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Web Based IT Crossword Generator

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ABSTRACT: Crossword puzzles are today's most popular world game. Crosswords are the best brain teaser puzzles which we recommend you to play. First because you learn each day new things from their questions and second because it grows your brain agility each day and more. We have started to share all the possible crossword clues of all crosswords puzzles all around field of IT. However, their production by hand is a difficult and time consuming process. The existing system developed with algorithm which uses the approach of unconstrained construction to produce very large crossword puzzles. This system is able to generate crossword with no human intervention. The crossword generator has relevant applications in entertainment, educational and rehabilitation contexts. The Web Based IT Crossword is useful in increasing our words knowledge and as well it increases our thinking capacity. On playing this game, we easily face the any aptitude type exams, on behalf of general words knowledge.

KEYWORDS: Information Technology, unconstrained.

I. INTRODUCTION

This project is a webbased application that helps to create IT crossword game that is used for increasing the intelligence and knowledge of the user. This crossword puzzle can have three levels that is basic level, intermediate level and higher levels depending on difficulties. A crossword is a word puzzle created from a grid of white and black squares, placing words horizontally and vertically on these squares while each two words which cross each other require having an identical letter at the place they are crossed. The application described and included in this Project is useful whenever there is a need to create a mechanism which will place words as a crossword.

Production of crossword puzzle using computer involve many branches of computer science. One needs a good database design for the storing the questions and answers.

II. LITERATURE SURVEY

Automated generation of unconstrained crossword puzzles and estimate of their solution space by Zafer Barutcuoglu, Department of Mathematics, Bogazici University, Bebek 80815, Istanbul, Turkey; this paper introduce crossword production with the backtracking technique, which is use to check the words are properly intersect or not by vertically and horizontally in the grid. If there is no match found then backtrack to the solution. [1]

A Fully Automatic Crossword Generator by Leonardo Rigutini Michelangelo Diligenti Marco Maggini Marco Gori, 2008 Seventh International Conference on Machine Learning and Applications algorithm which uses the approach of unconstrained construction to produce very large crossword puzzles. [2]

III. PROPOSED SYSTEM

The Web Based IT crossword is been proposed, which is specifically designed for IT field.

This paper introduces a software system that generates crosswords with no human intervention, including questions and their clues. The proposed system is designed based on the concepts which are related to the IT field such as simple programming language like c, c++, java, PHP, etc.

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We provide all the possible crossword clues of all crossword puzzles all around field of IT. In this system the user will solve the puzzle level wise as well as topic wise. If users want to see their previously solved puzzles then we provide the history of the puzzles to the users.

In our system we immediately provide result after completing the puzzle.

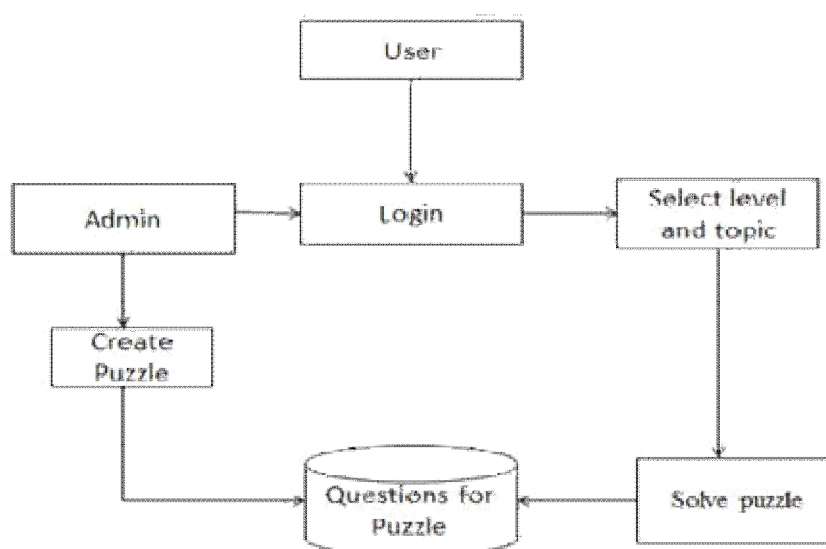


Figure 1 Block diagram of Web Based IT Crossword Generator

Admin login to the system by using proper username and password. Admin enters the questions and their answers related to IT subjects and create a puzzle under the concepts label like different programming language like php, .NET etc. and store it into the database.

User can register to the system with valid username and password. User can browse subject wise crossword or level wise crossword. User's solving skills are based on low level, middle level or the subject in which he/she is interested. User can view the previously solved crosswords. He can view his score. User can post a feedback.

IV. TECHNIQUE

- Backtracking:
We use this technique to check whether the words are placed at valid position or not by horizontal and vertical. If there is no matching words are found then it backtracks and checks all the available positions.
- Forward Tracking:
Forward tracking forms words in array matrix. Find the intersection and arranging or placing the words according to its.
- General idea of creating a crossword is as following
 1. Enter the title of the crossword with subject.
 2. Enter the answer and the clue for the answer.
 3. Arrange and sort words by checking its previous and next words to decide a position or an intersection.
 4. Breaking the words into letters and store the letters into the array of the puzzle.
 5. Creating grid.
 6. Backtrack to solution and fixed the position of letters in grid.

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V. IMPLEMENTATION



Figure 2 Homepage of Web Based IT Crossword Generator

The above figure describes the homepage of web based IT crossword Generator named as web IT Crossword. As shown in above figure, the homepage of web based IT crossword Generator contains the login and register page. Also, the navigation menu contains home, contact us, help, and feedback.



Figure 3 Homepage of Admin side

The above figure shows the homepage of the Admin. As shown in above figure, the homepage contains the link for create puzzles, users, feedback. Also, the navigation menu contains home, setting and logout.



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Figure 4 Homepage of User side

The figure describes the homepage of user side that contains links for my puzzles, solve puzzles, suggest puzzles and message. Also, the navigation menu contains home, setting and logout. Setting helps user to change their password.

Figure 5 Form to enter answers and question for puzzle

The figure shows the form for entering questions and answers for the puzzles. As we use java script we can store only one component at a time. But here we stored 15 elements hence we use multitenet box to store all element as a one component.

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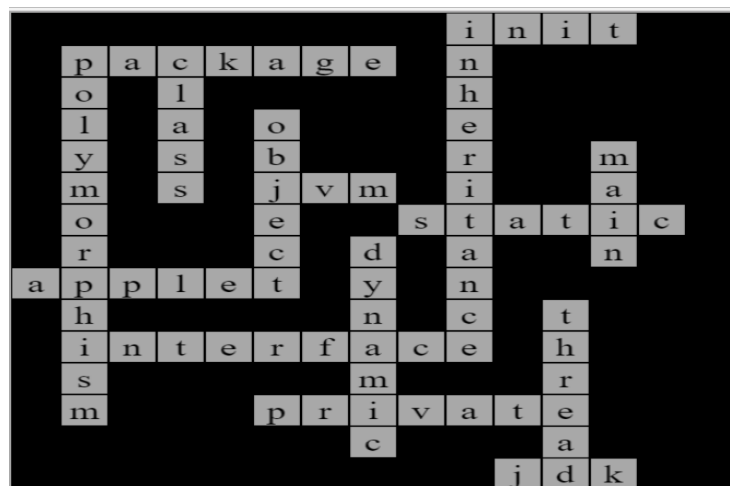


Figure 6 Grid Formation

The figure shows how the words are automatically placed vertically and horizontally having intersection at identical letter with no human interaction.

VI. CONCLUSION

Thus here we conclude that the proposed system will be used to increase the thinking capacity as well as the knowledge of the user. This crossword game saves our time rather than playing it on the paper.

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