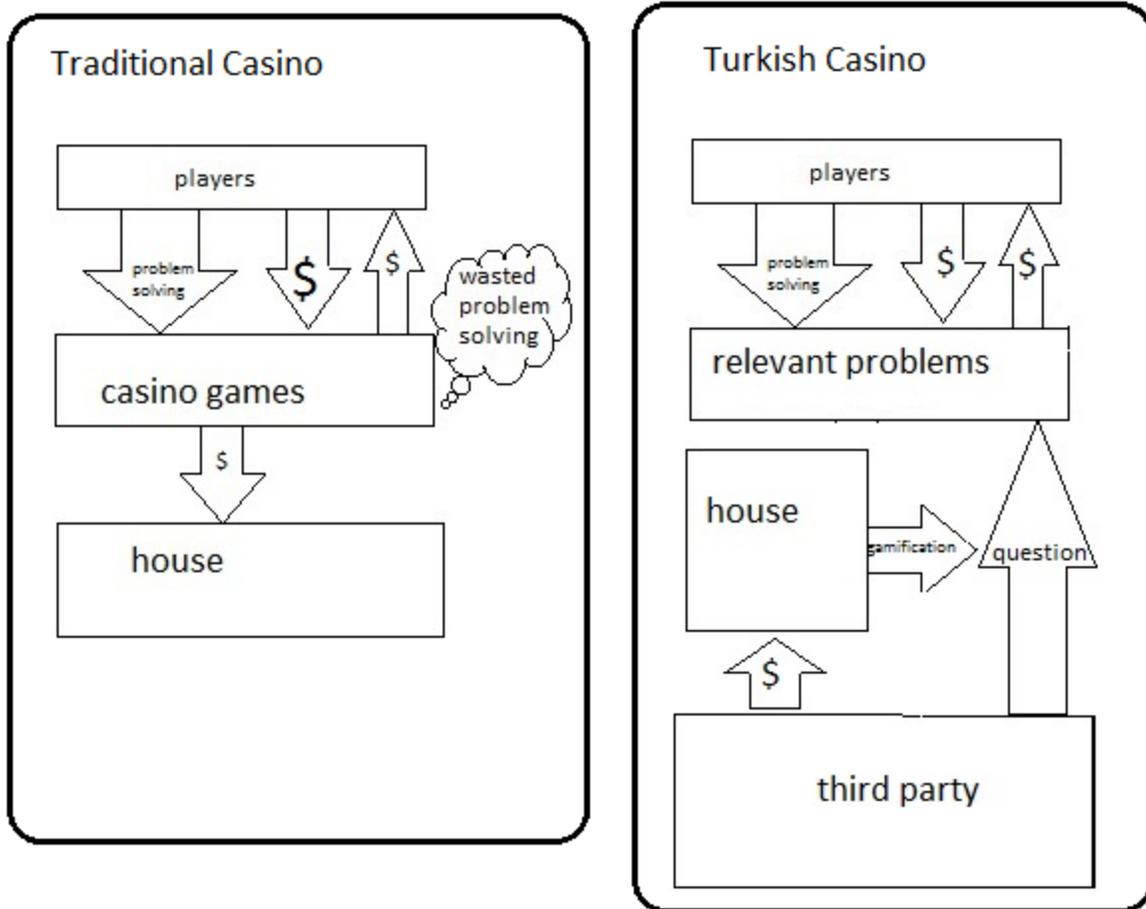Turkish Casino

Abstract
Online casinos charge players transaction costs in order to participate in games that require them to solve complex problems involving decks of cards, sports teams, etc. These solutions provide no value to anyone.

In a "Turkish Casino", players solve meaningful problems presented as games, in exchange for their privilege to gamble. Instead of charging the players for transactions, the casino derives value from the solving of problems. Players are rewarded based on the strength of their prediction, as well as the amount of money they correctly wager.

In a Turkish Casino, players solve useful problems that have been configured as games. These problems are stated by a third party, which pays a flat fee to the house. The house's responsibilities are to turn the third party's question into a game (gamification), and to provide a safe, reliable platform for gaming.
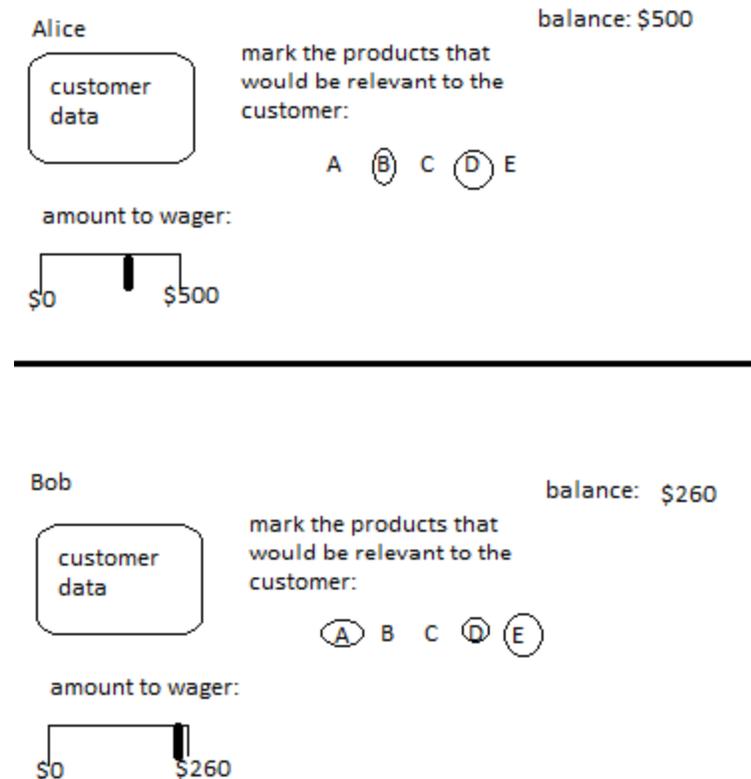
There are three roles in Turkish Casino:

- **asker (third party)**; the individual or organization with a crowdsourceable problem
- **casino**; the organization which owns the platform where betting occurs
- **players (turks)**; participants who wager on problems

Example Use Cases

Product Recommendations

The graphic below depicts a game played between several turks:

Alice   balance: $500

customer data | mark the products that would be relevant to the customer:

A (B) C (D) E

amount to wager:

$0 $500

Bob   balance: $260

customer data | mark the products that would be relevant to the customer:

(A) B C (D) (E)

amount to wager:

$0 $260

In the example, Alice and Bob are players who are given the same data about a prototypical customer on an e-commerce platform. "Customer data" is not data for an actual customer. It is a set of data points that are true for a large set of customers: a commonly occurring customer type.

The top half of the diagram shows Alice's screen. The bottom half shows Bob's screen. Each player is presented with a set of 5 products that could potentially be shown to this type of customer. Alice has predicted that products B and D will appeal to the customer. Bob has predicted that products A, D, and E will perform best.

Shortly after the bets are placed, products A, B, D, and E are all shown to the customer type. **At no cost, the e-commerce platform has filtered C from the list of products which the customer type might be interested in**. After several experiments, all of the money in the betting pool is returned to the turks who made better predictions on which products would perform well.

Salary Offer

IBM has decided to make a hiring offer to a candidate. IBM wants to offer the minimum amount that the candidate will accept. To crowdsource this, IBM gets 1000 Turks from the casino, and sends the turks a comprehensive file on the candidate, the position, the team, etc. Each Turk responds with two pieces of information: the amount to pay the candidate, and the amount that the Turk is willing to wager—a measurement of his confidence in the decision.

Each Turk sees:

Resume	LinkedIn data	other data

Suggested Salary:

$80,000 — $300,000

Wager:

$.01 — $232

Results:

Suggested Salary	Wager
$112,000	$4
$109,000	$3.32
$102,000	$3.00
$119,000	$2.32
$101,000	$1.32
$103,000	$1.00
$104,000	$0.99
$102,000	$.01
$242,333	$.01

All of the wagers are pooled. Then, IBM studies the responses and, based on the amount that the candidate ends up being offered, the entire wager pool is awarded to the Turks who had the closest answers. This entire process costs IBM a small, flat fee that IBM pays to the casino.
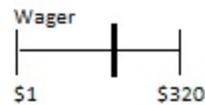
Betting Survey

The following diagram illustrates a "betting survey".
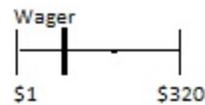
Alice

Balance: $320

1. The best seafood restaurant in New York is _____.
   - A. Red Lobster
   - B. Le Fountaine
   - C. Fish Frenzy

   Wager
   $1 — $320

2. The most trustworthy source for restaurant recommendations is _____.
   - A. Yelp
   - B. Google
   - C. Zagat's

   Wager
   $1 — $320

The goal of this game is to reward everyone who wagers on whatever ends up as the majority opinion. A turk who votes with the majority will be rewarded based on how much he wagered, and how much the opposing sides wagered. The reward structure incentivizes a participant to consider how the population at large thinks, rather than solely taking into account the participant's personal opinion.

Comparison to Mechanical Turk

In Mechanical Turk, a participant is rewarded based on whether or not he completes a specific task. There are few incentives for exceptional performance. Quality control is a tough problem. In Turkish Casino, a player makes a wager and is rewarded based on the product of 1) how differentiated her predictions are, 2) how confident she is in her prediction and 3) how correct those predictions are relative to other players.

Each example above could be presented to Mechanical Turk users. But the platform is different in some key ways:

- **players are paying each other** based on what they correctly wager; the price for the third party remains flat even if the game is popular
- **subjective questions can be answered;** This solves a problem of Mechanical Turk. The amount which a turk invests is a strong proxy for how confident she is in the correctness of her decision. But there is still incentive to bet honestly--the asker doesn't have to award the individuals who bet the most, he can choose to award whoever he wants. For example, if one turk wagers $1000 on option A, and 9 turks wager $100 on option B, the asker may still choose option B as the correct solution.
- **player rewards are scaled to the strength of their decisions**; in Mechanical Turk, turks are rewarded as long as their solutions meet a certain threshold--there is no incentive for exceptionally strong judgment. In Turkish Casino, players are empowered to make more off of their decisions--in line with however much they choose to bet.

Comparison to Prediction Markets

Turkish Casino is comparable to a *prediction market* such as Inkling. According to Wikipedia, a prediction market is "a speculative market created for the purpose of making predictions." Turkish Casino is differentiated from a prediction market similarly to how an online casino is differentiated from an online stock trading interface.

In the stock market, an active trader has a complex UI, with lots of statistical and graphical tools. To scientifically minded gamblers, this can be an engaging environment. But other gamblers enjoy synthesizing data sets such as series of cards and observed sports games.

Similarly, **a differentiator for Turkish Casino is a high bar for interesting interfaces**, and games that are fun and engaging for the end user.

	USELESS PROBLEM SOLVING	USEFUL PROBLEM SOLVING
BLAND INTERFACE	celebrity polls	prediction markets, stock trading, Mechanical Turk
FUN INTERFACE	poker, sports betting, FarmVille	Turkish Casino

Engineering

The casino is responsible for engineering the third party's question into a game. An engineering workflow below reflects a desire to satisfy the third party (by solving the problem) and delight the players (by presenting an engaging game).
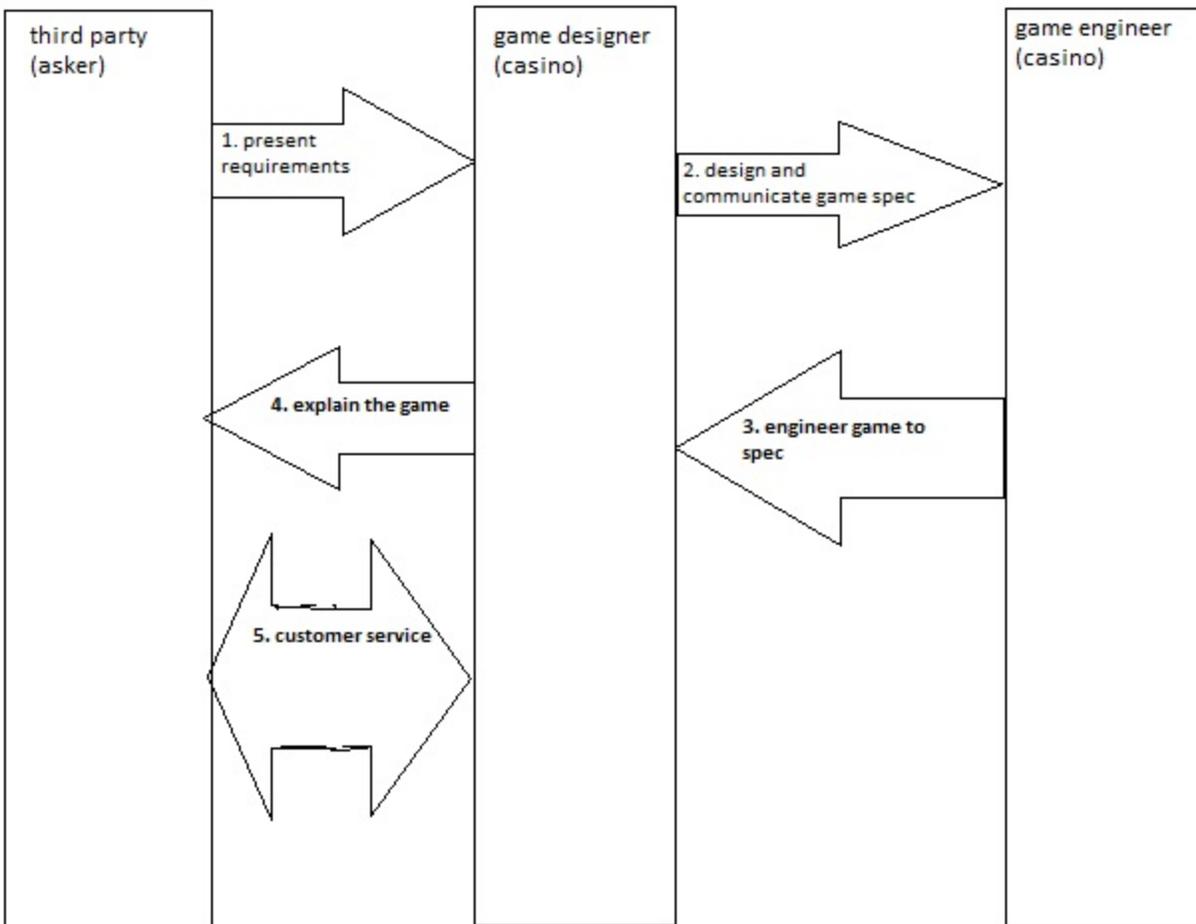
1. **present:** the asker issues a question or problem to the game designer
2. **design:** the game designer creates a spec
3. **engineer:** the engineer develops a fully working game
4. **explain:** the designer explains the game to the asker, showing how enough user volume in the game will lead to a sufficient answer
5. **customer service:** the game designer communicates with the asker, as well as players of the game, and answers any questions about rules or reward structures

One alternative workflow could give the third party the abilities of a game designer and engineer by providing a WYSIWYG directly to the third party.

Who are the players?

The role of "player" appeals to several segments:

- **"professional" gambler**: Many gamblers, both successful and unsuccessful, consider themselves professionals. They are compelled by their ability to evaluate a complex situation and wager on it appropriately. Although these skills are usually applied to decks of cards or sports teams, professional gamblers pride themselves on extrapolating their skills to other areas.
- **turk**: On the Mechanical Turk platform, every decision is straightforward and easy to decide on for a human. Some turks will get bored by this, but since it is their source of income, they will continue to do it unhappily. Turkish Casino's platform demands more consideration and has higher upside for the players. This offers more experienced, intelligent turks a way to make a better income.
- **domain expert**: This type of player will choose games which he has a knowledgeable edge on. For example, a medical student might choose to wager on a game where someone has posted health data, and is looking for a diagnosis.

Moral Approach: Turkish Arcade

The casino games explained above combine Mechanical Turk-style tasks with two other elements: gambling and gamification. Both elements change the incentive structure of Mechanical Turk.

- **gambling** incentivizes turks to declare how confident they are that an answer is correct (how much they wager)
- **gamification** incentivizes turks to participate for more hours, since the activity is more enjoyable when presented as a game

There is a predatory stigma, as well as legal and brand risk to any company that involves itself in gambling. However, even with just the addition of gamification ("Turkish Arcade"), Mechanical Turk could become a more appealing platform.