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A Psychometric Analysis Web Portal for Kids

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ABSTRACT: Smart city is booming concept where smart education can play vital role. For education to be smart, we need to focus on skills and furnish it to bright level. The psychometric analysis is the process of measuring and analyzing relevant weaknesses and strength of human. To identify these skills normally parents from western country perform psychometric test for their child. In India there is no such procedure available for deciding capability of intelligent strong part. Some of the mega city may have such center but people are not aware of it. All the tests taken in these centers are totally manually and the charges are costly. In the remote areas, villages there are no such facilities available. Now a day's choosing right career and becoming successful and proficient in that field is everyone's dream. To achieve this making right decision while choosing a field for career plays a vital role. Selecting the domain is highly dependent on area of interest and natural skills of kids. With the proper analysis parents can find out the strong zone of their child and hence take the suitable action for improving their area of weaknesses and deciding fields for their Child's interest.

KEYWORDS: Psychometric analysis, Psychometric test, Prediction.

I. INTRODUCTION

The lack of social interaction ability and their ability to adapt are caused by the influence of children psychology , to undertake psychological test, a child is brought to a psychiatrist and that will make that child follows various form of psychological tests that are mostly difficult. Psychological tests performed nowadays are still manual. They only use paper test and do some observation on children's attitudes. The weakness of this test for children is that it tends to create a boring situation. In addition, it is not easy to persuade and bring the child to psychiatrist for being tested. In India there is no such procedure available that decides the capability of intelligent strong part .some of the mega city may have such center but people in some area may not be aware of it. All the test procedure taken in these centers are totally manual or we can say by using pen and paper and the charge for this type of test is expensive. In the remote areas, urban and rural areas there are no such facilities available.

II. RELATEDWORK

To identify skills like strength and weaknesses, normally parents from western countries perform psychometric test for their child .with the proper analysis they can find out the strong zone of their child or we can say area of interest of their child and hence they take the suitable action for improving their weaken area and deciding field for their child. Age 4 to 8 is a concrete operational phase where logical thinking ability is currently developed, with a condition that objects that will become the source of that logical thought present concretely. This logical thinking ability is achieved through ability to classify the objects based on their classification, to put things in their order, ability to understand people's point of views, and ability to think deductively. In these ages, children start to enter a formal education, where normal kids are supposed to interact well in their social association. Children cannot directly judged by anyone that which level of mind they carrying for their study.



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Result-

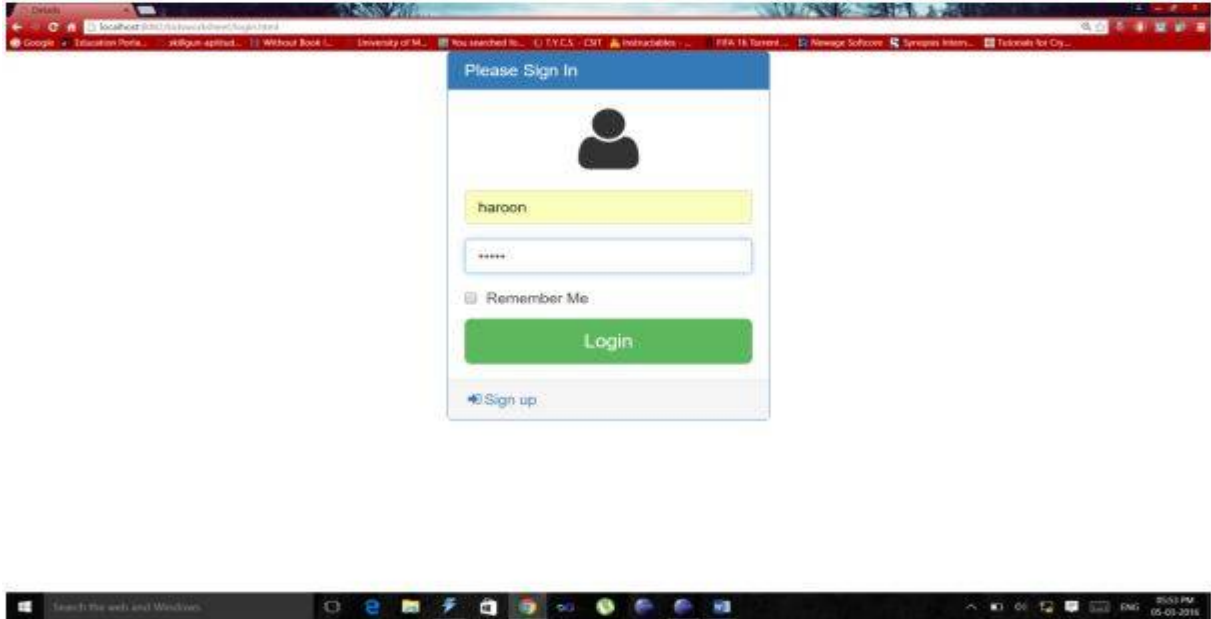


Fig.1 User Login Page

Here authenticate registered user can login the portal by giving valid username password .Which is then checked with database storage after than the user is given the authorization.

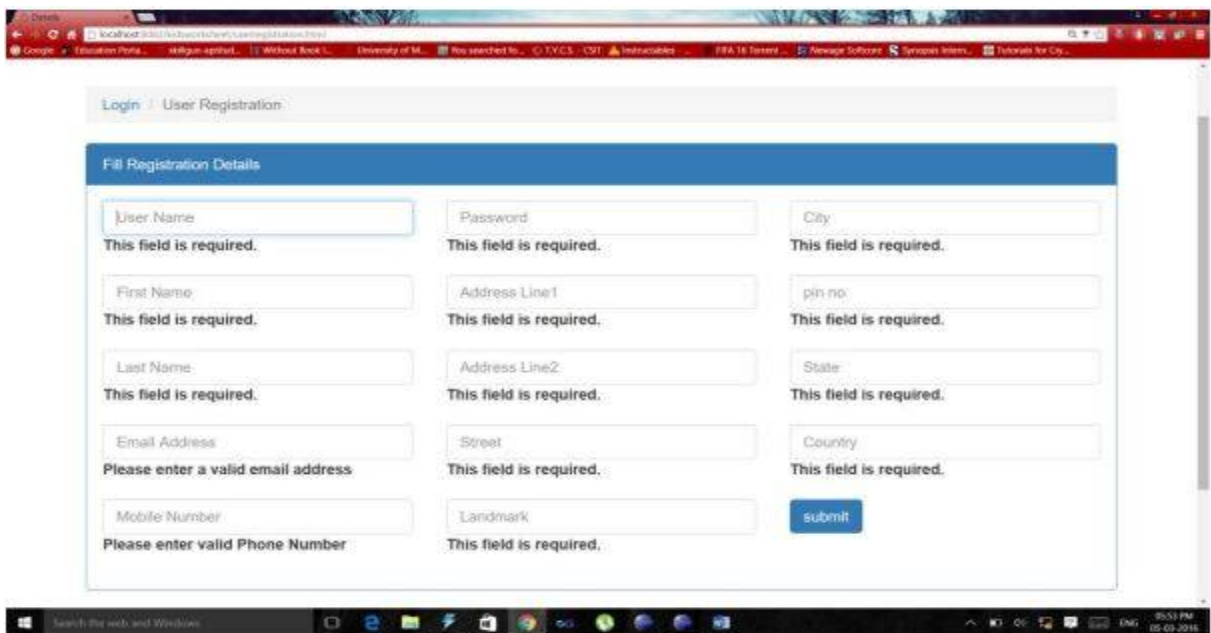


Fig.2 User Registration Form

Here if new user visits the portal after that providing the information required after this information is stored in



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database created in mysql.

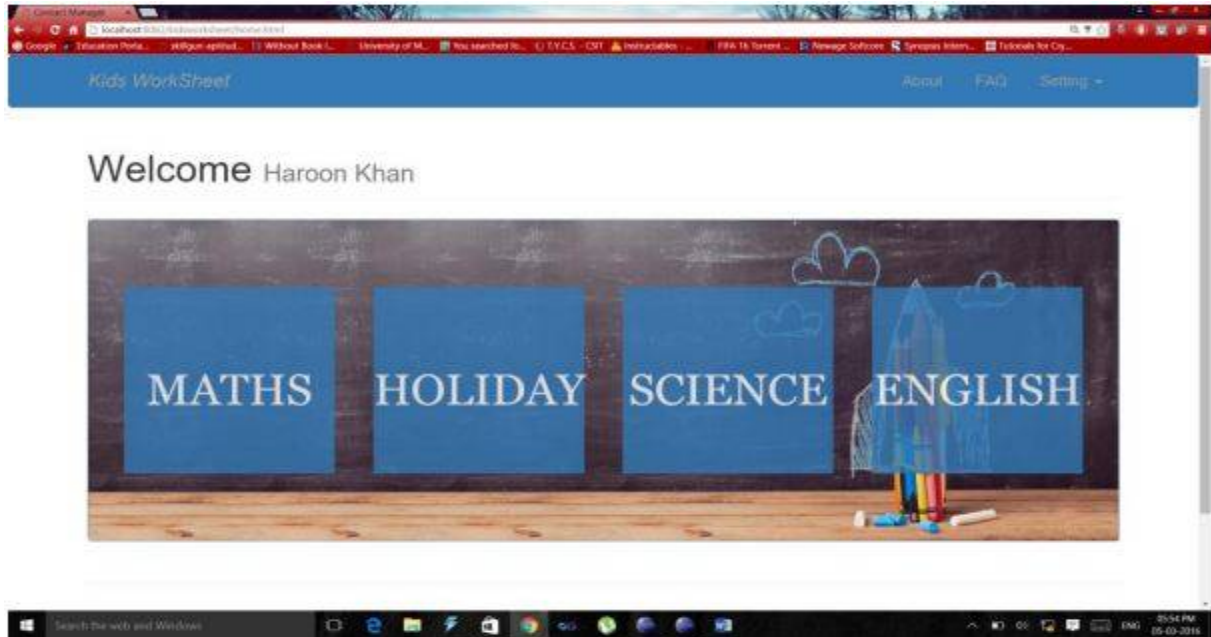


Fig.3 Welcome Page of user

This welcome home page after user logins the portal after which he/she can access the services like question paper for child, games, quiz.

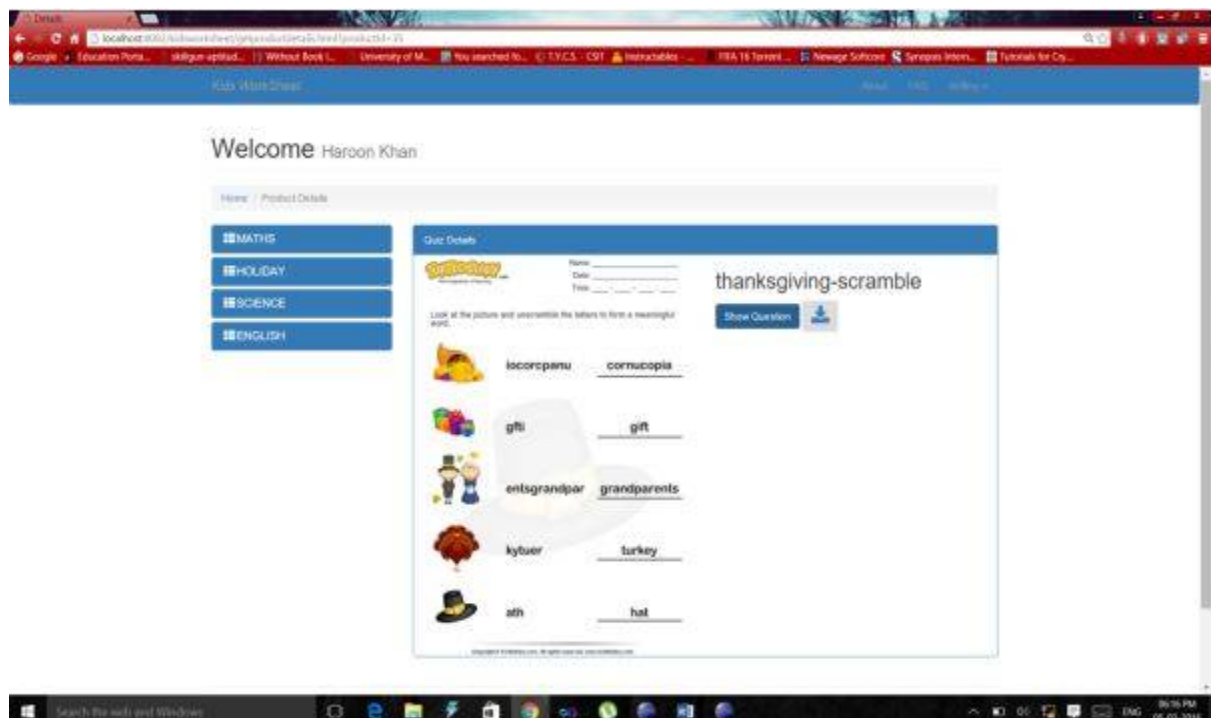


Fig4. Test Paper and downloading pdf

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This is the sample question paper that is given to the child for conducting and analyzing the skills of the child. One can also download the papers.

III. PROPOSED ALGORITHM

The proposed system bringing all activity at online platform so that every people from town, city can connect freely. The system will smartly capture strong and weak point of child's by simple puzzles questions and games. From the effective psychometric books and expert's result which can be converted into computer algorithms. Then analysis can be done to predict and suggest the best advice to the people. Also this system will provide offline test option where user can download paper and solve it for practice.

The proposed solution for psychometric analysis web portal for kids is focuses age group of 4-8 years. To identify skills like strength and weaknesses, normally parents from western countries perform psychometric test for their child. In India there is no such procedure available that decides the capability of intelligent strong part. This purposed system bringing the all psychometrics manual testing activity at online platform and remotely so that the every people from town, small cities can connect freely. this system smartly capture the strong and weak point of child's by conducting test. The test which is conducting analysis is having relevance of questions that provided depending on all areas like understanding skill, IQ quality, behavior of certain event which are converted into puzzles, pictures, gaming. After conducting test the verification occur. From effective psychometric books and experts results by using prediction analysis with business analysis which converted into computer algorithm an analysis can predicted and it provides scores and measures the result. And suggest the best advice to the people.

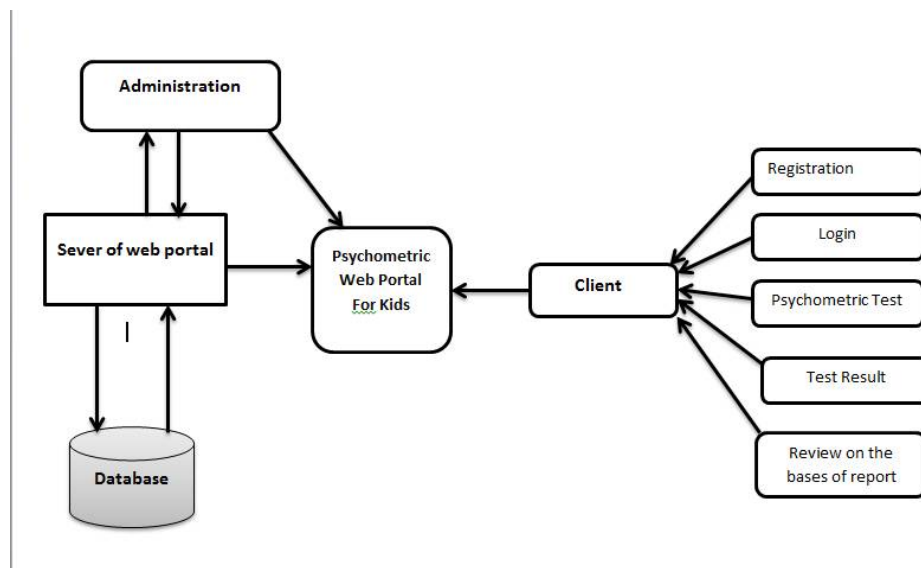


Fig.5 Proposed System

IV. LITERATURE SURVEY

Dr. Cattell was a former president of the American Psychological Association started a business to market psychological tests and related materials to educational, corporate and government clients. DrCattell's plan was to form a holding company and referral service for psychologists, giving them shares of stock in exchange for their willingness to administer individual intelligence tests and promote the research and development of applied psychology. So great



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was Dr. Cattell's influence that he was able to recruit almost half of the 400 APA members for his corporation. Offices were opened in New York City's Grand Central Terminal, with the goal of locating and maintaining branch offices throughout the United States and abroad. Q-global is Pearson's new web-based system for test administration, scoring and reporting. It houses the industry's gold standard in assessment tools and is accessible from any computer connected to the Internet..[1]

The Behavior Assessment System for Children Second Edition (BASC2) was developed by Cecil R. Reynolds and Randy W. Kamphaus. This review is based on the 2nd edition published in 2004 by AGS Publishing. Student Observation System (SOS) is an additional measure that allows the clinician to observe and evaluate the child or adolescent's daily classroom behavior directly, and takes approximately 15 minutes for observation. The new Portable Observation System (POP) can be placed on a PDA or laptop and offers a streamlined way of collecting observational data electronically. The amount of time required for the scoring and interpretation of any of these measures is not discussed in the manual. The tool consists of 5 different kinds of reports/forms that are completed by an array of parents, teachers, caregivers, the examinee, and the clinician Scoring software is available for scanners and manual entry for both Windows and Mac platforms. The publisher also carries additional scoring form packs, test items on CD, and training videos in DVD and VHS format. For parents and students that have difficulty with reading, test items are available on audio CD in both English and Spanish (PRS and SRP)..[2]

In this paper SetionoKusdwirarti described that age 6 to 8 is a concrete operational phase where logical thinking ability is currently developed, with a condition that objects that will become the source of that logical thought present concretely. This logical thinking ability is achieved through ability to classify the objects based on their classification, to put things in their order, ability to understand people's point of views, and ability to think deductively. In these ages, children start to enter a formal education, where normal kids are supposed to interact well in their social association..[3]

ZahirZainuddin, Indah PurwitasariIhsan described that, based on game learning in order to ease psychiatrists and parents in understanding the children's psychological condition. By playing that game, children will unconsciously learn about social affairs while their's level of social intelligence are also being tested in the same time. Based on the study, it is clearly known about children's attractiveness and easiness in completing psychological test using the game learning..[4]

This study examined the statistical and theoretical derivation of a behavioral screener for the estimation of executive functions in children from the well-established Behavior Assessment System for Children (BASC). The original national standardization sample of the BASC-Teacher Rating Scales for children ages 6 through 11 was used (N 2,165). Moderate-to-high internal consistency was obtained within each factor (.80 –.89). A panel of experts was used for content validity examination. A confirmatory factor analysis model with 25 items loading on 4 latent factors (behavioral control, emotional control, attentional control, and problem solving) was developed, and its statistical properties were examined. The multidimensional model demonstrated adequate fit, and it was deemed invariant after configural, metric, and scalar measurement invariance tests across sex and age. Given its strong psychometric properties, with further tests of item validity, this instrument promises future clinical and research utility for the screening of executive functions in school-age children.[5]

V .FUTURE SCOPE

Day by day education plays vital role in career. For education to be smart, we need to focus on skills and furnish it to bright level. So this system can be used for schools, NGOs. In this system we can add more feature or more studies of psychometric and there can be a separate Admin panel for configuring the analysis of expert of psychological studies, it can be made commercial by providing the expert appointment in future.



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VI. CONCLUSION

The system proposed in this paper makes a web-based psychological test modeling that is expected to become a wider in detecting and understanding the psychological condition of children in early stages through Online psychological test in very innovative way of assessment, so the children will not realize if they are actually undergoing a test. Children also pleasantly play the game that they unconsciously know if they are actually learning as well as getting a test in the same time. This really prevents a direct judging, so the children remain confident.

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