

### ST. RAPHAEL 'S H.S.SCHOOL INDORE



### Session 2020-2021

**Computer Science PROJECT** 

Submitted to: Submitted by:

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### Sajal khan XII

### **CERTIFICATE**

This is to certify that Sajal Khan of XII A has worked on the Computer Science project . She has collected the reading materials and has devoted sufficient periods of practical laboratory work to complete this project. This project may be considered as partial fulfilment of All India Senior School Certificate Examination (AISSCE) 2020-21, conducted by CBSE, New Delhi.

**Internal Examiner** 

**Principal** 

**External Examiner** 



### **Acknowledgement**

I would like to express my sincere gratitude towards our respected Principal Sr. Jancy Joseph for her encouragement and help during my tenure as a student.

I would also like to express my sincere gratitude towards my computer science teacher Mrs. Shiju Nair, for her vital support, guidance and encouragement, without which this project would not have come forth. My sincere thanks also goes to the lab mates for their help throughout the project



# Aim of the project



### **AIM**

Aside from just being fun and mentally stimulating, solving word jumbles has a variety of other benefits. The consistent practice of noticing patterns of letters and words will help you be a better player in Scrabble, Boggle, Words With Friends, and more! Keep solving and playing jumble word games, it's a fun and beneficial way to spend your time.



# Scope of the project

- Jumble is a word puzzle which is played by scrambling the letters to make an anagram, based on some clue. Jumble Solver helps you solve such puzzles if you enter some clue (scrambled letters).
- II. You enter the jumbled/scrambled words and it tells you the possible words or answers, that can be made from those letters (think of it like a single word anagram). So, if you frequently play daily jumble (or similar word puzzle), this little site might come in handy when you're stuck for long, use it as a learning tool or to solve disputes among your friends. Or maybe you could use this to cheat (sometimes) and win:-)
- III. A Jumble or Scramble Word Game is a game where a mixed up set of letters are provided and you have to unscramble the letters to find the word. Sometimes, clues are provided to help



- you figure out the puzzle. Other times, all you have are the jumbled letters.
- IV. Jumble games involve the skill of solving anagrams. Anagrams are all the words that can be created with the letters of one word or phrase. The difference between an anagram and a word jumble is that with an anagram you start with an existing word and you jumble the letters to create new ones. With a word jumble puzzle, you start with a random scramble of letters and you have to find the word within the jumble.
- V. These types of puzzles will help you develop your skills and get better at games like Words with Friends and Scrabble. In those games, you're theoretically always solving a word jumble puzzle. You get a rack of 7 random letters and you have to unscramble the letters to find the best word for your turn. Solving word jumble games will sharpen your ability to unscramble words quickly and sufficiently.



# Front end (PYTHON) &



# Back End (MySQL)

# Introduction to Front End Tool

### Introduction to PYTHON:-

Python is a clear and powerful object-oriented programming language, comparable to Perl, Ruby, Scheme, or Java.

Some of Python's notable features:

- Uses an elegant syntax, making the programs you write easier to read.
- Is an easy-to-use language that makes it simple to get your program working. This makes Python ideal for prototype development and other ad-hoc programming tasks, without compromising maintainability.
- Comes with a large standard library that supports many common programming tasks such as connecting to web servers, searching text with regular expressions, reading and modifying files.
- Python's interactive mode makes it easy to test short snippets of code. There's also a bundled development environment called IDLE.



- Is easily extended by adding new modules implemented in a compiled language such as C or C++.
- Can also be embedded into an application to provide a programmable interface.
- Runs anywhere, including Mac OS X, Windows, Linux, and Unix, with unofficial builds also available for Android and iOS.
- Is free software in two senses. It doesn't cost anything to download or use Python, or to include it in your application. Python can also be freely modified and re-distributed because while the language is copyrighted it's available under an open-source license.

Some programming-language features of Python are:

- A variety of basic data types are available: numbers (floating point, complex, and unlimited-length long integers), strings (both ASCII and Unicode), lists, and dictionaries.
- Python supports object-oriented programming with classes and multiple inheritances.
- Code can be grouped into modules and packages.
- The language supports raising and catching exceptions, resulting in cleaner error handling.
- Data types are strongly and dynamically typed. Mixing incompatible types (e.g. attempting to add a string and a number) causes an exception to be raised, so errors are caught sooner.
- Python contains advanced programming features such as generators and list comprehensions.
- Python's automatic memory management frees you from having to manually allocate and free memory in your code.

### **PYTHON tkinter Platform**

The <u>tkinter</u> package ("Tk interface") is the standard Python interface to the Tk GUI toolkit. Both Tk and <u>tkinter</u> are available on most Unix platforms, as well as on Windows systems. (Tk itself is not part of Python; it is maintained at ActiveState.)

Running python -m tkinter from the command line should open a window demonstrating a simple Tk interface, letting you know that <u>tkinter</u> is properly installed on your system, and also showing what version of Tcl/Tk is installed, so you can read the Tcl/Tk documentation specific to that version.

#### **Tkinter Modules**

Most of the time, <u>tkinter</u> is all you really need, but a number of additional modules are available as well. The Tk interface is located in a binary module named <u>tkinter</u>. This module contains the low-level interface to Tk, and should never be used directly by application programmers. It is usually a shared library (or DLL), but might in some cases be statically linked with the Python interpreter.



In addition to the Tk interface module, <u>tkinter</u> includes a number of Python modules, tkinter.constants being one of the most important. Importing <u>tkinter</u> will automatically import tkinter.constants, so, usually, to use Tkinter all you need is a simple import statement:

import tkinter

Or, more often:

from tkinter import \*

class tkinter.Tk(screenName=None, baseName=None, className='Tk', useTk=1)

The  $\underline{\mathsf{Tk}}$  class is instantiated without arguments. This creates a toplevel widget of Tk which usually is the main window of an application. Each instance has its own associated Tcl interpreter.

tkinter.Tcl(screenName=None, baseName=None, className='Tk', useTk=0)

The <u>Tcl()</u> function is a factory function which creates an object much like that created by the <u>Tk</u> class, except that it does not initialize the Tk subsystem. This is most often useful when driving the Tcl interpreter in an environment where one doesn't want to create extraneous toplevel windows, or where one cannot (such as Unix/Linux systems without an X server). An object created by the <u>Tcl()</u> object can have a Toplevel window created (and the Tk subsystem initialized) by calling its loadtk() method.

### Introduction to Back End Tool

MySQL Server, the world's most popular open source database, and MySQL Cluster, a real-time, open source transaction.

#### Features Edit

MySQL is offered under two different editions: the open source MySQL Community Server and the proprietary Enterprise Server. MySQL Enterprise Server is differentiated by a series of proprietary extensions which install as server plugins, but otherwise shares the version numbering system and is built from the same code base.

Major features as available in MySQL 5.6:

- A broad subset of ANSI SQL 99, as well as extensions
- Cross-platform support



- Stored procedures, using a procedural language that closely adheres to SQL/PSM
- Triggers
- Cursors
- Updatable views
- Online Data Definition Language (DDL) when using the InnoDB Storage Engine.
- Information schema
- Performance Schema that collects and aggregates statistics about server execution and query performance for monitoring purposes.
- A set of SQL Mode options to control runtime behavior, including a strict mode to better adhere to SQL standards.
- X/Open XA distributed transaction processing (DTP) support; two phase commit as part of this, using the default InnoDB storage engine
- Transactions with savepoints when using the default InnoDB Storage Engine. The NDB Cluster Storage Engine also supports transactions.
- ACID compliance when using InnoDB and NDB Cluster Storage Engines
- SSL support
- Query caching
- Sub-SELECTs (i.e. nested SELECTs)
- Built-in replication support
  - Asynchronous replication: master-slave from one master to many slaves or many masters to one slave
  - Semi synchronous replication: Master to slave replication where the master waits on replication
  - o Synchronous replication: Multi-master replication is provided in MySQL Cluster.
  - Virtual Synchronous: Self managed groups of MySQL servers with multi master support can be done using: Galera Cluster or the built in Group Replication plugin.

### Operating system

**Windows 10** is a series of operating systems developed by Microsoft and released as part of its Windows NT family of operating systems. It is the successor to Windows 8.1, released nearly two years earlier, and was released to manufacturing on July 15, 2015, and broadly released for the general public on July 29, 2015 Windows 10 was made available for download via MSDN and Technet, and as a free upgrade for retail copies of Windows 8 via the Windows



Store. Windows 10 receives new builds on an ongoing basis, which are available at no additional cost to users, in addition to additional test builds of Windows 10, which are available to Windows Insiders. Devices in enterprise environments can receive these updates at a slower pace, or use long-term support milestones that only receive critical updates, such as security patches, over their ten-year lifespan of extended support.

Windows 10 makes its user experience and functionality more consistent between different classes of device, and addresses most of the shortcomings in the user interface that were introduced in Windows 8. Windows 10 Mobile, the successor to Windows Phone 8.1, shared some user interface elements and apps with its PC counterpart.

Windows 10 supports universal apps, an expansion of the Metro-style first introduced in Windows 8. Universal apps can be designed to run across multiple Microsoft product families with nearly identical code—including PCs, tablets, smartphones, embedded systems, Xbox One, Surface Hub and Mixed Reality. The Windows user interface was revised to handle transitions between a mouse-oriented interface and a touchscreen-optimized interface based on available input devices—particularly on 2-in-1 PCs, both interfaces include an updated Start menu which incorporates elements of Windows 7's traditional Start menu with the tiles of Windows 8. Windows 10 also introduced the Microsoft Edge web browser, a virtual desktop system, a window and desktop management feature called Task View, support for fingerprint and face recognition login, new security features for enterprise environments, and DirectX 12.

# Hardware and software requirement



### Minimum hardware required

Processor : core IV

• RAM: 4 GB

• Hard disk: 320 GB

Monitor: any

Keyboard: 89 keys

### Minimum software required

Operating system: windows 10

Python version: 3.9

Python platform: tkinter

MySQL version: MySQl version 8.0



# Design

- 1. Table structure
- 2. ER diagram

**Table structure** 

# 1.Table game\_ info create database game\_info;

```
5 | umfr

5 | umfr

9 | meg

7 | remi

8 | tanisha

9 | dirp

9 | mam

10 | insiya

11 | harry

12 | tris

13 | ron

14 | yomaish

15 | himanshi

5 | nisha

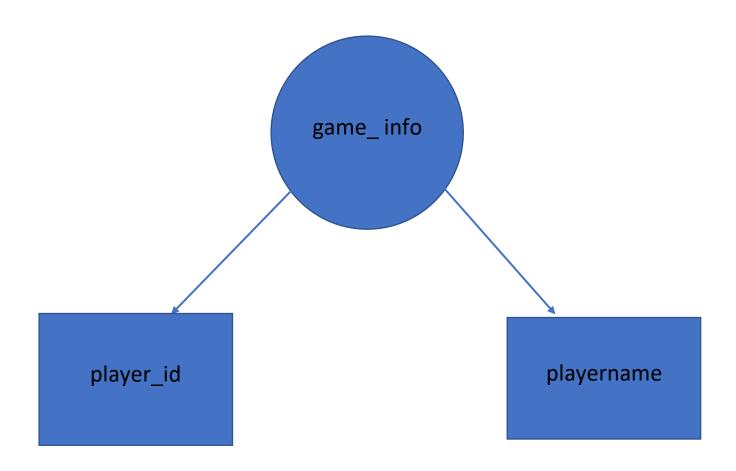
16 | rows in set (0.00 sec)
```

use game\_info;

create table word\_jumble\_info( playerid
integer,playername varchar(30));
select\*from word\_jumble\_info;



### **ER** diagram





# **Design**

# LOGIN WINDOW CODING FOR LOGIN WINDOW

```
import tkinter
from tkinter import *
from tkinter import messagebox
import admin
import newentry
w=tkinter.Tk()
w.title('login')
w.geometry('400x400')
w['bg']="black"
l1=Label(w,text="WELCOME",font=("algerian",20,'underline'),fg="yellow",bg="black")
l1.grid(column=0,row=1)
tkinter.Label(w,text='playername').place(x=10,y=60)
playername=tkinter.Entry(w)
playername.place(x=120,y=60)
tkinter.Label(w,text='password').place(x=10,y=90)
password=tkinter.Entry(w,show="*")
```



password.place(x=120,y=90)

def login():

player=playername.get()

secret=password.get()

if player=='myname' and secret=='mybunny':

messagebox.showinfo("login","login successfully")

admin.adminwindow()

w.destroy()

else:

messagebox.showinfo("login","invalid username and password")

button1=tkinter.Button(w,text='login',command=login).place(x=10,y=120)
button2=tkinter.Button(w,text='exit',command=w.destroy).place(x=100,y=120)
w.mainloop()



Playername: myname

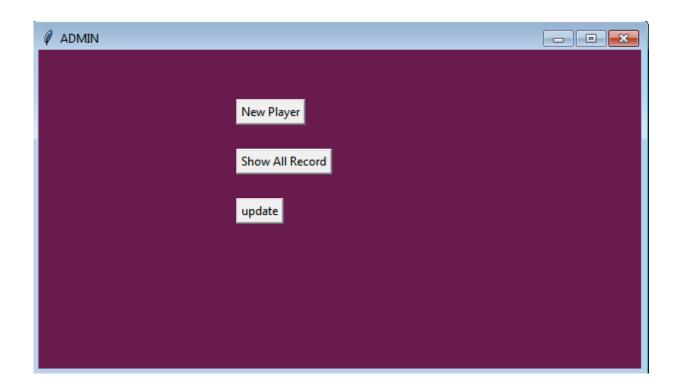


Password: my bunny



# **ADMIN Window**

<u>import tkinter</u>
from tkinter import messagebox
import newentry
import searchall
def callnewentry():
newentry.newwindow()
def callsearchall():
searchall.searchwindow()
def adminwindow():
a=tkinter.Tk()
a.title("ADMIN")
b1=tkinter.Button(a,text="New Player",command=callnewentry).place(x=200,y=50)
b2=tkinter.Button(a,text="Show All Record",command=callsearchall).place(x=200,y=100)
b3=tkinter.Button(a,text="update",command=callsearchall).place(x=200,y=150)





# **Newentry and Searchall**

### **Newentry program**

```
import tkinter
from tkinter import *
from tkinter import messagebox
import mysql.connector as myc
import wordjumble
def game():
    n.withdraw()
    wordjumble.wordjumble()
def saverecord( playerid ,playername):
        try:
        con=myc.connect(host="127.0.0.1",user="root",passwd="K6hawK7867@!",database="game_info")
                print("CONNECTED SUCCESSFULLY")
                rs=con.cursor()
                query="insert into word_jumble_info values({},'{}')".format(playerid,playername)
                rs.execute(query)
                con.commit()
                print("RECORD SAVED SUCCESSFULLY")
                rs.close()
                con.close()
        except Exception as e:
```



print(e)

```
def newwindow():
    global n
    n=tkinter.Tk()
    n.geometry('400x300')
    n.title("NEW PLAYER")
    n['bg']="red"
    l2=Label(n,text="word jumble",font=("algerian",20),fg='blue',bg='red')
    l2.grid(column=0,row=1)
    tkinter.Label(n,text="playerid").place(x=30,y=60)
    me=tkinter.Entry(n)
    me.place(x=100,y=60)
    tkinter.Label(n,text="playername").place(x=30,y=80)
    name=tkinter.Entry(n)
    name.place(x=100,y=80)
    b=tkinter.Button(n,text='ENTER
INFO',command=lambda:saverecord(me.get(),name.get())).place(x=150,y=240)
    b1=tkinter.Button(n,text='ENTER TO GAME',command=game).place(x=150,y=200)
Searchall
import tkinter
from tkinter import messagebox
import mysql.connector as myc
from tkinter import ttk
def searchwindow():
  searchwindow=tkinter.Tk()
  s=tkinter.Tk()
  s.geometry('800x400')
```



```
s.title("Search All")
frame1=tkinter.Frame(s)
frame1.pack(side=tkinter.LEFT)
tv=ttk.Treeview(frame1,columns=(1,2),show="headings",height="5")
tv.pack()
tv.heading(1,text="playerid")
tv.heading(2,text="playername")
try:
  con=myc.connect(host="127.0.0.1",user='root',password="K6hawK7867@!",database="game_info")
  print("CONNECTED SUCCESSFULLY")
  rs=con.cursor()
  query="select * from word_jumble_info"
  rs.execute(query)
  rows=rs.fetchall()
  totalrows=rs.rowcount
  print(totalrows)
  for i in rows:
    tv.insert("",'end',values=i)
  rs.close()
  con.close()
except Exception as e:
  print(e)
```



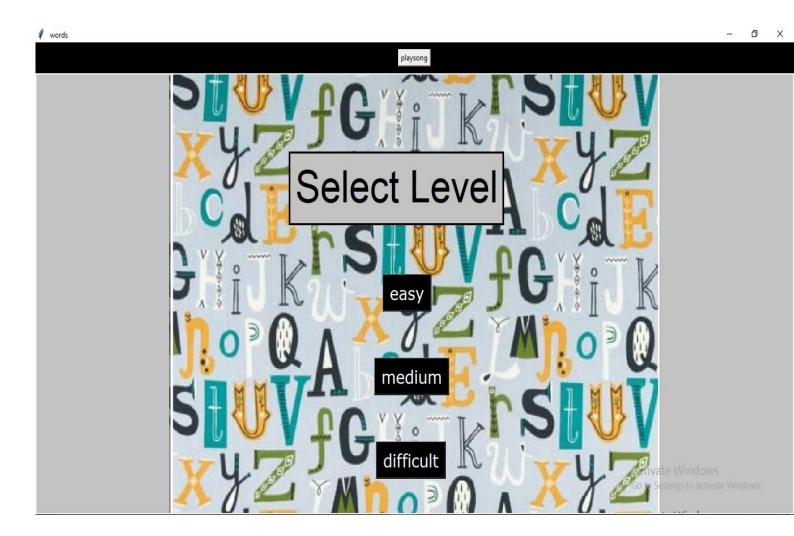
# **Newplayer Window**





# The game window

Select level according to your preference.





# **Easy level!**





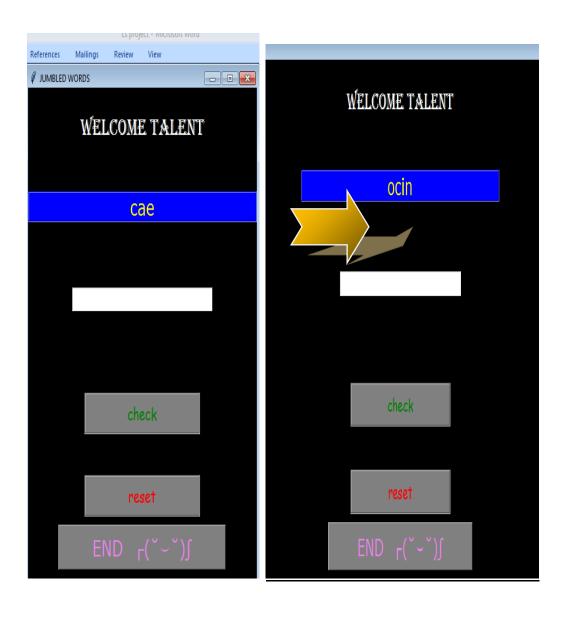
• Check button: If answer is found correct and incorrect it shows following output





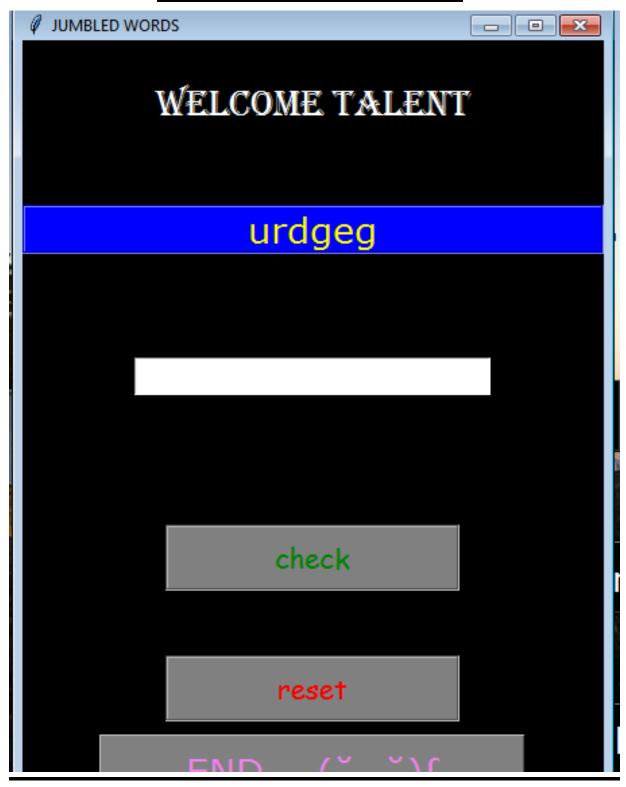


### Reset button





### **Medium level!!**



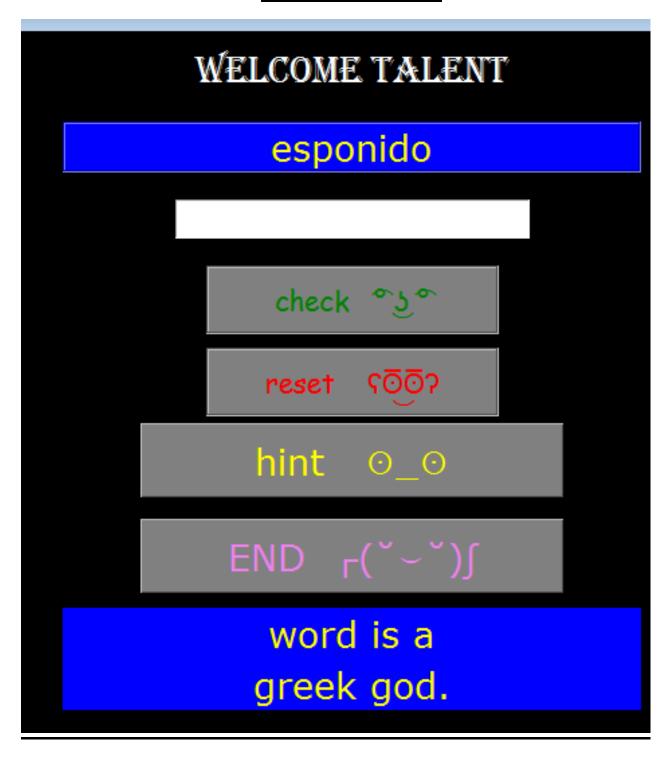


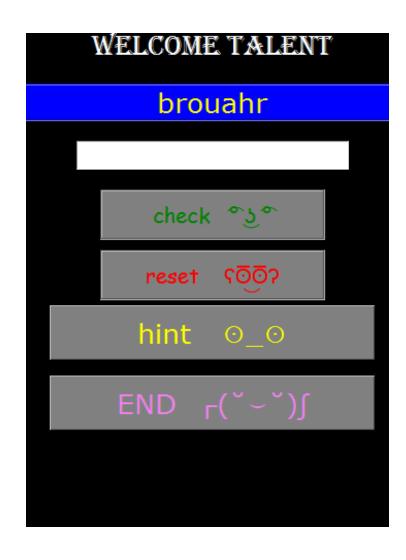
### **HARD LEVEL!!!**





### **Hint button**







### **End button**





## Coding behind the game is as :-

import tkinter
from tkinter import *
from PIL import Image
from PIL import ImageTk
import pygame
import random
from tkinter import messagebox
answers=['rot','ruin','page','trip','dew','tin','oily','rust','coin','book','troy','mines','lily','rope','ace','boa']
words=['tor','uirn','apeg','pitr','ewd','int','loiy','stru','ocin','obok','yotr','iesnm','illy','orpe','cae','oba']
n=random.randrange(1,15,1)
ma=['grudge','hussle','prick','hollow','fright','vanish','vague','hermit','estate','jewish','breed','goofy','dipper','cri ic','phobia','mantis']
mw=['urdgeg','susleh','pirkc','lowolh','rifgth','avinhs','avueg','timreh','tsatee','hsweji','ederb','ogoyf','piderd','riict','hopaib','tinsma']
m=random.randrange(0,15,1)
da=['kryptonite','aristocrat','pleasure','dungeon','poseidon','meteor','quantum','chamomile','woodoo','harbour ,'silhouette','xaxophone','mandolin','viking']
dw=['oprytnteik','orttaairsc','sealrepu','gundneo','esponido','teeomr','nuatmuq','mmoilehca','oooodw','brouahi ,'littehuose','aoxxoenhp','lodinnam','iikngv']
h=['weakness of superhero.','person who belongs to higher class.','feeling of satisfaction.','prison in castle.','greek god.','matter from outer space.','field of physics.','type of tea','type of magic','place where ships moore in shelter','thing with ablack outline.','is an instrument.','is an instrument','type of warriors.']
f=random.randrange(0,14,1)
def wordjumble():



```
def easy():
  def default():
    global words, answers, n
    lbl.config(text=words[n])
  def reset():
    global words,answers,n
    n=random.randrange(0,15,1)
    lbl.config(text=words[n])
    en.delete(0,END)
  def checkans():
    global words, answers, n
    v=en.get()
    if v == answers[n]:
      messagebox.showinfo("You are genius!!!!","THIS IS A CORRECT ANSWER")
      reset(),d.destroy(),easy()
    else:
      messagebox.showerror("ERROR","THIS IS NOT CORRECT,TRYAGAIN")
      en.delete(0,END),d.destroy(),easy()
  def end():
    messagebox.askquestion('end','surely end')
    d.destroy()
    i=Label(u,text="!(\bullet \cup \bullet)THANKYOU!(\bullet \cup \bullet)!",font=('verdana',20),bg='green',fg='yellow',width=20)
    i.pack(pady=10)
  d=tkinter.Tk()
  d.title("JUMBLED WORDS")
  d['bg']="black"
  lb=Label(d,text="WELCOME TALENT",font=("algerian",21),bg="black",fg="white")
  lb.pack(pady=30)
  lbl=Label(d,text="WELCOmeTALNT",font=("verdana",20),bg="blue",fg='yellow',width=25,relief=GROOVE)
  lbl.pack(pady=30)
  k=StringVar()
```



```
en=Entry(d,font=("verdana",15),textvariable=k)
    en.pack(pady=50)
    checkbtn=Button(d,text="check",font=("comic sans
ms",16),bg='grey',fg='green',width=16,relief=GROOVE,command=checkans)
    checkbtn.pack(pady=50)
    resetbtn=Button(d,text="reset",font=("comic sans
ms",16),bg='grey',fg='red',width=16,relief=GROOVE,command=reset)
    resetbtn.pack()
    endbtn=Button(d,text='END (")f',font=('verdana',20),fg='violet',bg='grey',width=18,command=end)
    endbtn.pack(pady=10)
    default()
    d.mainloop()
  def medium():
    def defaultm():
      global mw,ma,m
      lblm.config(text=mw[m])
    def resetm():
      global mw,ma,m
      m=random.randrange(0,15,1)
      lblm.config(text=mw[m])
      enm.delete(0,END)
    def checkansm():
      global mw,ma,m
      w=enm.get()
      if w == ma[m]:
        messagebox.showinfo("You are genius!!!!", "THIS IS A CORRECT ANSWER")
        resetm(),t.destroy(),medium()
      else:
        messagebox.showerror("ERROR","THIS IS NOT CORRECT,TRYAGAIN")
        enm.delete(0,END),t.destroy(),medium()
    def end():
      messagebox.askquestion('end','surely end')
```



```
t.destroy()
      i=Label(u,text= "!(•̀ • •́)THANKYOU!(•̀ • •́)!",font=('verdana',20),bg='green',fg='yellow',width=20)
      i.pack(pady=10)
    t=tkinter.Tk()
    t.title("JUMBLED WORDS")
    t['bg']="black"
    lbm=Label(t,text="WELCOME TALENT",font=("algerian",21),bg="black",fg="white")
    lbm.pack(pady=30)
    lblm=Label(t,text="WELCOmeTALNT",font=("verdana",20),bg="blue",fg='yellow',width=25,relief=GROOVE)
    IbIm.pack(pady=30)
    g=StringVar()
    enm=Entry(t,font=("verdana",15),textvariable=g)
    enm.pack(pady=50)
    checkbtnm=Button(t,text="check",font=("comic sans
ms",16),bg='grey',fg='green',width=16,relief=GROOVE,command=checkansm)
    checkbtnm.pack(pady=50)
    resetbtnm=Button(t,text="reset",font=("comic sans
ms",16),bg='grey',fg='red',width=16,relief=GROOVE,command=resetm)
    resetbtnm.pack()
    endbtn=Button(t,text='END_{(")'})f,font=('verdana',20),fg='violet',bg='grey',width=18,command=end)
    endbtn.pack(pady=10)
    defaultm()
    t.mainloop()
  def hard():
    def default():
      global dw,da,f
      lbl.config(text=dw[f])
    def hint():
      global dw,da,f,j,jh
      j=Label(d,text="word is a",font=("verdana",20),bg='blue',fg='yellow',width=25)
      j.pack()
      jh=Label(d,text=h[f],font=("verdana",20),bg='blue',fg='yellow',width=25)
```



```
jh.pack()
def reset():
  global dw,da,f,h
  f=random.randrange(0,14,1)
  lbl.config(text=dw[f])
  en.delete(0,END)
  deletehint()
def deletehint():
  jh.destroy()
 j.destroy()
def checkans():
  global dw,da,f
  v=en.get()
  if v == da[f]:
    messagebox.showinfo("You are genius!!!!", "THIS IS A CORRECT ANSWER")
    reset(),d.destroy(),hard(),deletehint()
  else:
    messagebox.showerror("ERROR","THIS IS NOT CORRECT,TRYAGAIN")
    en.delete(0,END),d.destroy(),hard()
def end():
  messagebox.askquestion('end','surely end')
  d.destroy()
  i=Label(u,text="!(\bullet \cup \bullet)THANKYOU!(\bullet \cup \bullet)!",font=('verdana',20),bg='green',fg='yellow',width=20)
  i.pack(pady=10)
d=tkinter.Tk()
d.title("JUMBLED WORDS")
d['bg']="black"
lb=Label(d,text="WELCOME TALENT",font=("algerian",21),bg="black",fg="white")
lb.pack(pady=10)
lbl=Label(d,text="WELCOmeTALNT",font=("verdana",20),bg="blue",fg='yellow',width=25,relief=GROOVE)
lbl.pack(pady=10)
```



```
k=StringVar()
    en=Entry(d,font=("verdana",15),textvariable=k)
    en.pack(pady=10)
    checkbtn=Button(d,text="check 5",font=("comic sans
ms",16),bg='grey',fg='green',width=16,relief=GROOVE,command=checkans)
    checkbtn.pack(pady=10)
    resetbtn=Button(d,text="reset \Omega \overline{O}?",font=("comic sans
ms",16),bg='grey',fg='red',width=16,relief=GROOVE,command=reset)
    resetbtn.pack()
    hintbtn=Button(d,text='hint O_O',font=('verdana',20),fg='yellow',bg='grey',width=18,command=hint)
    hintbtn.pack(pady=5)
    endbtn=Button(d,text='END (")f',font=('verdana',20),fg='violet',bg='grey',width=18,command=end)
    endbtn.pack(pady=10)
    default()
    d.mainloop()
  u=Toplevel()
  u.title(" words")
  u.geometry('800x500')
  u['bg']="black"
 pygame.mixer.init()
 def play():
    pygame.mixer.music.load(r"C:\Users\wafa\Downloads\resources\audio\moonlight.wav")
    pygame.mixer.music.play(loops=0)
 b=Button(u,text="playsong",command=play)
 b.pack(pady=10)
```

bg=PhotoImage(file=r"C:\Users\wafa\Downloads\resources\images\New folder\07.png")

c=Canvas(u,width=800,height=500)

```
c.pack(fill='both',expand=True)
c.create_image(0,0,image=bg,anchor='nw')
c.create_text(650,170,text='Select Level',font=('helvetica',50),fill='black')
eb=Button(u,text="easy",font=("verdana",20),bg='black',fg='white',command=easy)
#eb.pack(pady=50)
em=Button(u,text="medium",font=("verdana",20),bg='black',fg='white',command=medium)
#em.pack(pady=60)
ed=Button(u,text="difficult",font=("verdana",20),bg='black',fg='white',command=hard)
#ed.pack(pady=10)
eb_window=c.create_window(625,300,anchor="nw",window=eb)
em_window=c.create_window(610,425,anchor="nw",window=em)
ed_window=c.create_window(613,550,anchor="nw",window=ed)
u.mainloop()
```



### **CONCLUSION**

This project gives us an outlook on how to play the word game and improve our skills. The benefits we get from playing this game are as follows:-

- 1. Use it as a word generator
- 2. Get to do more in a fun way



## **Bibliography**

- www.onenote.com
- www.wikipedia.org
- www.github.com