Backend Team Mini-App Suggestion List

Skip the table, the listing starts on page 5

Please put at least one mini-app idea in the table below. Include a few pros and cons for each idea regarding implementation (e.g., is it simple or complex, how long would it take to implement, what possible pitfalls are there, etc.)

Name	Mini-App Idea	Description	Pros	Cons
Gil	Molybdomancy (This form of fortune telling is found in various cultures in Europe, such as Finland and Germany, and in Turkey.)	Tin is melted over a flame, then the molten liquid is poured into water. The resulting shape is then interpreted - either as an omen for the future by itself, or is rotated in candlelight to create shadows whose shapes are then interpreted. List of shape meanings (Disclaimer, some kits for this include lead which is dangerous)	The backend is likely simple (randomly choose a shape it will become) Potentially unique - I've never heard of it before at least	Likely difficult for the frontend - may require multiple 2D animations (e.g., melting the tin, putting the tin in water, the tin forming into some sort of discernable shape) A potential solution could be to embed videos from YouTube of someone performing these steps, and just showing an image of the resulting shape
Van	Fortune stick (a form of East asian fortune telling)	Originally from my knowledge, the procedure is to choose a category (career,wealth, health, relationship and etc), and pick one straw	Fits the east Asian part of the map. Rules relatively easy, outcome is straightforward	Only 1 pick is required, short in terms of a ceremony. (possible

		from the pool full of straws. Each starw has 4 possible outcomes (Best, good, bad, worst).	. Potentially can use the accelerometer to “shake” the box that contains the straws For laptop / desktop, shake the box using the mouse?	solution) we can make it our version, it will generate N straws and give out the stat of all the straws (a % best, b% good, c% bad …). The generation is based on a random seed so the outcome will be not so even.
Jun	Bone Throwing	Target Region: Africa. A collection of bones, shells, or other small objects are thrown and their patterns or positions are interpreted to gain insight or provide guidance. Sample Issues: 1) Create a comprehensive list of ~5 objects and their corresponding interpretations. Sample item/value pairs 2) Randomization of bone selection. Involve a virtual "shake" or "toss" action, followed by the display of a selection of bones or objects on the screen. 3) **Interpretation**	Maybe it adds some diversity to our project. A form of fortune telling that is representative of a specific region/culture. Can also simplify by giving interpretations for each object by itself.	BACKEND: research needs to be done when implementing the **interpretation algorithm**, and I think that would be the **most difficult** part if we are desired for a high quality – the human-like interpretation and smooth wording, etc. Also, it is **time consuming** considering the exponential growing combinations counts when adding more objects.

		algorithm: algorithm that maps the positions and associated values of the bones into the corresponding interpretations. (5^3 combinations if 5 objects and 3 positions) 4) FRONTEND: find the appropriate images for each object and the designed elements i.e. background color should be associated with traditional African culture.		FRONTEND: the most challenging part would definitely be the animation part and adjustment of item position displayed on the screen.
Minh	Wat Pho (origin from Thailand) “Change to Yin Yang coin”	We will ask the user to enter their birthday, then the front end team will continue to build the animation with a mysterious book and chart. After that, it will show some year ranges, in which something will occur to the user. For example, you will have a lucky person come to you and bring luck to you → You will succeed. How to Consult the I Ching Using 3 Coins: 9 Steps (with Pictures) (wikihow.com)	This will be familiar to most Asian people because we believe the date we were born will be affected from some “constellation” (star).	Maybe it’s too simple?

		Hexagram (I Ching) - Wikipedia		
Francisco	Palmistry	Will ask the user to create a hand that most resembles their own. Based on the qualities already set we can explain what each aspect of their palm represents and what each line is meant to symbolize.	Can work well on the developers as adding a new line makes the work very modular It can be entertaining gameplay to design your hand. It works well to design an app that lets you drag and drop elements into place. Can simplify edge cases by using drag-and-drop mechanic (snap into place, so each kind of line can be in exactly one location) Can also simplify by giving an interpretation for each line independently	The true background is of Hindu mythology, which seems to be different of the theme. The history has evolved so their are different interpretations. Potentially complex animation-wise, may require a graphics library?

Ranking in terms of amount of backend work: (increasing in order of work)

Least: Fortune stick, Yin Yang Coin, Molybdomancy
Average: Bone Throwing, (cartomancy)
Most: Palmistry

Molybdomancy
Fortune stick
Bone Throwing
~~Wat Pho~~
Yin Yang coin
Palmistry

Name: Gil

Mini-App Idea: Molybdomancy

Location: Finland, Germany, and Turkey.

Description: Tin is melted over a flame, then the molten liquid is poured into water. The resulting shape is then interpreted - either as an omen for the future by itself, or is rotated in candlelight to create shadows whose shapes are then interpreted.

Video demonstration

List of shape meanings

(Disclaimer, some kits for this include lead which is dangerous)

Pros:

The backend is likely simple (randomly choose a shape it will become)

Potentially unique - I've never heard of it before at least

Cons:

Likely difficult for the frontend - may require multiple 2D animations (e.g., melting the tin, putting the tin in water, the tin forming into some sort of discernable shape)

A potential solution could be to embed videos from YouTube of someone performing these steps, and just showing an image of the resulting shape

---

Name: Van

Mini-App Idea: Fortune stick

Location: East Asia

Description: Originally from my knowledge, the procedure is to choose a category (career,wealth, health, relationship and etc), and pick one straw from the pool full of straws. Each starw has 4 possible outcomes (Best, good, bad, worst).

Video demonstration

Pros:

Fits the east Asian part of the map. Rules relatively easy, outcome is straightforward.

Potentially can use the accelerometer to “shake” the box that contains the straws

For laptop / desktop, shake the box using the mouse?

Cons:

Only 1 pick is required, short in terms of a ceremony.

(possible solution) we can make it our version, it will generate N straws and give out the stat of all the straws (a % best, b% good, c% bad …). The generation is based on a random seed so the outcome will be not so even.

Name: Jun

Mini-App Idea: Bone Throwing

Location: Africa

Description: A collection of bones, shells, or other small objects are thrown and their patterns or positions are interpreted to gain insight or provide guidance.

Sample Issues:

1) Create a comprehensive list of ~5 objects and their corresponding interpretations. Sample item/value pairs
2) Randomization of bone selection. Involve a virtual "shake" or "toss" action, followed by the display of a selection of bones or objects on the screen.
3) **Interpretation algorithm**: algorithm that maps the positions and associated values of the bones into the corresponding interpretations. (5^3 combinations if 5 objects and 3 positions)
4) FRONTEND: find the appropriate images for each object and the designed elements i.e. background color should be associated with traditional African culture.

Pros:

Maybe it adds some diversity to our project.

A form of fortune telling that is representative of a specific region/culture.

Can also simplify by giving interpretations for each object by itself → if there are 3 positions, then each object can have 3 different interpretations for each location it lands

in. Then we can have many possible objects, and the interpretation would be a list of 3 sentences or so from each object and its position as opposed to one single interpretation.

Also, could use ChatGPT to generate an interpretation given an outcome - no issue of prompt injection since we're the ones making the entire prompt.

Cons:

BACKEND: research needs to be done when implementing the **interpretation algorithm**, and I think that would be the **most difficult** part if we are desired for a high quality – the human-like interpretation and smooth wording, etc.

Also, it is **time consuming** considering the exponential growing combinations counts when adding more objects.

FRONTEND: the most challenging part would definitely be the animation part and adjustment of item position displayed on the screen.

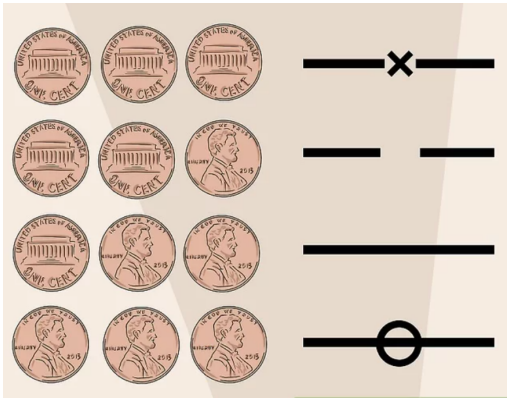
Name: Minh

Mini-App Idea: Yin Yang Coins

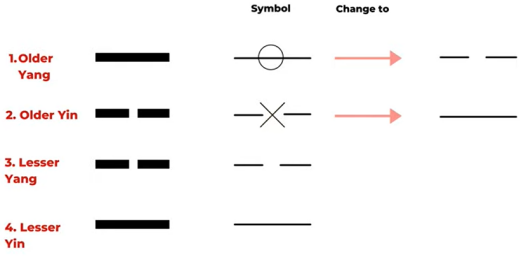
Location: China

Description: https://www.wikihow.com/Consult-the-I-Ching-Using-3-Coins

The process works something like this:



1. Gather a few coins (usually 3)
2. Write down a question you want answered
3. Toss the coins
4. Calculate the numerical result
    a. Three tails add up to 6.
    b. One head and two tails add up to 7.
    c. Two heads and 1 tail add up to 8.
    d. Three heads add up to 9.
5. Each number has a meaning in the I Ching
6. Repeat the process 6 times (Tossing 3 coins simultaneously count as 1) → Creates your Hexagram
7. Interpret your Hexagram



Pros:

Simple to implement (at least in backend), Unique (numerical based), can hardcode interpretations from the I Ching

Cons: Maybe too simple?

Name: Francisco

Mini-App Idea: Palmistry

Location: Unknown; perhaps India?

Description: Will ask the user to create a hand that most resembles their own. Based on the qualities already set we can explain what each aspect of their palm represents and what each line is meant to symbolize.

Pros:

Can work well on the developers as adding a new line makes the work very modular

It can be entertaining gameplay to design your hand.

It works well to design an app that lets you drag and drop elements into place.

Can simplify edge cases by using drag-and-drop mechanic (snap into place, so each kind of line can be in exactly one location)

Can also simplify by giving an interpretation for each line independently

Cons:

The true background is of Hindu mythology, which seems to be different of the theme.

The history has evolved so there are different interpretations.

Potentially complex animation-wise, may require a graphics library?

Other potential ideas: Cartomancy, Astrology

Name: Gil (inspired by Minh's idea from brainstorming)

Mini-App Idea: Cartomancy

Location: Europe

Description: Fortune-telling using a standard deck of cards. Can be done in many different ways: the simplest way is to pick a card or a few cards which are then individually interpreted. E.g., for Yes/No questions, you can pull a single card. For past, present, and future, you can pull 3 cards. You can also pull a number of cards in a spread.

Decent demonstration

Pros:

This can be as simple or as complex as we want.

Simplest implementation: choose a single card and give its interpretation.

Most complex: offer multiple reading types (e.g., different types of spreads).

Simple backend - single interpretation for each card (or multiple for different types of divinations, e.g. yes / no, past/present/future, each spread type, etc.)

Cons:

Maybe very common; I wouldn't be surprised if a lot of other projects support some sort of cartomancy and / or Tarot.

May be a bit complex for the frontend in terms of animating the cards, though we can also avoid implementing card animations all together.

Likely complexity: average.