CROWD-BASED REQUIREMENT ENGINEERING
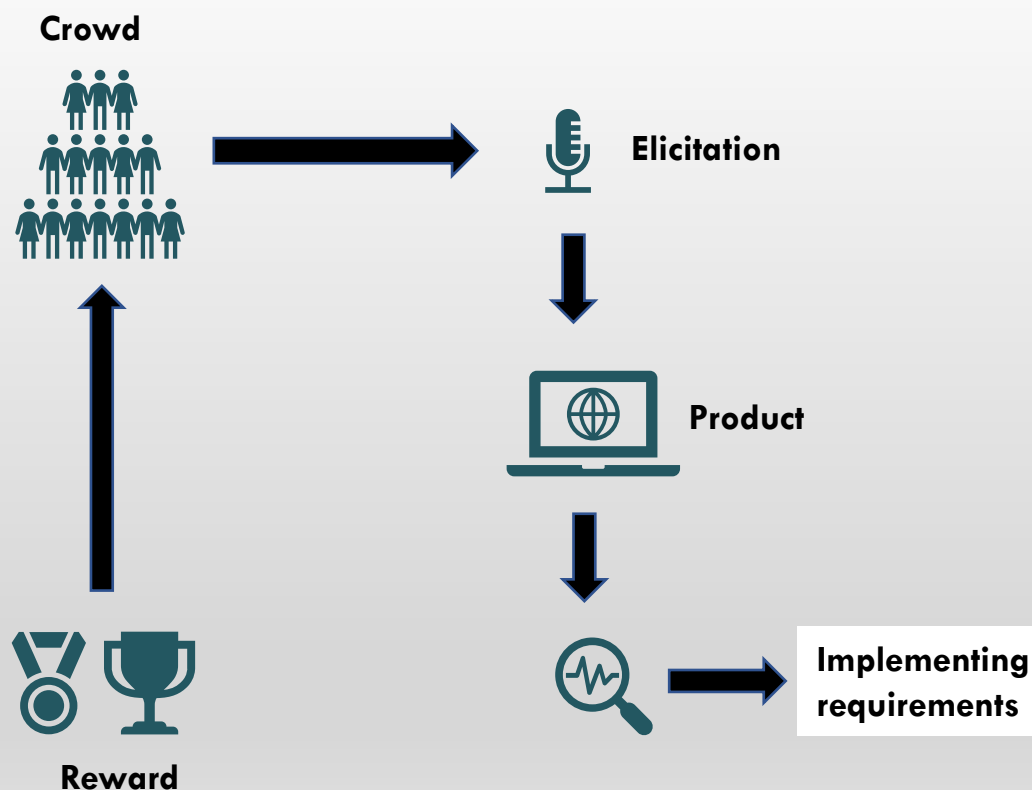
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ABSTRACT

Requirement elicitation through crowdsourcing is trending nowadays and due to its major benefits, some of the organizations are implementing this idea. Our research paper discusses the traditional requirement engineering concepts and then compares them with crowd-based requirement engineering to show the benefits of crowdsourcing. Features of Crowd-Based Requirements Engineering are highlighted to give an idea of the basis on which the survey was conducted. Furthermore, we have discussed the online survey and gamification methods to motivate the crowd.

CONCEPT

METHODOLOGY

The survey was divided into 9 categories and those categories are as follows:

Largeness: It is considered as a crowdsourcing feature because it helps in maximizing the information and decision-making is made easier.

Diversity: number of creative information can be gathered, but on the other hand diverse information can lead to highly complex decision making

Anonymity: On the one hand anonymity can help us in getting an honest opinion but it can cause risks like participation of malicious users.

Competence: It is also one of the main features of crowdsourcing. Even though, it creates the impression that high capability in the group is constantly positive with no negative results - the truth could be extraordinary.
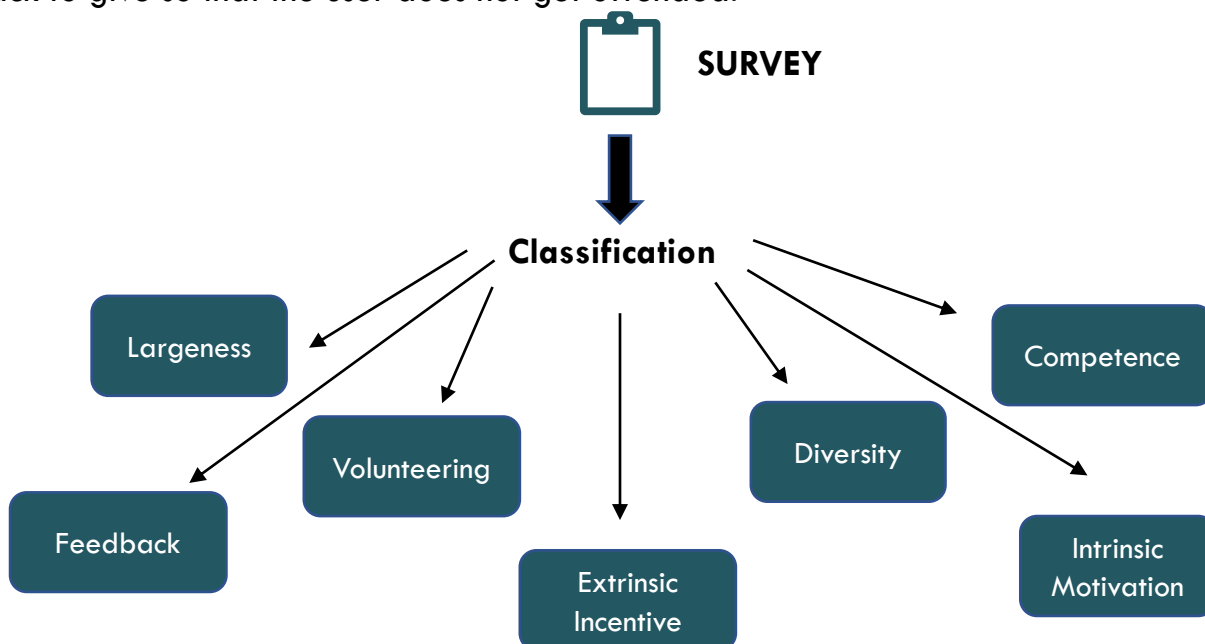
Collaboration: There are many benefits of collaboration, including the capacity to comprehend the method of reasoning for prerequisites and having all-encompassing arrangements.

Intrinsic Motivation: Characteristically propelled members are really intrigued by the product for which prerequisites are crowdsourced and subsequently give better quality data. Be that as it may, it is difficult to concoct measurements and tests for such a quality property in clients.
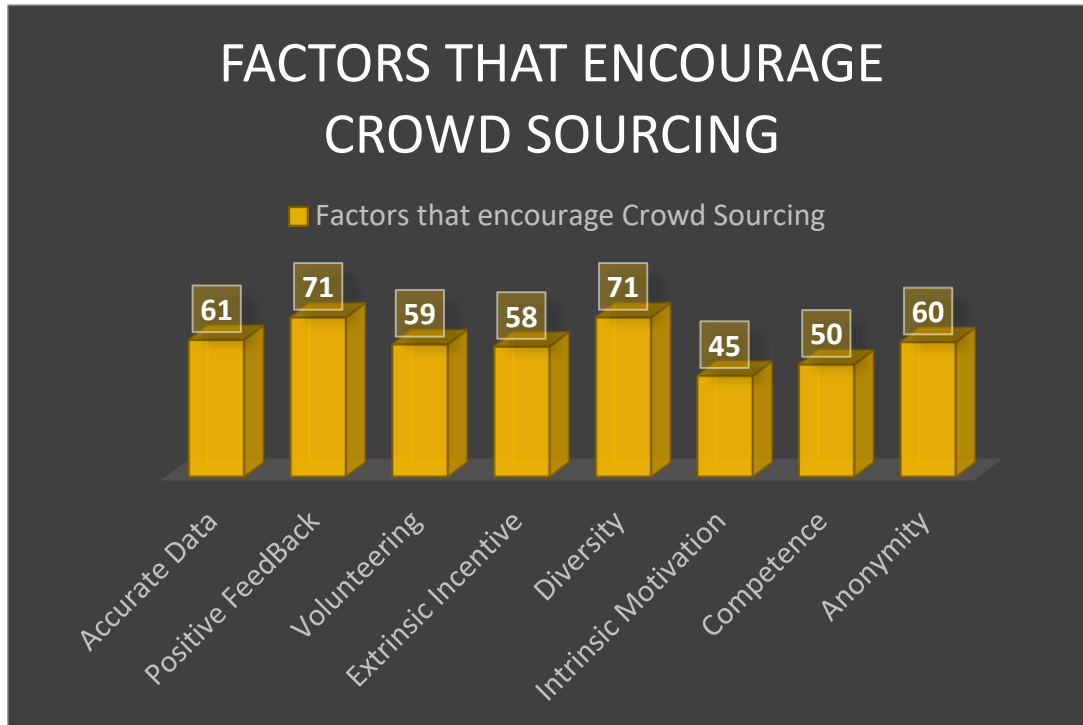
Volunteering: These features are believed to be the core of crowdsourcing, which is regularly observed as a free authoritative model in the light of intentional interest. Difficulties in different measurements,

Extrinsic Incentive: This implies costs for the crowd sourcer and could likewise mean less reliable prerequisites. Guaranteeing that the members' objective isn't exclusively to get motivation is a test.

Feedback: a positive feature for crowdsourcing but is still under exploration of which kind of feedback to give so that the user does not get offended.

SURVEY

Classification

Largeness

Volunteering

Feedback

Extrinsic Incentive

Diversity

Competence

Intrinsic Motivation

RESEARCH FINDINGS

In our research survey, we observed that people in Pakistan do have an idea of how important accuracy, anonymity, motivation, feedback and collaboration of the crowd is, to gather proficient requirements. We also observed that the use of this technique brings in new challenges like avoiding malicious users and motivating the crowd. Furthermore, this survey highlights the most important feature of crowd-based requirement engineering that is, Feedback. Fig 14, shows most of the respondents agreed that positive feedback not only gives motivation to the crowd but also helps in bringing out quality ideas. However, one still needs to investigate the type of feedback provided to keep the crowd motivated. This survey gives us an idea that in future organizations might adopt this idea and result in an early return on investment, but issues might exist that would affect little bit of its successful implementation.

CONCLUSION

It can be said that if Crowd based Requirement Engineering has some benefits it can have some pitfalls too. The only source to motivate the crowd to participate in the requirement elicitation is through gamification and the survey that we conducted explains that applying the crowdsourcing technique would bring up some challenges that should be resolved in the future in order to gather creative, accurate and error-free requirements. Quality of requirements gathered through the crowd is still doubtful, but it will help engineers to understand trends in the crowd.