

# CODESHAstra

## 1. Sabse Bada Rupaiya – Custom Cryptocurrency

A bank is a financial institution that accepts deposits from the public and creates a demand deposit while simultaneously making loans.

Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system

A Blockchain-based Banking System is sought to replicate the functionalities of the existing model.

Below features are desired in an application:

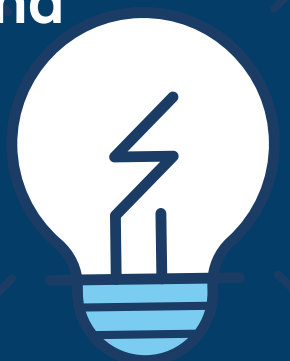
a.) Create your own crypto platform. The correct choice of blockchain platform for your business depends on the consensus mechanism you've selected.

b.) Customers should be able to buy/loan crypto from the blockchain based system.

c.) Upon performing certain amount of transactions, the system should be able to calculate the credit score for a particular user on the blockchain.

This will bring transparency to the entire supply chain and ensure that fraud risk is eliminated, system preserves the transaction anonymity and therefore provides lower operational costs.

That means that instead of having to rely on a network of custodial services and correspondent banks, transactions could be settled directly on a public blockchain.



## 2. 'Yogyata' for Yoga – AI-driven Yoga trainer

Yoga is a group of physical, mental, and spiritual practices or disciplines that originated in ancient India. Yoga is one of the six Āstika (orthodox) schools of Indian philosophical traditions.

There is a broad variety of yoga schools, practices, and goal in Hinduism, Buddhism, and Jainism. The term "Yoga" in the Western world often denotes a modern form of hatha yoga and yoga as exercise, consisting largely of postures or asanas.

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Contestants have to develop an application that will have the following features that we are looking for :4

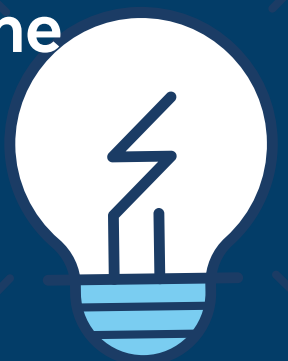
1.It should have a Machine Learning algorithm that identifies all the asanas and meditation routines.

2.It should have the ability to give a personalized routine to every person where there should be a feature that allows each person to keep a track of how many asanas they are done with.

3.Augmented Reality should be used to show consumers the correct posture for each asana

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Our goal is to make yoga more popular and accessible throughout the world and we can do so by using the technological advancements made in Augmented Reality and Machine Learning.



## 3. Gaadi Waala Aaya - Smart Traffic Management System

The increasing traffic density on city roads in India has led to a number of measures being taken such as construction of flyovers and new, wider roads in an effort to reduce congestion but to no avail. The root cause for this menace is the outdated and ineffective traffic management systems in place, which allow for sloppy management and lax enforcement of traffic rules. These issues are exaggerated during times of crisis like a disaster requiring evacuation or an incident requiring access by emergency response agencies.

The Internet of Things or IoT is the path-breaking technology that assists devices in communicating with each other via the internet, forming a network. It enables us to interact with our belongings. An IoT system generates, stores and processes huge amounts of data which is why these systems use cloud technology to save up all the data.

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Contestants have to develop a smart traffic management system using IoT and integrate the following features in their product:

1. Violators will be prosecuted
2. Provisions have to be made for the data gathered by this system to be pushed on cloud. A hotspot map of violations done in that period of time must also be presented.
3. Additional features like face tracking and fine according to the person should be included.

Contestants can incorporate further features as they see fit.

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## 4. To those who work in Acres, not in Hours – *Smart Portal for Cottonseed Farming*



Cottonseed, the seed of the cotton plant, is commercially important and used for oil and other products. The purpose of cottonseed certification is to sustain and make available high-quality seed of the cotton plant.

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The team has to develop a solution to implement certified cotton seeds from cotton farmers in India, keeping in mind the following features:

1. Statistics for warehouse stock for effective analysis and decision making
  2. Verification of farmers via Aadhar Card or Farmer Certificate
  3. To benefits farmers, the system should include application and tracking features
  4. Implement live tracking and safe delivery of the products for the satisfaction of farmers and consumers.
  5. A portal that will help the farmers to sell the products in a much easier way
  6. A Multi-lingual system would be highly appreciated, assuming that the system would be made available across India.
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Additional features to this system would serve as the cherry on top. Developers need to give special focus on simplifying the system for easy usage for all farmers alike.

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## 5. *Kho Gaye Hum Kahan* – Enquiry Portal for Lost and Found Items

Lots of people lose their valuable belongings at stations, bus stops, and at various places in the city. When we find hold of such lost items, we are clueless as to what steps should be taken to help to deliver the lost item to the right person.

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Here are some things to keep in mind :-

1. Create a system in which a person who has found something can add his details of the particular found item and the person who has lost something can go to this portal and search for the object
  2. The search functionality for the people trying to search their item must be smart enough to catch multiple keywords and find out the lost item.
  3. It is also important that the person saying that the lost item is theirs should actually be the right person, you have to figure out methods to verify the correct identity of the person claiming to get hold of any lost item from the portal.
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Yes, there are measures in place to ensure lost items are found, but the archaic method of keeping records at the Police stations is not optimal and very time-consuming. The portal you create must solve incumbent problems and participants have the liberty to add new features should they think of any.



## *6. Zindagi ke Saath bhi, Zindagi ke baad bhi -* Insurance Lead Generation Chatbot

The greatest financial lesson learnt this year is how important Buying an Insurance for yourself and family could be, which gives you relief on medical expenses amid such uncertain situations. Before buying any insurance, you would probably google search "insurance", click on the first link and look for information on which insurance to buy with a ton of questions in your head. The problem that insurance companies face is that potential customers need to be aware of a significant amount of information before they can even begin to think of buying insurance from any company. Also, these earning customers has only a short span of attention to spend on your website and it becomes clear that a human interaction is required at some point to ensure the conversion of these busy customers and less informed potential people. Human interactions are not always viable unless you are an insurance giant. Human labour is expensive, slow and unscalable.



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So, to overcome such problem, we want you to develop an Insurance Lead Generational Chabot.

**Dataset:** Pick any open-source insurance dataset available on web

**Deliverables:** Create a Chatbot model and Build a UI to test where this chatbot is functional and answers questions that a customer may need to know while buying an insurance policy.

The chatbot should be able to capture and store leads information like name, email, contact number mandatorily and other details if required in the database. This should not be done in a direct way but needs to be in an interactive and conversational manner.

You can use any framework or technology to build the UI. You can also use pre-trained models if required.

