

# Ideation Phase

## Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	PNT2022TMID38707
Project Name	Crude Oil Price Prediction
Maximum Marks	4 Marks

### Brainstorm & Idea Prioritization Template:


Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: <https://app.mural.co/t/crudeoilprice9287/m/crudeoilprice9287/1663664555860/88f6635edc03a3528be6f09dc1366ca41015e6db?sender=ud513add794268c4cc7e78228>

### Step-1: Team Gathering, Collaboration and Select the Problem Statement

Template



## Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 🕒 10 minutes to prepare
- 🕒 1 hour to collaborate
- 👥 2-8 people recommended

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#### Before you collaborate

A session is very useful to collaborate

🕒 10 minutes

A

#### Team gathering

yes,the session to invite the my team members.then collaborate

B

#### Set the goal

In the final goal of it is reduce the price and improve the solution

C

#### Learn how to use the facilitation tools

then get a tool for the solution is time keeping,no risk ,then low cost,etc...

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#### Define your problem statement

Easy way to be solve the predition of oil price problem.

🕒 5 minutes

PROBLEM

It may problem was crude oil price predition,then get a easy solution of our idea

Key rules of brainstorming

To run an smooth and productive session

- 🗣️ Stay in topic.
- 💡 Encourage wild ideas.
- 👂 Defer judgment.
- 👂 Listen to others.
- 🗣️ Go for volume.
- 👁️ If possible, be visual.

### Brainstorm

in our team ideas to solve the problem.

[🕒 10 minutes](#)

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Rajalakshmi..

EAST TO SOLVE	What are the challenges involved in solving this?	Is it a mathematical problem or something else?
	The problem involves finding the area under a curve.	Can we use calculus to solve this?
	We need to find the function that describes the curve.	How can we determine the function?
	We have some data points from the curve.	Can we fit a curve through these points?
	We know the general form of the function.	How can we find the specific parameters?

Rajalakshmi..

We already have the primary	give us the cost
	Let's assume the cost is proportional to the square of the length.
	Then, if the length is L, the cost is C = kL^2.
	Now, we want to minimize the cost while keeping the volume constant.
	Volume V is proportional to L^3.
	So, we have two equations: C = kL^2 and V = mL^3.
	We can express C in terms of V and vice versa.
	For example, C = k(V/M)^{2/3}.
	To minimize C, we need to minimize (V/M)^{2/3}.
	Since V is constant, we need to maximize M.
	M is related to the radius r of the cylinder.
	So, maximizing M means maximizing r.

jeevitha.

Application of algebra	Activation transfer functions
	Given the input-output pairs, find the function f(x).
	Example: Input {1, 2, 3}, Output {2, 4, 6}. Find f(x).
	Solution: f(x) = 2x.
	Another example: Input {1, 2, 3}, Output {1, 4, 9}. Find f(x).
	Solution: f(x) = x^2.
	Generalize the process for arbitrary inputs and outputs.
	Use graphical representation to visualize the function.
	Check for consistency across different sets of data.
	Discuss the limitations of the method.
	Explore real-world applications of activation functions.

Jeevitha.

Area of the shaded portion of a right triangle	Find the area of the shaded portion of a right triangle with legs of length 6 cm and 8 cm, and hypotenuse of length 10 cm.
	Solution: The area of the triangle is (1/2) * base * height = (1/2) * 6 * 8 = 24 cm^2.
	The area of the unshaded portion is (1/2) * 6 * 8 - Area of shaded portion.
	Let the area of the shaded portion be A.
	Then, 24 - A = (1/2) * 6 * 8 - A.
	This equation is always true, so it doesn't help us find A.
	We need another approach.
	Consider the similar triangles formed by the altitude from the right angle to the hypotenuse.
	Let the altitude be h.
	Then, the area of the triangle is also (1/2) * hypotenuse * altitude = (1/2) * 10 * h.
	Equating the two expressions for the area: 24 = (1/2) * 10 * h.
	Solving for h, we get h = 4.8 cm.
	Now, the area of the shaded portion is (1/2) * base * height = (1/2) * 6 * 4.8 = 14.4 cm^2.

### Group Ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.


[🕒 20 minutes](#)

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GROUP-1.

Factorise the expression and identify the roots of the quadratic equation.	WHY AT LOW EAST	What are the factors of the polynomial? Can we factorise it completely?	What are the roots of the equation? How do they relate to the coefficients?
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
GROUP-2.

Area of the shaded portion of a right triangle	The area of the shaded portion is equal to the area of the triangle minus the area of the unshaded portion.		What are the dimensions of the shaded portion? How can we calculate its area?
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GROUP-3.

Graph of the function y = x^2 + 2x + 1	The graph of the function y = x^2 + 2x + 1 is a parabola opening upwards with vertex at (-1, 0).	What are the key features of the graph? How does it change as x varies?	
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GROUP-4.

Circle with center O and radius r. A chord AB is drawn such that the distance from O to the chord is d.	If O is the origin (0,0), then the coordinates of A and B are (r cos θ, r sin θ) and (-r cos θ, r sin θ) respectively.	What are the coordinates of A and B? How do they depend on the angle θ?	
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[illegible]