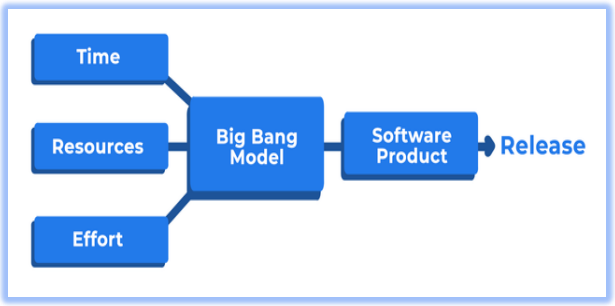
GROUP 8 – BIGBANG MODEL

I. SDLC and Its Importance

- SDLC is a structured process for designing, developing, and testing software to ensure quality. It outlines plans for each stage, enabling efficient task completion to deliver cost-effective software within set timelines that meet user needs. SDLC is important due to the following reasons:
  - Provides a clear roadmap for the entire software development process.
  - Helps identify potential risks and challenges early in the project.
  - Has the ability to control costs.
  - Ultimately, the success of any software project depends on customer satisfaction. SDLC ensures that the final product aligns with the customer's expectations and requirements.

II. Big Bang Model

- The Big Bang model is an SDLC model where we do not follow any specific process/ procedure. The development just starts with the required money and efforts as the input, and the output is the software developed which may or may not be as per customer requirement.



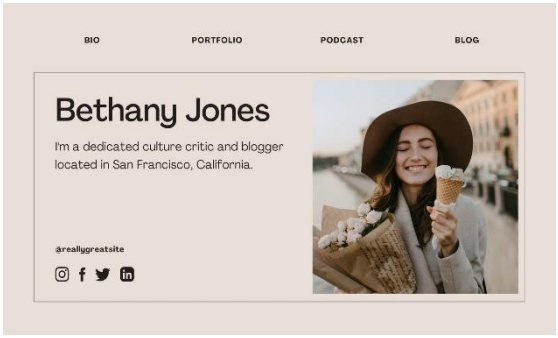
- <u>When to consider using the Big Bang model:</u>
  - Can be suitable for small-scale projects with clear and straightforward requirements.
  - Beneficial for research and experimental projects, enabling flexibility and quick prototyping.
  - In urgent situations requiring rapid solutions, like critical business needs, the Big Bang model prioritizes speed over formal processes.

- <u>Instances where the Big Bang model may not apply:</u>
  - Not be suitable for large, complex projects with dependencies and stakeholders.
  - Projects with uncertainty, technical complexity, or regulatory needs may face risks with this model.
  - Does not allow sufficient time for user research, testing, and iteration in projects where user involvement and feedback are critical for success
  - Limited risk mitigation for systems requiring high reliability and security.

III. Software / Applications That Could Potentially Employ the Big Bang Model During Development

- Hackathon
  - a combination of “hack” and “marathon,”, aiming to create a prototype quickly, have fun, enhance skills, and network.

- Personal projects
  - individual developers or small teams may use an informal, iterative approach that resembles aspects of the Big Bang model for personal or hobby projects.



- Student projects
  - students may undertake software development projects and may adopt an informal approach to development, focusing on practical implementation and experimentation rather than following formal methodologies.

IV. Pros and Cons of Big Bang Model

- Advantages

  - ❖ Simple and easy to implement.
  - ❖ Requires minimal planning.

- ❖ Ideal for repetitive or small projects with low risks.
- ❖ It is a good learning aid for new comers or students.

- Disadvantages

- ❖ High risk due to lack of pre-planning.
- ❖ Changes or misunderstood requirements can lead to project failure.
- ❖ Not a good model for complex and object-oriented projects.
- ❖ Poor model for long and ongoing projects.

V. Takeaways

The Big Bang model in SDLC is a straightforward approach that does not adhere to specific requirements, processes, or formal development steps. Essentially, this model demands minimal planning for software development. It is well-suited for small projects and proves beneficial for academic and experimental projects due to its flexibility and ease of management. However, this model is not recommended for complex or object-oriented projects because the absence of pre-planning introduces a high risk of project failure. Nevertheless, the Big Bang model serves as an effective educational tool and learning aid, particularly for novices and students seeking to practice and enhance their project developments skills.

VI. References

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