**Problem Statement:** Students have difficulties in understanding various math formula. It's easy to learn things but the better understood the more it is perceived and good to recall. Visualizing formula enables students to perceive things better and concepts are cleared more efficiently.

**Solution:** To understand things with greater efficiency and bring the concepts to practical problems is where, VISUAL MATHEMATICS FORMULA, comes into action. Visual mathematics formula shows the live presentation of various mathematical formula, through which the students can absorb the basic concepts and visualize their graphs.

***Prototype Model***

Prototype methodology is defined as a Software Development model in which a prototype is built, test, and then reworked when needed until an acceptable prototype is achieved. It also creates a base to produce the final system. Software prototyping model works best in scenarios where the project's requirement are not known. It is an iterative, trial, and error method which take place between the developer and the client.

**Step 1: Requirements gathering and analysis:** A prototyping model starts with requirement analysis. In this phase, the requirements of the system are defined in detail. During the process, the users of the system are interviewed to know what is their expectation from the system.

**Step 2: Quick design:** The second phase is a preliminary design or a quick design. In this stage, a simple design of the system is created. However, it is not a complete design. It gives a brief idea of the system to the user. The quick design helps in developing the prototype.

**Step 3: Build a Prototype:** In this phase, an actual prototype is designed based on the information gathered from quick design. It is a small working model of the required system.

**Step 4: Initial user evaluation:** In this stage, the proposed system is presented to the client for an initial evaluation. It helps to find out the strength and weakness of the working model. Comment and suggestion are collected from the customer and provided to the developer.

**Step 5: Refining prototype:** If the user is not happy with the current prototype, you need to refine the prototype according to the user's feedback and suggestions. This phase will not over until all the requirements specified by the user are met. Once the user is satisfied with the developed prototype, a final system is developed based on the approved final prototype.

**What is a Functional Requirement?**

In software engineering, a functional requirement defines a system or its component. It describes the functions a software must perform. A function is nothing but inputs, its behavior, and outputs. It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality which defines what function a system is likely to perform.

Functional software requirements help you to capture the intended behavior of the system. This behavior may be expressed as functions, services or tasks or which system is required to perform.

**What is Non-Functional Requirement?**

A non-functional requirement defines the quality attribute of a software system. They represent a set of standards used to judge the specific operation of a system. Example, how fast does the website load?

A non-functional requirement is essential to ensure the usability and effectiveness of the entire software system. Failing to meet non-functional requirements can result in systems that fail to satisfy user needs.

Non-functional Requirements allows you to impose constraints or restrictions on the design of the system across the various agile backlogs. Example, the site should load in 3 seconds when the number of simultaneous users are > 10000. Description of non-functional requirements is just as critical as a functional requirement.

**Visual Mathematics Formula**

Functional Requirements

Visual mathematics formula does not require you to login or sign in. The only requirement you have to fulfill is provide a formula for the representation of the graph. Next to the formula you move ahead to the assignment of values so as to plot the graph. Plotting values can ensure the feasibility of the formula and preciseness of the formula. This way we can acknowledge the working of the formula and how else we can modify the formula.

Non-Functional Requirements

The graph can Move as we desire. We can zoom the graph to study how precise it is. Published formulas can be tested and studied by plotting the using value substitution.