| **SYNOPSYS : CA IPMV 2023-24** | | |
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| **PROJECT NAME( Group Number )** | | **Memory game using Image processing (Group Number 10)** |
| ELECTRONICS AND TELECOMMUNICATION ENGINEERING | | |
| Vivekanand Education Society's Institute of Technology | | |
| **Students Names (Class /Roll Number)** | | Anshkumar Agrahari (D14B/01) |
| **Students Names (Class /Roll Number** | | Pranav Jha (D14B/24) |
| **Students Names (Class /Roll Number** | | Ashish Nair(D14B/37) |
| **Students Names (Class /Roll Number** | | Akash Neharkar (D14B/40) |
| **Mentor Name** | | Mr. Mrugendra Vasmatkar |
| **SEM/Year/CAY** | | VI/TE/2023-24 |
| **Problem Statement**  **(Initial Goal)** | To make a memory game using Image processing. | |
| **OBJECTIVE(s)** | 1. To identify the type of game that is to be developed 2. To collect the image database required for the game 3. Processing and Morphing the images to fit into the game 4. Creating the first instance of the game with a single level 5. Creating much more deeper and complex stages as the levels proceed | |
| **SPECIFIC:** | The aim of this project is to create a memory game based on image processing where the user will be given a particular image and then the image will be jumbled into multiple pieces and the user has to rebuild the image based on the image first displayed   1. Identification of the game required: Ashish,Ansh,Akash,Pranav 2. Procuring the image database : Ashish,Ansh,Akash,Pranav 3. Processing and ssegmenting the images to fit in the game : Ashish,Ansh,Akash,Pranav 4. Development of different levels : Ashish,Ansh,Akash,Pranav   This project is finished before April and remaining time can be utilized for project report and demonstrations.  This project is a prototype for commercial memory game application and may be presented in poster presentation and competitions | |
| **MEASURABLE:** | To make the memory game more measurable, consider tracking completion time, number of moves, accuracy, difficulty level, error rate, retention rate, and player feedback. Completion time reflects player efficiency, while fewer moves may indicate better strategy. Accuracy measures memory recall and decision-making. | |
| **ACHIEVABLE:** | For this project Softwares like Visual Studio Code is required.  We have to learn about multiple libraries present in the software for successful completion of project . So Student Pranav , Akash , Ansh , Ashish will learn about different libraries present in the software and Ansh , Ashish , Pranav , Akash will learn about the syntax as well as using these libraries in creating multiple functions in the code. | |
| **RELEVANT:** | This prototype will help to build a memory game which will show complete image in start and rearrange in random order. Player has to arrange image parts in proper order to complete levels. | |
| **TIME-BOUND:** | *Game Overview : 02-March-2024*  *Study of operations on image : 05-March-2024*  *Software : 09-March-2024*  *Trouble shooting :18-March-2024* | |
| Introduction :  This project explores the integration of image processing techniques in solving jigsaw puzzles, aiming to understand the cognitive and computational processes involved. Key areas of focus include image segmentation, feature extraction, matching algorithms, and performance evaluation.  Description :   * The "Jigsaw Puzzle Image Input" represents the source images of jigsaw puzzles that are processed by the image processing module. * Image segmentation separates puzzle pieces from the background image. * Feature extraction identifies distinctive features of puzzle pieces, such as edges, colors, and textures. * Puzzle piece sorting organizes pieces based on their features. * Matching algorithms identify connections between adjacent puzzle pieces based on similarities. * The "Puzzle Assembly Evaluation" phase assesses the accuracy and efficiency of the assembly process.   Block Diagrams :- | | |
| Mentor Name & Signature with date: Mr. Mrugendra Vasmatkar | | |