PROJECTS:
-EN20IT301052 ISHAN RAI

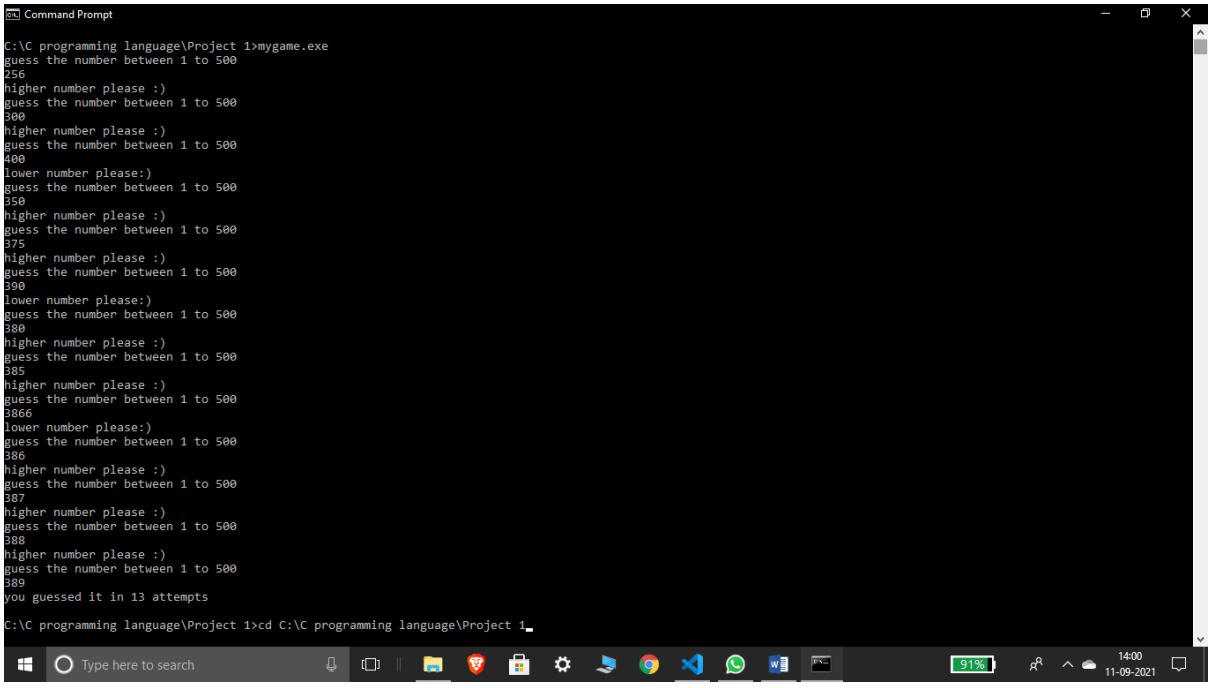
1.) Guess the number in C:

CODE:

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int main()
{
   int number, nguesses = 1, guess;
   srand(time(0));
   number = rand() % 500 + 1;

   do
   {
      printf("guess the number between 1 to 500\n");
      scanf("%d", &guess);
      if (guess > number)
      {
         printf("lower number please:)\n");
      }
      else if (number > guess)
      {
         printf("higher number please :)\n");
      }
      else
```

```
        {
            printf("you guessed it in %d attempts\n", nguesses);
        }
        nguesses++;
    } while (guess != number);

    return 0;
}
```

OUTPUT:



2.) Snake water gun or stone paper scissor in C

CODE:

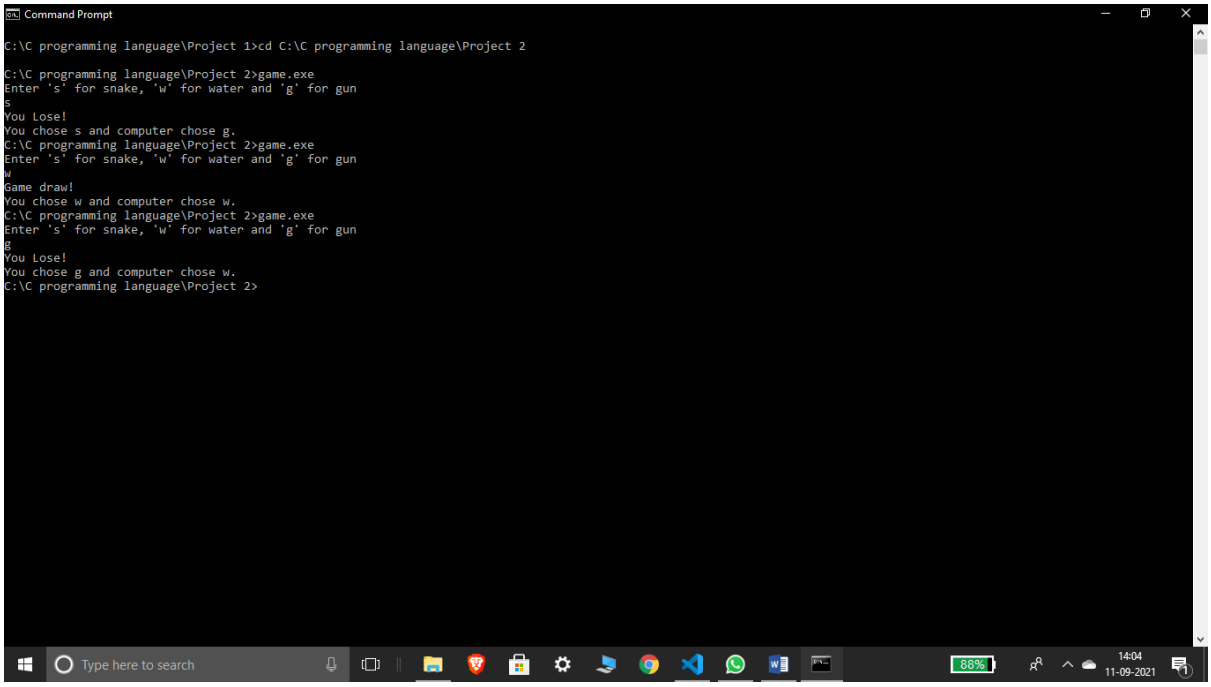
```
#include<stdio.h>
#include<stdlib.h>
#include<time.h>

int snakeWaterGun(char you, char comp){
```

```
    // returns 1 if you win, -1 if you lose and 0 if draw
    if(you == comp){
        return 0;
    }

    if(you=='s' && comp=='g'){
        return -1;
    }
    else if(you=='g' && comp=='s'){
        return 1;
    }

    if(you=='s' && comp=='w'){
        return 1;
    }
    else if(you=='w' && comp=='s'){
        return -1;
    }

    if(you=='g' && comp=='w'){
        return -1;
    }
    else if(you=='w' && comp=='g'){
        return 1;
    }

}
```

```
int main(){
    char you, comp;
    srand(time(0));
    int number = rand()%100 + 1;

    if(number<33){
        comp = 's';
    }
    else if(number>33 && number<66){
        comp='w';
    }
    else{
        comp='g';
    }

    printf("Enter 's' for snake, 'w' for water and 'g' for gun\n");
    scanf("%c", &you);
    int result = snakeWaterGun(you, comp);
    if(result ==0){
        printf("Game draw!\n");
    }
    else if(result==1){
        printf("You win!\n");
    }
    else{
        printf("You Lose!\n");
    }
```

```
    printf("You chose %c and computer chose %c. ", you, comp);
    return 0;
}
```

OUTPUT:



3.) LIBRARY MANAGEMENT SYSTEM IN PYTHON

CODE:

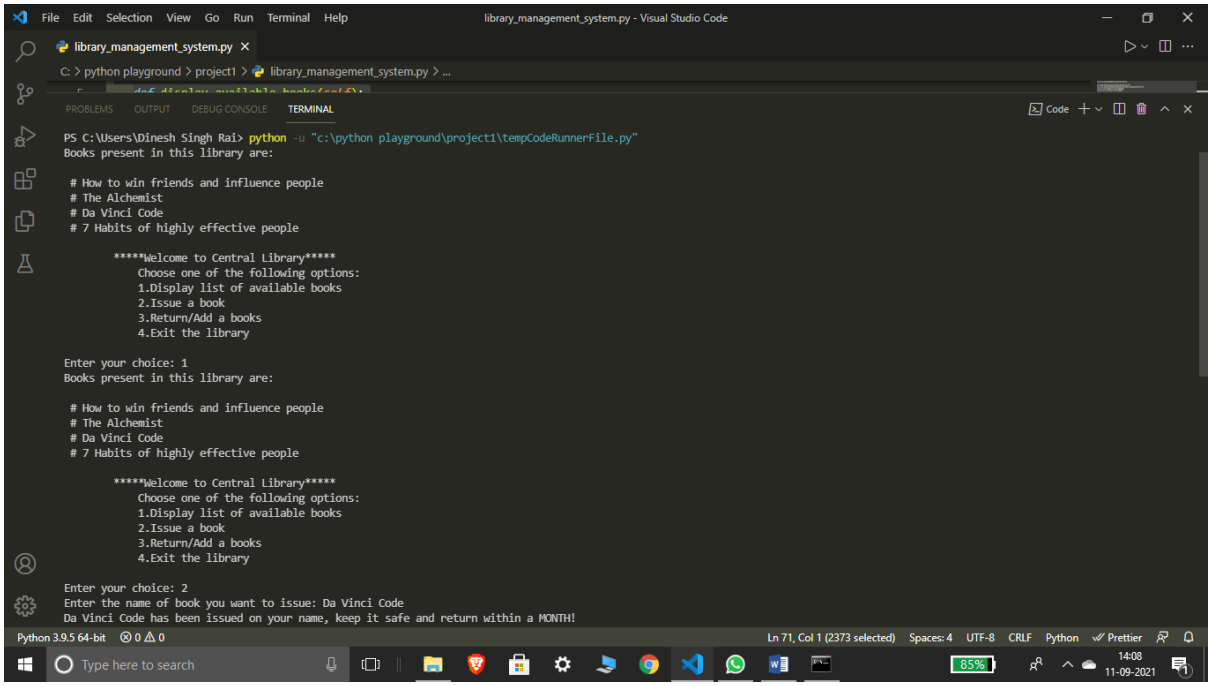
```
class Library:
    def __init__(self, list_of_books):
        self.books = list_of_books

    def display_available_books(self):
        print("Books present in this library are:\n")
        for book in self.books:
            print(" # "+book)

    def issue_book(self, book_name):
```

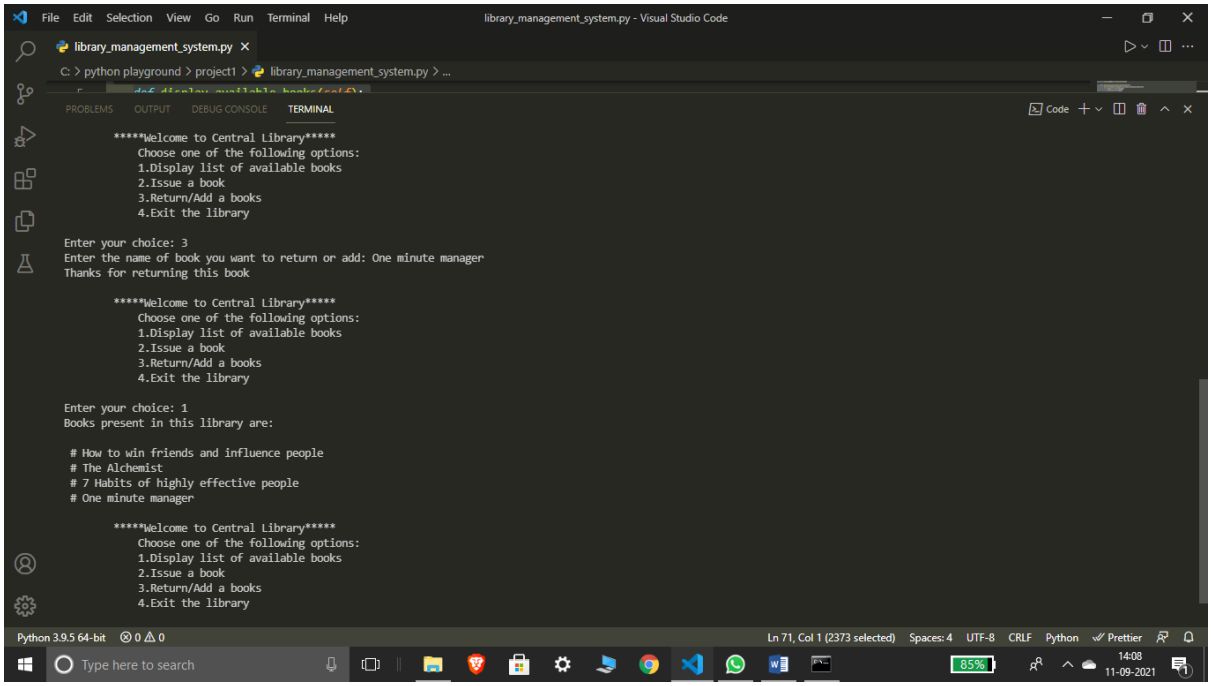
```
        if book_name in self.books:
            print(
                f"{book_name} has been issued on your name, keep it safe and return within a MONTH!")
            self.books.remove(book_name)
            return True
        else:
            print("Sorry, this book is issued to someone else")
            return False

    def return_book(self, book_name):
        self.books.append(book_name)
        print("Thanks for returning this book")

class Student:
    def __init__(self,):
        pass

    def request_book(self):
        self.book = input("Enter the name of book you want to issue: ")
        return self.book

    def return_book(self):
        self.book = input("Enter the name of book you want to return or add: ")
        return self.book

# main
if __name__ == "__main__":
```

```
    Central_library = Library(["How to win friends and influence people",
                               "The Alchemist", "Da Vinci Code", "7 Habits of highly effect
ive people"])


    Central_library.display_available_books()
    student_obj = Student()
    while(True):
        Welcome_message = '''
        *****Welcome to Central Library*****
            Choose one of the following options:
            1.Display list of available books
            2.Issue a book
            3.Return/Add a books
            4.Exit the library
            '''
        print(Welcome_message)
        try:
            a = int(input("Enter your choice: "))
            if a == 1:
                Central_library.display_available_books()
            elif a == 2:
                Central_library.issue_book(student_obj.request_book())
            elif a == 3:
                Central_library.return_book(student_obj.return_book())
            elif a == 4:
                print("Thank you for choosing Central library keep reading :)")
                exit()
            else:
```

```
            print("Invalid Choice")
        except Exception as e:
            print("Enter Number corresponding to choice ")
```

OUTPUT:





4.)Dekstop assistant in python:

CODE:

```
import pyttsx3 #pip install pyttsx3
```

```
import speech_recognition as sr
import datetime
import wikipedia
import webbrowser
import os
import smtplib

engine = pyttsx3.init('sapi5')
voices = engine.getProperty('voices')
# print(voices[1].id)
engine.setProperty('voice', voices[1].id)

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

def wish_me():
    hour = int(datetime.datetime.now().hour)
    if hour >= 0 and hour < 12:
        speak("Good morning Sir")
    elif hour >= 12 and hour <= 18:
        speak("Good afternoon sir")
    else:
        speak("Good evening sir")
    speak("Jarvis at your service, how may i help you")

def take_command():
```

```
    pass
    r= sr.Recognizer()
    with sr.Microphone() as source:
        print("Listening....")
        r.pause_threshold=1
        audio=r.listen(source)
    try:
        print("Recognizing...")
        query=r.recognize_google(audio,language='en-in')
        print("User said: ", query,"\n")
    except Exception as e:
        print("Couldn't recognize your voice")
        return "None"
    return query
if __name__ == '__main__':
    wish_me()
    take_command()
```