Group No.	TA Group	Topic	Description
1-3	Akanksha & Meenakshi	Solve a Quadratic Equation	Develop a software tool to solve any given quadratic equation with real coefficients. Your tool should be able to handle all the cases, and should visualize the complete solution step by step.
4-6	Akanksha & Meenakshi	Find Determinant of a Matrix	Develop a software tool to find determinant of a given 3X3 real valued matrix. Your tool should consider all the input cases, and should also visualize the solution at each step.
7	Ayasha, Megha, Susrita	Number Conversion	Develop a software tool to convert a number given in Binary representation as input to its equivalent Octal representation and present it. It can be any real number. Visualize the process of conversion creatively.
8	Ayasha, Megha, Susrita	Number Conversion	Develop a software tool to convert a number given in Octal representation as input to its equivalent Decimal representation and present it. It can be any real number. Visualize the process of conversion creatively.
9	Ayasha, Megha, Susrita	Number Conversion	Develop a software tool to convert a number given in Decimal representation as input to its equivalent Binary representation and present it. It can be any real number. Visualize the process of conversion creatively.
10-12	Shubham and Jay	ADD 2 NUMBERS	Problem Statement: Implement a small software for children which takes 2 numbers from user and performs the summation operation. Display the process of summation of these 2 numbers using Visual Basics. Clearly display the process of how carry is forwarded in summation using Visual Studio Graphics.
13	Shubham and Jay	SEARCH (Linear)	Implement a small software to search an element from a list of elements. Element can be anything for e.g. Integer, float, string, etc. Display the list of elements to the user (read from a file) and ask for the element to be searched. Using Visual Basics and graphics show how the search proceeds.
14-15	Shubham and Jay	SEARCH (Binary)	Implement a small software to search an element from a list of elements. All the elements are of similar data type (Integer, float, string, etc.) and are sorted. Using Visual Basics and graphics show how the search proceeds using Binary Search Algorithm.

16-18	Shubham and Jay	ONE-PAGE CALENDAR	Problem Statement: Implement a small software to display a one-page calendar. For Example: Your software can take year as an input and display the calendar accordingly.
19-21	Ayasha, Megha, Susrita	CALCULATOR	Design a graphical representation of a calculator with the following functionalities:addition,substraction,multiplication and division
22	Ayasha, Megha, Susrita	SORTING(BUBBLE)	Implement bubble sort and visualize the intermediate steps creatively(comparison,swapping)
23	Ayasha, Megha, Susrita	SORTING(INSERTIO N)	Implement insertion sort and visualize the intermediate steps creatively(comparison,swapping)
24	Ayasha, Megha, Susrita	SORTING(SELECTIO N)	Implement selection sort and visualize the intermediate steps creatively(comparison,swapping)
25-27	Prasanta, Vaishali	Image Gallery	Implementation of basic image gallery in visual basic, Images will be shown from a folder , thumbnail or list kind of things can be added
28-30	Prasanta, Vaishali	Password Strength Checker	Implementation of a basic password strength checker , which can be used in various platforms , user can check wheather the password he/she going to use in future how strong or weak is it.