TABLE OF CONTENT :-

- **PYTTSX3 :- pyttsx3** is a text-to-speech conversion library in Python. The pyttsx3 module supports two voices first is female and the second is male which is provided by “sapi5” for windows.

- **RANDOM :- Python** has a built-in module that you can use to make **random** numbers.

- **DATETIME :- Datetime** module supplies classes to work with date and time. These classes provide a number of functions to deal with dates, times and time intervals.

- **WIKIPEDIA :-**. **Wikipedia** is a Python library that makes it easy to access and parse data from Wikipedia.

- **WEBBROWSER :- Webbrowser** module provides a high-level interface to allow displaying Web-based documents to users.

- **SMTPLIB :- SMTPLIB** module defines an SMTP client session object that can be used to send mail to any Internet machine with an SMTP or ESMTP listener daemon

- **OS :-** This module provides a portable way of using operating system dependent functionality.

- **Speech Recognition :- It** is an important feature in several applications used such as home automation, artificial intelligence, etc.

- **Mysql Connector :-** MySQL Connector/Python is implementing the MySQL Client/Server protocol completely in Python

ACKNOWLEDGEMENT

I express my deep gratitude and appreciation to those who agreed to participate in this project , for there time expended and courage in sharing their insights with a group of fledging students . It is to them that I am most indebted , and I can only hope that the project of your collaboration benefits each one of us as I benefitted from the process.

I had been immeasurably enriched by working under the guidance MR. Dhananjay Kumar Singh , our subject teacher , who has great level of knowledge who has an art of encouraging , correcting and directing me in every possible situation , which has enabled me to complete the project .

I acknowledge to all the people who have involved and supported me in making the project possible .

NAME :-

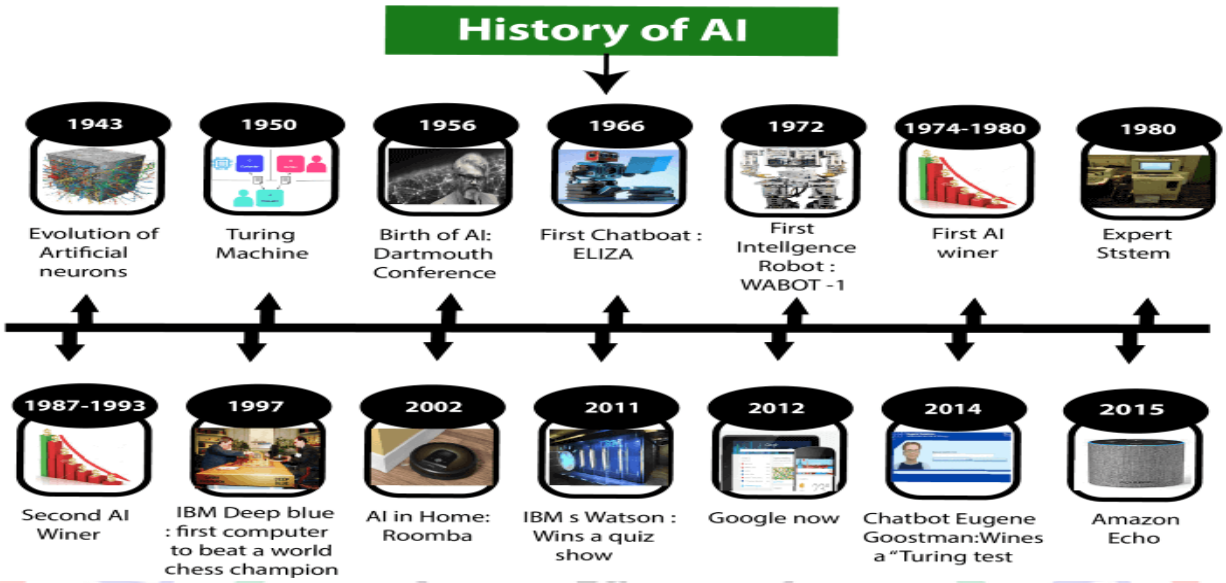
BOARD ROLL NUMBER :-

PROPOSED SYSTEM

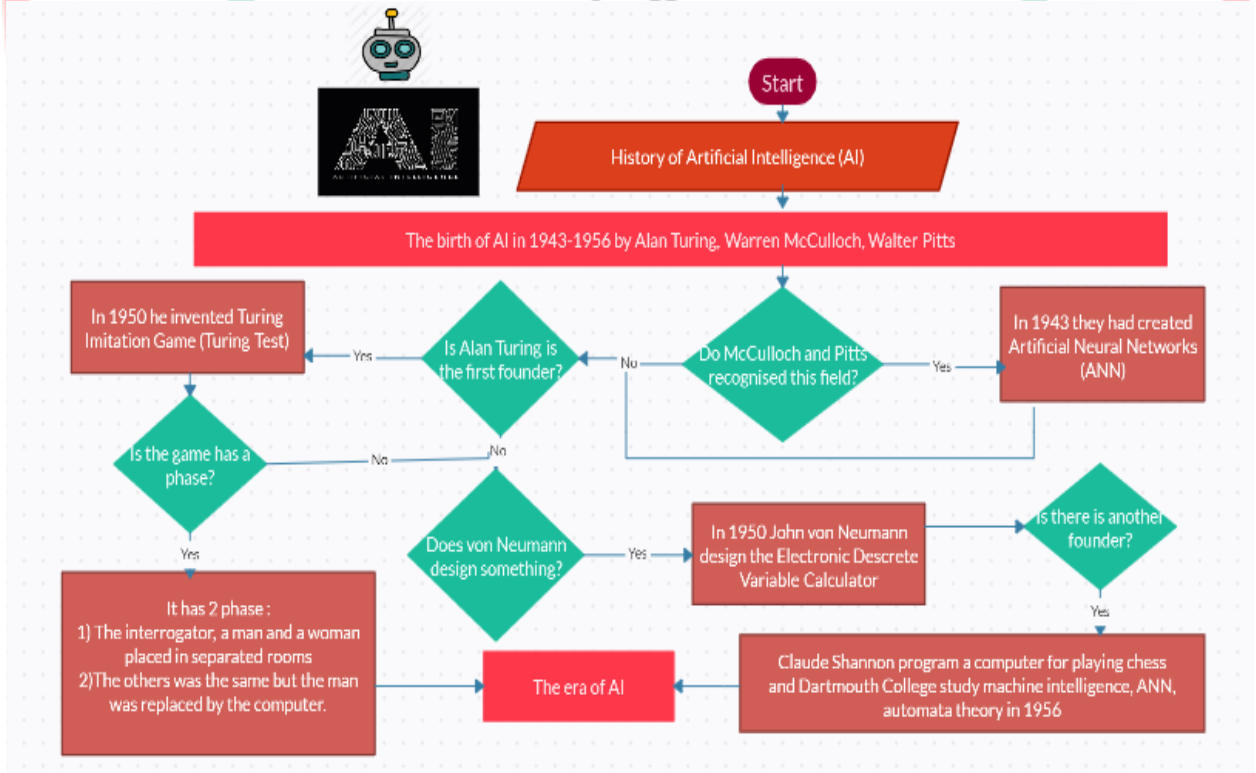
Today one cannot afford to rely on the fallible human beings of be really wants to stand against today's merciless competition where not to wise saying "to err is human" no longer valid, it's outdated to rationalize your mistake. So, to keep pace with time, to bring about the best result without malfunctioning and greater efficiency so to replace the unending heaps of flies with a much sophisticated hard disk of the computer. One has to use the data management software. Software has been an ascent in atomization various organizations. Many software products working are now in markets, which have helped in making the organizations work easier and efficiently. Data management initially had to maintain a lot of ledgers and a lot of paper work has to be done but now software product on this organization has made their work faster and easier. Now only this software has to be loaded on the computer and work can be done. This prevents a lot of time and money. The work becomes fully automated and any information regarding the organization can be obtained by clicking the button. Moreover, now it's an age of computers of and automating such an organization gives the better look.

It has been recognized that deeper and wider neural networks are continuously advancing the state-of-the-art performance of various computer vision and machine learning tasks. However, they often require large sets of labeled data for effective training and suffer from extremely high computational complexity.

HISTORY OF AI



FLOW CHART OF HISTORY OF AI



OBJECTIVE OF PROJECT

The objective of this project is to let the students apply the programming knowledge into a real- world situation/problem and exposed the students how programming skills helps in developing a good software.

OBJECTIVES :-

- Students will demonstrate ability to conduct a research or applied Computer Science project, requiring writing and presentation skills which exemplify scholarly style in computer science.
- Students will demonstrate a breadth of knowledge in computer science, as exemplified in the areas of systems, theory and software development.
- Apply object oriented programming principles effectively when developing small to medium sized projects.
- Time efficient software to save the time of the user.
- It is to enable computers to perform such intellectual tasks as decision making, problem solving, perception, understanding human communication (in any language, and translate among them).

The present-day pervasiveness of AI, given how little it is noticed in everyday life, suggests that in important ways this objective has been reached. We find the notion of a refrigerator which calls in its own grocery orders a bit funny — one thinks of cartoon parrots who order pizzas — but it may surprise people to know just how much we have come to rely on this sort of intelligence which we no longer bother to label as artificial.

FUNCTION

- **SPEAK()** :- It enables to speak for interaction within user .
- **Sendemail(to,content)** :- It is used to send email via gmail .
- **Wishme()** :- It is used to greet the user .
- **Takecommand()** :- It converts input(audio) into string .
- **Takecommand2()** :- It converts input(audio) into string(specially for speech).
- **Informal()** :- It is used to access informal mode of IAS .
- **Formal()** :- It is used to access formal mode of IAS .
- **Twelve()** :- It is used to access twelve mode of IAS .

HARDWARE AND SOFTWARE INPUT

HARDWARE REQIREMENTS :

1. OPERATING SYSTEM - WINDOWS 7 AND ABOVE
2. CPU – intel pentium i5 (Dual processor)
3. RAM – 2 GB +
4. HARD DISK – 512 MB
5. CD/DVD (IF BACKUP REQUIRED)
6. FLOPPY DRIVE – 1.44MB (IF REQUIRED)
7. MONITOR 14 INCH
8. KEY BOARD AND MOUSE
9. PRINTER – HARD COPY (IF REQUIRED)

SOFTWARE REQUIREMENTS :

1. MICROSOFT VISUAL CODE
2. PYCHARM
3. MYSQL SERVER 5.7
4. WINDOWS OS
5. PYTHON 3.9
6. MS PAINT

BIBLIOGRAPHY :

- WIKIPEDIA WEBSITE: https://en.wikipedia.org/

- **CBSE SITE**
- **GAMING SITES**
- **SCHOOL SITES**
- **GOOGLE :** www.google.com
  www.google.com/maps

SOURCE CODE OF IAS :-

IAS (Individual Assistant System)

```python
import pyttsx3
import speech_recognition as sr
import datetime
import wikipedia
import webbrowser
import os
import pygame
import json
import random
import mysql.connector
import smtplib

engine = pyttsx3.init('sapi5')
voices = engine.getProperty('voices')
engine.setProperty('voice', voices[0].id)

def speak(audio):
    engine.say(audio)
    engine.runAndWait()

def sendemail(to, content):
    speak("the email sender should enable less secure apps option in their respective gmail account")
    speak("if you want to get more information about this then say get information ")
    query = takeCommand().lower()
    if 'get information' in query:
        webbrowser.open("https://support.google.com/accounts/answer/6010255?hl=en")
    speak("Please say your email")
    print("Please say your email")
    a = takeCommand()
    speak("please write your password")
    b = input("Enter your password")
    server = smtplib.SMTP('smtp.gmail.com', 587)
    server.ehlo()
    server.starttls()
    server.login(f"{a}@gmail.com", f"{b}")
    server.sendmail(f"{a}@gmail.com", to, content)
    server.close()


def wishMe():
    hour = int(datetime.datetime.now().hour)
    if hour>=0 and hour<12:
        speak("Good Morning!")
```

```
        speak("Good Morning!")

    elif hour>=12 and hour<18:
        speak("Good Afternoon!")

    else:
        speak("Good Evening!")

    speak("I am our IAS Sir . It consists of three modes")
    print("I am our IAS Sir . It consists of three modes")
    speak("Three modes are Formal mode , Informal mode , class twelve mode ")
    print("Three modes are Formal mode , Informal mode , class twelve mode ")
    speak("So how may i help you")
    print("So how may i help you")

def takeCommand():
    r = sr.Recognizer()
    with sr.Microphone() as source:
        print("listening...")
        r.pause_threshold = 0.9
        audio = r.listen(source)
    try:
        print("Recognising...")
        query = r.recognize_google(audio, language='en-in')
        print(f"user said: {query}\n")

    except Exception as e:
        print(e)
        speak("say that again please")
        print("say that again please")
        return "None"
    return query

def informal():
    speak("Informal mode is activated")
    if __name__ == "__main__":
        takeCommand()
        while True:
            query = takeCommand().lower()
            if 'wikipedia' in query:
                speak('Searching Wikipedia...')
                print('Searching Wikipedia...')
                query = query.replace("wikipedia", "")
```

```
            query = query.replace("wikipedia", "")
            results = wikipedia.summary(query, sentences=4)
            speak("According to Wikipedia")
            print("According to Wikipedia")
            print(results)
            speak(results)

        if 'full form of ias' in query:
            speak('IAS stands for Individual Assistant System')
            print('IAS stands for Individual Assistant System')

        if 'open youtube' in query:
            speak("opening youtube")
            print("opening youtube")
            webbrowser.open("youtube.com")
        if 'open google' in query:
            speak("opening google")
            print("opening google")
            webbrowser.open("google.com")

        if 'open games' in query:
            speak("Which online gaming site you want to open")
            print("Which online gaming site you want to open")
            speak("FRIV and KIZI")
            print("FRIV and KIZI")
            while True:
                query = takeCommand().lower()
                if 'kizi' in query:
                    speak("opening kizi")
                    print("opening kizi")
                    webbrowser.open_new_tab("https://kizi.com")
                if 'friv' in query:
                    speak("opening friv")
                    print("opening friv")
                    webbrowser.open("friv.com")
        if 'play music' in query:
            speak("starting music player Sir..")
            print("starting music player Sir..")
            music_disc = 'F:\\relax (instrumental song)'
            songs = os.listdir(music_disc)
            print(songs)
            os.startfile(os.path.join(music_disc, songs[random.randint(0, 7)]))
        if 'movies' in query:
```

```
            if 'movies' in query:
                speak("starting video player")
                print("starting video player")
                movies_disc = 'E:\\movies\\horror movies'
                video = os.listdir(movies_disc)
                print(video)
                os.startfile(os.path.join(movies_disc, video[random.randint(0, len(video))]))

            if 'say the time' in query:
                gettimmer = datetime.datetime.now().strftime("%H:%M:%S")
                speak(f"sir, the time is {gettimmer}")
                print(f"sir, the time is {gettimmer}")

            if 'open paint' in query:
                speak("opening paint for you Sir..")
                print("opening paint for you Sir..")
                paint = "C:\\ProgramData\\Microsoft\\Windows\\Start Menu\\Programs\\Accessories\\Paint"
                os.startfile(paint)

            if 'send email' in query:
                try:
                    speak("say the body of your email")
                    print("say the body of your email")
                    content = takeCommand()
                    speak("say the receivers email")
                    print("say the receivers email")
                    z = takeCommand()
                    to =(f"{z}@gmail.com")
                    sendemail(to, content)
                    speak("Email has been sent!")
                    print("Email has been sent!")
                except Exception as e:
                    print(e)
                    speak("Sorry due to some issues email is not been send.")
                    print("Sorry due to some issues email is not been send.")

def Class12():
    speak('class12 mode activated')
    if __name__ == '__main__':
        while True:
            query = takeCommand().lower()
            if 'important event' in query:
                note='C:\\Users\\ambika kumari\\OneDrive\\Documents'
```

```
                note='C:\\Users\\ambika kumari\\OneDrive\\Documents'
                os.startfile(note)
            if 'class information' in query:
                location='C:\\Users\\ambika kumari\\Desktop\\source code'
                os. startfile(location)
            if 'teacher' in query:
                store='C:\\Users\\ambika kumari\\Desktop\\source code'
                os.startfile(store)

            if 'school location' in query:
                webbrowser.open('https://goo.gl/maps/M7P7Dq1w5QQiou4y8')


if __name__ == '__main__':
    wishMe()
    while True:
        query = takeCommand().lower()
        if 'informal' in query:
            informal()
        if 'class' in query:
            Class12()
        if 'formal' in query:
            speak("initialising formal mode")
            print("initialising formal mode")
            speak("please select the function that you want me to do..")
            print("please select the function that you want me to do..")
            print("for school section..speak! 'school' ")
            print("for board queries... speak! 'Board' ")
            print("for speech section...speak! 'speech' ")
            while True:
                query= takeCommand().lower()
                if "school" in query:
                    speak("welcome to school section")
                    print("welcome to school section")
                    speak("please kindly address the school name")
                    print("please kindly address the school name")
                    while True:
                        query = takeCommand().lower()
                        if 'ggps' in query:
                            print("opening your school website")
                            webbrowser.open("https://www.ggpsbokaro.org/")
                        if 'ayyappa' in query:
                            print("opening your school website")
```

GURU GOBIND SINGH PUBLIC SCHOOL
GGPS
Sector-V/B, B.S.City

```
                webbrowser.open("https://ayyappaschool.com/")
            if 'dav sector 4' in query:
                print("opening your school website")
                webbrowser.open("http://www.dav4bokaro.org/")
            if 'Chinmaya' in query:
                print("opening your school website")
                webbrowser.open("http://www.chinmayabokaro.org/")
            if 'mgm' in query:
                print("opening your school website")
                webbrowser.open("http://www.mgmhssbokaro.in/")
            if 'dps' in query:
                print("opening your school website")
                webbrowser.open("https://www.dpsbokaro.com/dpsi/")
            if 'kendriya' in query:
                print("opening your school website")
                webbrowser.open("https://no1bokaro.kvs.ac.in/")
            if 'pentecostal' in query:
                print("opening your school website")
                webbrowser.open("https://pasbokaro.com/")
            if 'dav sector 6' in query:
                print("opening your school website")
                webbrowser.open("http://dav6bokaro.org/")
            if 'rainbow' in query:
                print("opening your school website")
                webbrowser.open("http://rainbowchasbokaro.co.in/")
            if 'bokaro public school' in query:
                print("opening your school website")
                webbrowser.open("http://bokaropublicschool.org/Cloud/Home.aspx")
            if 'adarsh public school ' in query:
                print("opening your school website")
                webbrowser.open("https://avmbokaro.co.in/")
            if 'Sardar patel school' in query:
                print("opening your school website")
                webbrowser.open("https://www.sppsbokaro.in/")
            if 'Xavier' in query:
                print("opening your school website")
                webbrowser.open('https://www.xaviersbokaro.com/')
        if 'board' in query:
            speak("welcome to board section")
            print("welcome to board section")
            speak("choose your board")
            print("choose your board")
            while True:
```

```
                if 'bokaro public school' in query:
                    print("opening your school website")
                    webbrowser.open("http://bokaropublicschool.org/Cloud/Home.aspx")
                if 'adarsh public school ' in query:
                    print("opening your school website")
                    webbrowser.open("https://avmbokaro.co.in/")
                if 'Sardar patel school' in query:
                    print("opening your school website")
                    webbrowser.open("https://www.sppsbokaro.in/")
                if 'Xavier' in query:
                    print("opening your school website")
                    webbrowser.open('https://www.xaviersbokaro.com/')
            if 'board' in query:
                speak("welcome to board section")
                print("welcome to board section")
                speak("choose your board")
                print("choose your board")
                while True:
                    query = takeCommand().lower()
                    if 'central' or 'cbse' in query:
                        print("opening the preferred board website")
                        webbrowser.open('https://www.cbse.gov.in/')
                    if 'state' or 'jharkhand' or 'jac' in query:
                        print("opening the preferred board website")
                        webbrowser.open('https://jac.jharkhand.gov.in/jac/')
                    if 'icse' in query:
                        print("opening the preferred board website")
                        webbrowser.open('https://www.cisce.org/')
            if 'speech' in query:
                speak("welcome to Speech section")
                speak("you have got 2 minutes to express your views on topic")
                speak("tell your name please..")
                L=["child labour", "nationalism", "tourism", "COVID-19", "humanity"]
                n=random.randint(0, 5)
                speak("your topic is..", n)
                with open('my_result.txt', mode='w') as file:
                    file.write(f"Recognized text: {query}\n")
                    os.startfile(my_result.txt)
```

OUTPUT OF THE PROGRAM

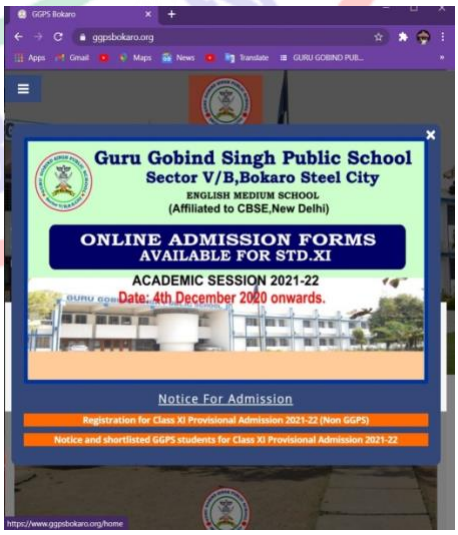
STARTING OF PROGRAM :-

```
pygame 2.0.1 (SDL 2.0.14, Python 3.9.1)
Hello from the pygame community. https://www.pygame.org/contribute.html
I am our IAS Sir . It consists of three modes
Three modes are Formal mode , Informal mode , class twelve mode
So how may i help you
listening...
```

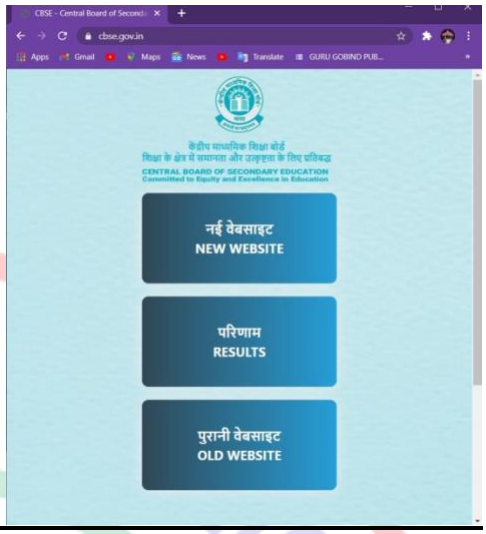
FORMAL MODE :-

```
listening...
Recognising...
user said: open formal mode

initialising formal mode
please select the function that you want me to do..
for school section..speak! 'school'
for board queries... speak! 'Board'
for speech section...speak! 'speech'
```

```
listening...
Recognising...
user said: School

welcome to school section
please kindly address the school name
listening...
Recognising...
user said: ggps

opening your school website
listening...
```



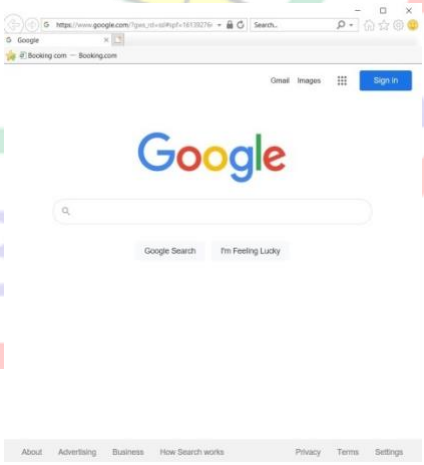
```
listening...
Recognising...
user said: board

welcome to board section
choose your board
listening...
Recognising...
user said: Central Board

opening the preferred board website
```



INFORMAL MODE :-

```
listening...
Recognising...
user said: open informal mode

listening...
```

```
listening...
Recognising...
user said: open Google

opening google
```

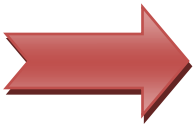


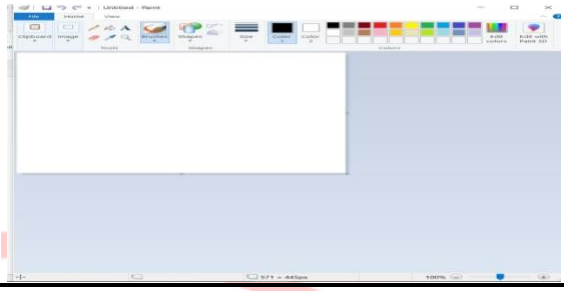
listening...

Recognising...

user said: open Paint

opening paint for you Sir..





SYSTEM CONCEPT DEVELOPMENT PHASE

The System Concept Development Phase begins after a business need or opportunity is validated by the Agency/Organization Program Leadership and the Agency/Organization CIO.

The purpose of the System Concept Development Phase is to:

- Determine the feasibility and appropriateness of the alternatives.
- Identify system interfaces.
- Identify basic functional and data requirements to satisfy the business need.
- Establish system boundaries; identify goals, objectives, critical success factors, and performance measures.
- Evaluate costs and benefits of alternative approaches to satisfy the basic functional requirements
- Assess project risks
- Identify and initiate risk mitigation actions, andDevelop high-level technical architecture, process models, data models, and a concept of operations. This phase explores potential technical solutions within the context of the business need.
- It may include several trade-off decisions such as the decision to use COTS software products as opposed to developing custom software or reusing software components, or the decision to use an incremental delivery versus a complete, onetime deployment.
- Construction of executable prototypes is encouraged to evaluate technology to support the business process. The System Boundary Document serves as an important reference document to support the Information Technology Project Request (ITPR) process.
- The ITPR must be approved by the State CIO before the project can move forward .

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