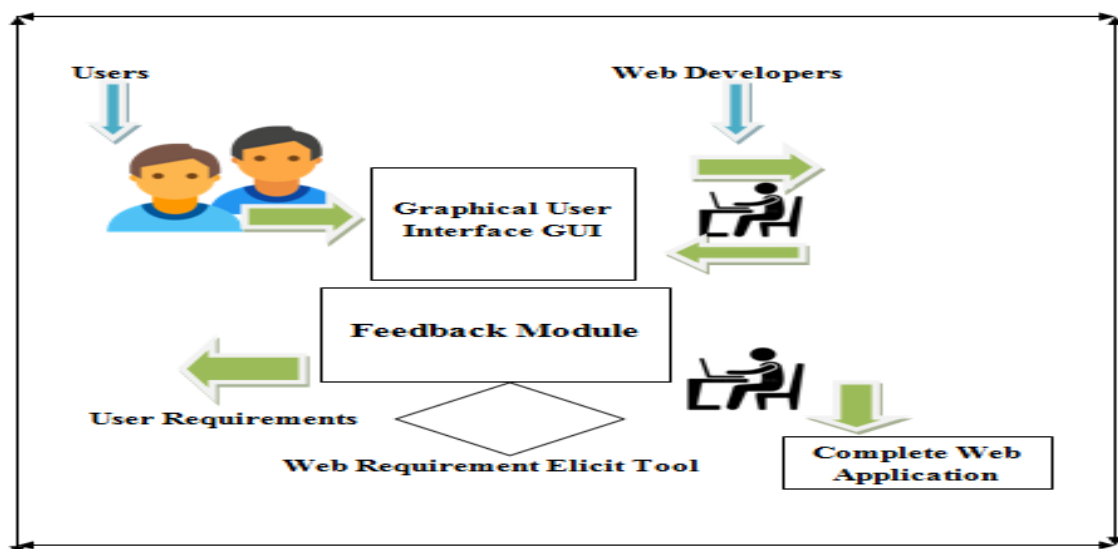

Figure 1 : Web Requirement Elicitation Tool

For the demonstration of our tool, it chose the different software houses. A squad of software analyststhenemployer'scustom the system to accomplish the different projects. It decided different categories like education, health, hotel management etc., for the clients to select one of them that he/she given requirement for website. In this session developer and client has discussed about the requirements in the feedback or comments. Finally, client and developer will be able to decided and elicit proper requirements for a project in less time. Make a questionnaire that was given to respondents toward obtain the response arranged the development of web application. The questionnaire has been a prearranged usual question as well as choice of application, different level of users that used the application, process involved and description format.
Accountability of Different department has remaineddesignatedcontains meet with different users to gather info, developing web applications, test web requesttheninstall web applications.

We related the efficiency of the procedureplanned for web application progress. We get thisstandard:
a) Informal usage
b) Cooperating level
   c) Period of web application development
   d) Level of functionality of the web application

IV.   RESULTS AND DISCUSSION

Statistical analysis has been used to calculate the results, which help to compare the results with other requirement elicitation techniques. It has clearly show that web requirement elicitation tool reduces the time when develop an application, by the results of statistical analysis.

ANOVA

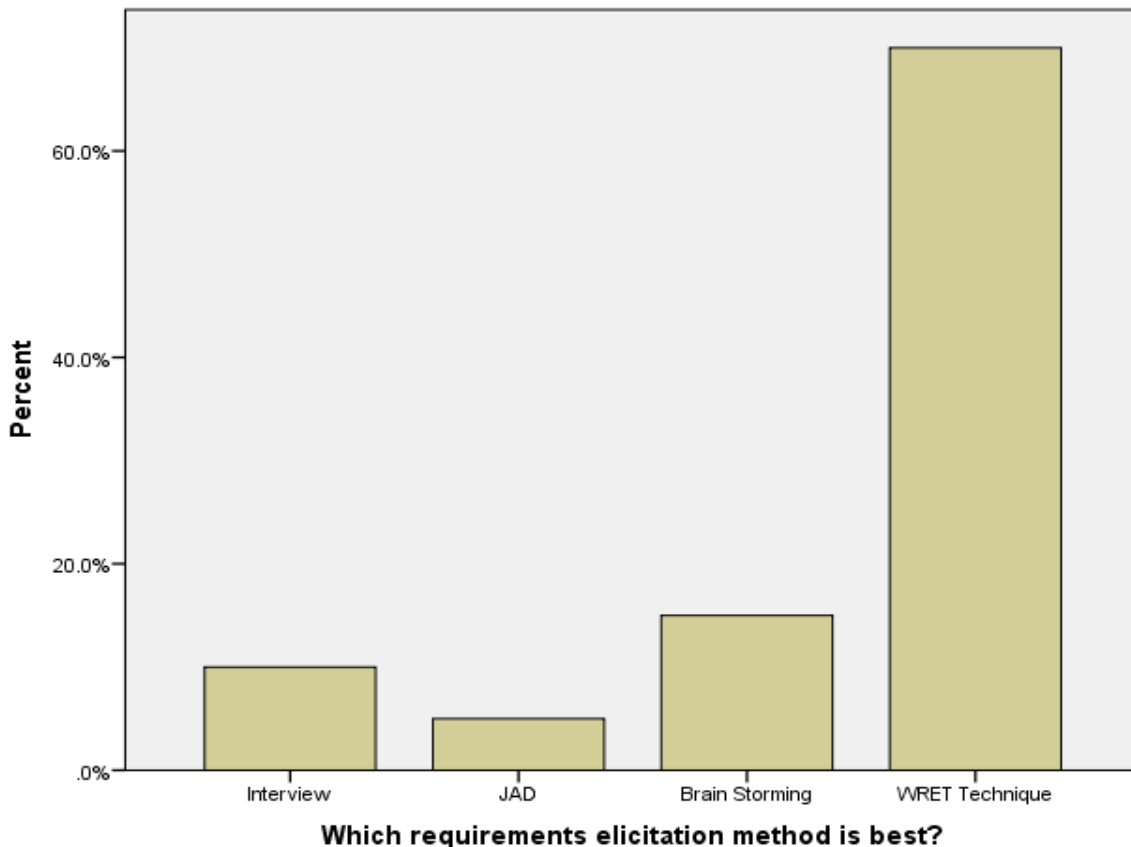| Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.720	7	1.389	2.740	.060[b]
	Residual	6.080	12	.507		
	Total	15.800	19			

Table 1: Analysis of Variance

Table 2: Comparison of different techniques for the requirement elicitation

We have conducted paired T test for the regression. In the ANNOVA table the significant value is 0.060which is greater than 0.05. In statistical analysis, if null hypothesis becomes true (which mean there is no difference in

the results for the compared techniques) always rejected. As displayed in table 1, the F value of the ANNOVA is 2.740. In this regression sum of squares and mean squares clearly shows the results.It can also be seen in table 1 that the proposed technique produced more than 60% for WRET technique, which is higher than interview, JAD and Brain Storming. The Proposed tool provides better requirement elicitation procedure and facilitates developers and clients describe their needs in a web application.

V.   CONCLUSION

In this research our struggle in concluding the top method elicitation of necessities in creating web base applications.The necessity to enhance present prerequisite elicitation strategies emerge after the issues looked via web designers within web application advancement. After this exploration, web engineers can utilize WRET(Web Requirement Elicitation Tool) technique for requirement elicitation instead of utilizing the interview andJADapproach, which did not display significant results.

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