

BUSINESS REQUIREMENTS DOCUMENT TEMPLATE

Roll No: 1551

PROJECT DETAILS

PROJECT NAME		
Algovizzle		
CREATOR		
Kaysan Shaikh		
DOCUMENT NO.	DATE	VERSION NO.
2	14/02/2025	2

1. EXECUTIVE SUMMARY SNAPSHOT

Provide an executive summary (overview of your business requirements) here. Your executive summary should be a "snapshot" of the purpose of your business requirements, including a brief description of any analysis, findings, project details, scope, business drivers, proposed process, current process, and functional requirements. An executive summary provides an overview of a larger document or of research and is usually the first thing your reader will see. Here are the questions you should answer when writing your business requirements executive summary:

- What is the goal (purpose) of this business requirements document (BRD)?
- Who is the audience for this business requirements document?

AlgoVizzle is an interactive algorithm visualization tool designed to help students, educators, and professionals understand and analyze sorting and searching algorithms more effectively.

Goal or Purpose of BRD:

The purpose of the BRD is to outline the functional and non-functional requirements for developing Algovizzle, an algorithm visualizer tool.

Aim:

To create a platform that helps users visualize and understand algorithms, allowing them to see step-by-step executions and analyze performance.

Audience:

1. Product Team
2. Development Team
3. UI/UX Designers
4. Customers
5. Educators
6. Students
7. QA Team
8. Marketing Team

2. PROJECT DESCRIPTION

In this section, describe the project for which you are writing this business requirements document. Describe the project's purpose, what the current process/solution is for the project, what the challenges are, and why you need to undertake the project.

Project's Purpose:

The goal of this project is to develop an efficient algorithm visualizer tool that enables users to visually understand and analyze various algorithms.

Challenges:

1. Lack of intuitive tools for algorithm visualization.
2. Difficulty in understanding complex algorithms.
3. Limited access to interactive learning resources.
4. Ensuring a user-friendly experience that caters to both beginners and advanced users.

3. PROJECT SCOPE

Provide a high-level description of the project's scope, including a list of project-specific goals, tasks, deliverables, costs, deadlines -- everything that is "in" and "out" of scope for the project. This information provides team members with guidelines for the scope of the project, so they can plan and resource accordingly.

IN-SCOPE ITEMS	OUT-OF-SCOPE ITEMS
Item 1: Implementation of sorting algorithm visualizations (Bubble Sort, Merge Sort, Quick Sort, etc.)	Item 1: Advanced machine learning algorithms.
Item 2: Implementation of searching algorithm visualizations (Binary Search, Linear Search, etc.)	Item 2: Distributed computing support.
Item 3: Interactive UI for step-by-step execution	Item 3: Development of algorithm-solving capabilities.
Item 4: User input for custom datasets	Item 4: Integration with third-party educational platforms.
Etc.	Etc.

4. BUSINESS DRIVERS

Enter the reasons (i.e., business drivers) why your business is initiating the project. In short, Why are you undertaking the project? Examples might include the following: legal requirements, cost savings with a more efficient practice, updated import/export laws, improved efficiency, improved sales, etc.

Business Driver 1: Enhanced Algorithm Learning Experience

Providing an interactive and visual learning tool helps students and developers grasp concepts more effectively

Business Driver 2: Bridging the Gap Between Theory and Practice

AlgoVizzle allows users to experiment with real-time algorithm execution and analyze their behavior.

Business Driver 3: Improved Educational Tools

Institutions can leverage AlgoVizzle for better teaching methodologies.

Business Driver 4: User Engagement

Explanation: Enhancing user engagement by providing a unique learning experience

5. PRESENT PROCESS

**NO
UNKNOWN**

Provide details of your current, prevailing process for addressing the primary issue your project attempts to solve. Feel free to include diagrams, flowcharts, or other visuals to illustrate the current process.

Current Process:

1. Users have limited access to static algorithm explanations.
2. Lack of interactive tools makes learning challenging.
3. Existing tools are either too simplistic or too complex.

6. PROPOSED PROCESS

NO
UNKNOWN

Provide details of the proposed process for addressing the primary issue your project attempts to solve. Feel free to include diagrams, flowcharts, or other visuals to illustrate the proposed process. For this process, we recommend that you use the same illustrative tool/style that you used for your present/current process (above).

- A web-based visualization tool
- Real-time animation of algorithm execution
- Custom input dataset options
- A centralized platform for algorithm visualization.
- Interactive modules for users to engage with algorithms.
- Feedback and analysis tools for better understanding.

7. FUNCTIONAL REQUIREMENTS

NO
UNKNOWN

Detail the project's functional requirements by enumerating the ways in which the current process addresses the issue and by describing the functional requirements necessary to make the project successful.

Customer App:

- 1. User Registration & Authentication.
- 2. Algorithm Listings and Search.
- 3. Visualization & Analysis Management.
- 4. Real-Time Feedback.
- 5. User Reviews & Ratings.
- 6. Support & Help Center.

Admin Panel:

- 1. User Management.
- 2. Content Management.
- 3. Analytics & Reports.
- 4. Promotions & Offers.

8. NON-FUNCTIONAL REQUIREMENTS

NO UNKNOWN

Detail all non-functional requirements (NFRs) of the project, including such things as features, system behavior, and project characteristics that relate to user experience.

ID	REQUIREMENT
Availability:	Ensure 99.9% uptime for the platform.
Scalability:	Handle increased load during peak times.
Performance:	Load time of the tool should not exceed 2 seconds.
Security:	End-to-end encryption for sensitive data.