PROJECT REPORT
ON

TEXT TO SPEECH

PYTHON PROGRAMMING (INT 213)

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Text to speech

ABSTRACT

This software project is a windows based software that reads a text file to the user. The bots reads a text file and associated pronunciations in its temporary database. The bots then reads an entire word to the user. The pronunciations of articles and basic words have been fed to the bots, the rest of the words and complex ones are calculated and read accordingly. The bots an be effectively used to help read the text document for the user so that the user does not constantly need to look at the screen and read the entire document. Test to speech converter is a recent software project that allows even the visually challenged to read and understand various documents.

ACKNOWLEDGEMENT

I would like to Acknowledge all those without whom this Project would not have been successful. Firstly, I would wish to thank our Computer Science (PYTHON) Teacher Prof. Sagar Pande who guided me throughout the project and gave his immense support. He made us understand how to successfully complete this project and without him, the project would not have been complete.

This project has been a source to learn and bring out theoretical knowledge to the real-life world. So, I would really acknowledge his help and guidance for this project.

I would also like to Thank my parents who have always been there whenever needed.

Once again, Thanks to everyone for making this project successful.

INTRODUCTION

- ✓ This is a program to translate TEXT into SPEECH The Aim of this project is to make the Through this program we can do a lot of things like : -
- ✓ Help people in learning languages which you dont know.
- ✓ It helps in preparation of speeches by hearing your work read aloud.
- ✓ It will helps in listening e-books or e-material during journey.
- ✓ And it will avoid eyestrain from too much reading.

CONTRIBUTION

Kishan Kumar : -

- GUI (GRAPHICAL USER INTERFACE)
- CODING
- REPORT

TKINTER

- Tkinter is an open source, portable graphical user interface (GUI) library designed for use in Python scripts.
  Tkinter relies on the Tk library, the GUI library used by Tcl / Tk and Perl, which is in turn implemented in C. Therefore, Tkinter can be said to be implemented using multiple layers.

Advantages of Tkinter : -

Layered Approach : -

The layered approach used in designing Tkinter gives Tkinter all of the advantages of the TK library. Therefore, at the time of creation, Tkinter inherited from the benefits of a GUI toolkit that had been given time to mature. This makes early versions of Tkinter a lot more stable and reliable than if it had been rewritten from scratch. Moreover, the conversion from Tcl/Tk to Tkinter is really trivial, so that Tk programmers can learn to use Tkinter very easily.

TKINTER

- **2. Accessibility : -**
- Learning Tkinter is very intuitive, and therefore quick and painless. The Tkinter implementation hides the detailed and complicated calls in simple, intuitive methods. This is a continuation of the Python way of thinking, since the language excels at quickly building prototypes. It is therefore expected that its preferred GUI library be implemented using the same approach.

3. Portability : -

Python scripts that use Tkinter do not require modifications to be ported from one platform to the other. Tkinter is available for any platform that Python is implemented for, namely Microsoft Windows, X Windows, and Macintosh. This gives it a great advantage over most competing libraries, which are often restricted to one or two platforms. Moreover, Tkinter will provide the native look-and-feel of the specific platform it runs on.

IMPLEMENTATION AND RESULTS (SCREENSHOTS)

REGISTRATION FORM

TEXT TO SPEECH

SCREENSHOT OF CODE

main.py - C:\Users\Vikash babu\Desktop\Python_Project\main.py (3.10.0)

File Edit Format Run Options Window Help

```
from tkinter import *;
from gtts import gTTS;
from playsound import playsound;
from tkinter import ttk;
import mysql.connector;
from PIL import Image,ImageTk;
from tkinter import messagebox

def loginf():
    global uname;
    global passw;
    global main_frame;
    main_frame = Tk();
    main_frame.geometry("700x330");
    main_frame.title("Login Form");
    m = Menu(main_frame);
    ml = Menu(m,tearoff = 0);
    m.add_cascade(label = "File",menu = ml);
    ml.add_command(label = "Register",command = regf);
    main_frame.config(menu = m);
    Label(main_frame,text = "Admin Login",justify = "center",font = ("helvetica",35,"bold"),fg = "Red",bg = "pink",width = 300).pack();

    bg = Image.open("login.jpg").resize((700,330));
    img = ImageTk.PhotoImage(bg,master = main_frame);
    lbl = Label(main_frame,image = img).pack(pady = 0.5);
    username_label = Label(main_frame,text = "UserName - ",font = ("helvetica",20,"bold"),bg = "white",fg = "Green").place(x = 40,y =90);
    password_label = Label(main_frame,text = "Password - ",font = ("helvetica",20,"bold"),bg = "white",fg = "Green").place(x = 40,y =140);
    uname = Entry(main_frame,width = 50,borderwidth = 3,font = ("Times New Roman",12,"bold"));
    uname.place(x = 275,y = 100);
    passw = Entry(main_frame,width = 50,borderwidth = 3,show = "*",font = ("Times New Roman",12,"bold"));
    passw.place(x = 275,y = 150);
    loginButt = Button(main_frame,text = "Login",font = ("helvetica",15,"bold"),command = CredentialCheck,fg = "Green",bg = "White",width = 10).place(x = 130,y = 214);
    clearButt = Button(main_frame,text = "Clear",font = ("helvetica",15,"bold"),command = Clear_Fl,fg = "Green",bg = "White",width = 10).place(x = 278 ,y = 214);
    exitButt =  Button(main_frame, text = "Exit",font = ("helvetica",15,"bold"),fg = "Green",bg = "White",command =main_frame.destroy,width = 10).place(x = 425,y = 214
    main_frame.mainloop();

def CredentialCheck():
    userna = uname.get();
    pas = passw.get();
    if userna == "" or pas == "":
        messagebox.showinfo("Alert","Please Fill the Username and Password");
    else:
```

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SCREENSHOT OF CODE

main.py - C:\Users\Vikash babu\Desktop\Python_Project\main.py (3.10.0)

File Edit Format Run Options Window Help

```
    if userna == "" or pas == "":
        messagebox.showinfo("Alert","Please Fill the Username and Password");
    else:
        mydb = mysql.connector.connect(host = "localhost",user = "root",password = "admin",database = "texttospeech");
        mycur=mydb.cursor()
        sql = ("select * from cred_check where USERNAME =%s and PASSWORD =%s ");
        val = (userna,pas);
        mycur.execute(sql, val);
        result = mycur.fetchall()
        if result:
            messagebox.showinfo("","Welcome Text to speech Interface ");
            main_frame.destroy();
            mainf();

        else:
            messagebox.showinfo("","Sorry Try Again ");

def Clear_Fl():
   uname.delete(0, END);
   passw.delete(0,END);


def regf():
    global fentry1;
    global lentry2;
    global emailentry3;
    global uentry4;
    global pentry5;
    global cpentry6;
    global rframe;
    rframe =  Tk();
    rframe.title("Registration Form");
    rframe.geometry("700x600");
    Label(rframe,text = "Registration Form",justify = "center",font = ("Ink Free",35,"bold"),fg = "Red",width = 300).pack();
    bg = Image.open("new.jpg").resize((700,600));
    img = ImageTk.PhotoImage(bg);
    lbl = Label(main_frame,image = img).pack(pady = 0.5);
    fname = Label(rframe,text = "FirstName",font = ("Ink Free",20,"bold"),bg = "white",fg = "green").place(x = 160,y =90);
    lname = Label(rframe,text = "LastName",font = ("Ink Free",20,"bold"),bg = "white",fg = "green").place(x = 400,y =90);
    fentry1 =Entry(rframe,width = 20,borderwidth = 3,font = ("Times New Roman",12,"bold"));
    fentry1.place(x = 144,y = 140);
    lentry2 =Entry(rframe,width = 20,borderwidth = 3,font = ("Times New Roman",12,"bold"));
```

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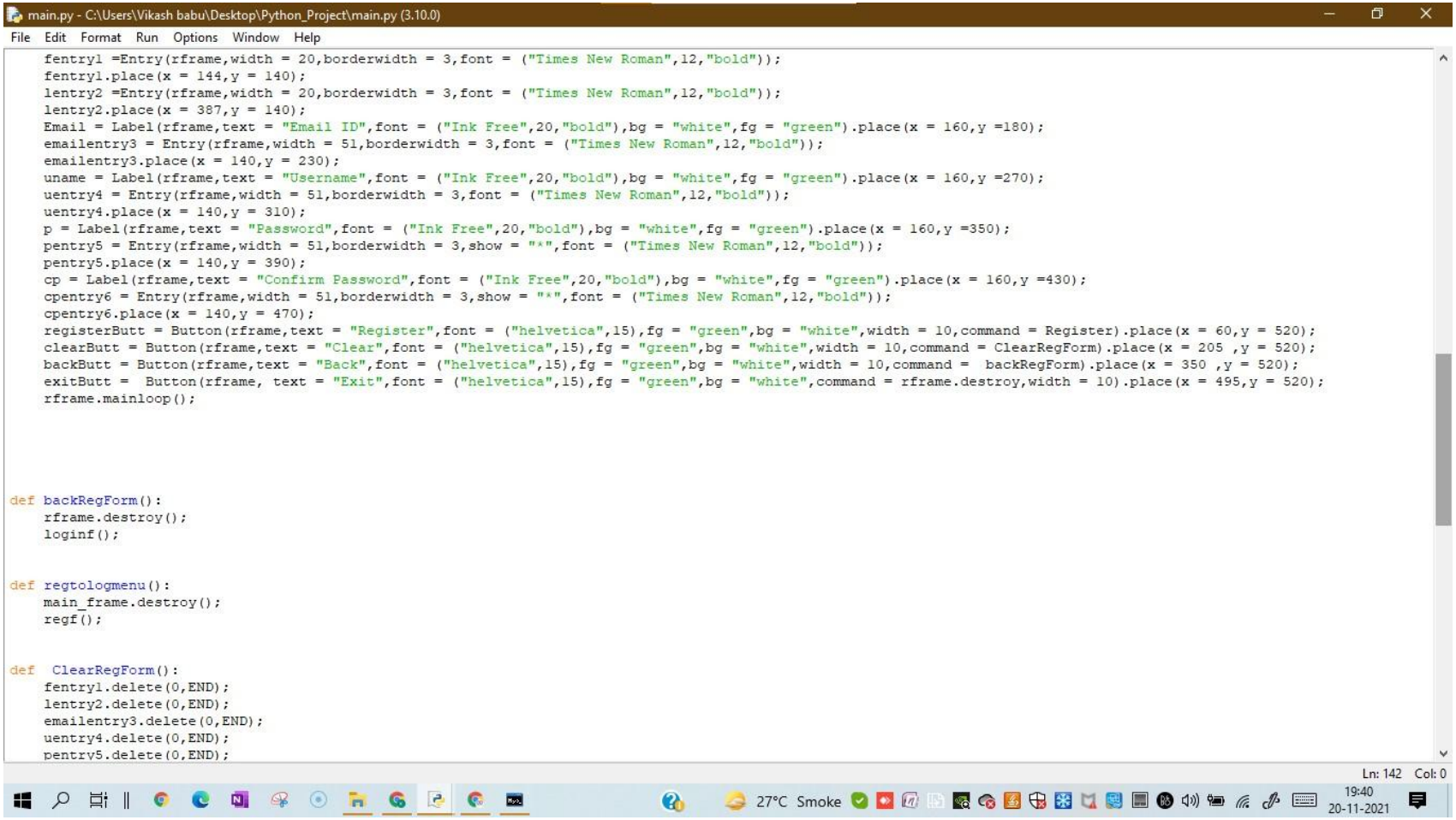
SCREENSHOT OF CODE



SCREENSHOT OF CODE

main.py - C:\Users\Vikash babu\Desktop\Python_Project\main.py (3.10.0)

File Edit Format Run Options Window Help

```
def  ClearRegForm():
    fentry1.delete(0,END);
    lentry2.delete(0,END);
    emailentry3.delete(0,END);
    uentry4.delete(0,END);
    pentry5.delete(0,END);
    cpentry6.delete(0,END);

def Register():
    fn = fentry1.get();
    ln = lentry2.get();
    ei = emailentry3.get();
    un = uentry4.get();
    p = pentry5.get();
    cp = cpentry6.get();

    if p != cp:
        messagebox.showinfo("","Password doesn't match");

    else:
        mydb = mysql.connector.connect(host = "localhost",user = "root",password = "admin",database = "texttospeech");
        mycur = mydb.cursor();
        mycur.execute("CREATE TABLE IF NOT EXISTS cred_check(First_Name varchar(40),Last_Name varchar(30),Email_ID varchar(40),UserName varchar(40),Password varchar(46
        val= [(fn,ln,ei,un,cp)];
        sql="INSERT INTO cred_check(First_Name,Last_Name,Email_ID,UserName,Password)VALUES (%s,%s,%s,%s,%s)";
        mycur.executemany(sql,val);
        mydb.commit();
        messagebox.showinfo("","You have been successfully Registered , Thank you ");
        ClearRegForm()


def mainf():
    root = Tk();
    root.geometry("350x300") ;

    root.title("DataFlair - TEXT TO SPEECH");
    bg = Image.open("text.jpeg").resize((350,300));
    img = ImageTk.PhotoImage(bg);
    lbl = Label(root,image = img).place(x = 0,y = 0);
    Label(root, text = "Text To Speech", font = "helvetica 25 bold",fg = "red",bg = "black").pack(pady = 10);
    Msg = StringVar();
    Label(root,text ="Enter Text", font = 'helvetica 20 bold',fg = "green",bg = "black").pack(pady = 10);
```

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SCREENSHOT OF CODE

```
def mainf():
    root = Tk();
    root.geometry("350x300") ;

    root.title("DataFlair - TEXT TO SPEECH");
    bg = Image.open("text.jpeg").resize((350,300));
    img = ImageTk.PhotoImage(bg);
    lbl = Label(root,image = img).place(x = 0,y = 0);
    Label(root, text = "Text To Speech", font = "helvetica 25 bold",fg = "red",bg = "black").pack(pady = 10);
    Msg = StringVar();
    Label(root,text ="Enter Text", font = 'helvetica 20 bold',fg = "green",bg = "black").pack(pady = 10);
    entry_field = Entry(root, textvariable = Msg ,width ='20',font = "helvetica 20 bold");
    entry_field.place(x=20,y=130);
    def Text_to_speech():
        Message = entry_field.get();
        speech = gTTS(text = Message);
        speech.save('DataFlair.mp3');
        playsound('DataFlair.mp3');
        mydb = mysql.connector.connect(host = "localhost",user = "root",password = "admin",database = "texttospeech");
        mycur = mydb.cursor();
        mycur.execute("insert into search_hist(Searched_text) values('"+Message+"')");
        mydb.commit();
    def Exit():
        root.destroy();
    def Reset():
        Msg.set("");
    Button(root, text = "PLAY", font = 'arial 15 bold' , command = Text_to_speech ,width = '4',fg = "green").place(x=25,y=200);
    Button(root, font = 'arial 15 bold',text = 'EXIT', width = '4' , command = Exit, fg = "green").place(x=120 , y = 200);
    Button(root, font = 'arial 15 bold',text = 'RESET', width = '6' , command = Reset,fg = "green").place(x=215 , y = 200);
    root.mainloop();


loginf();
```

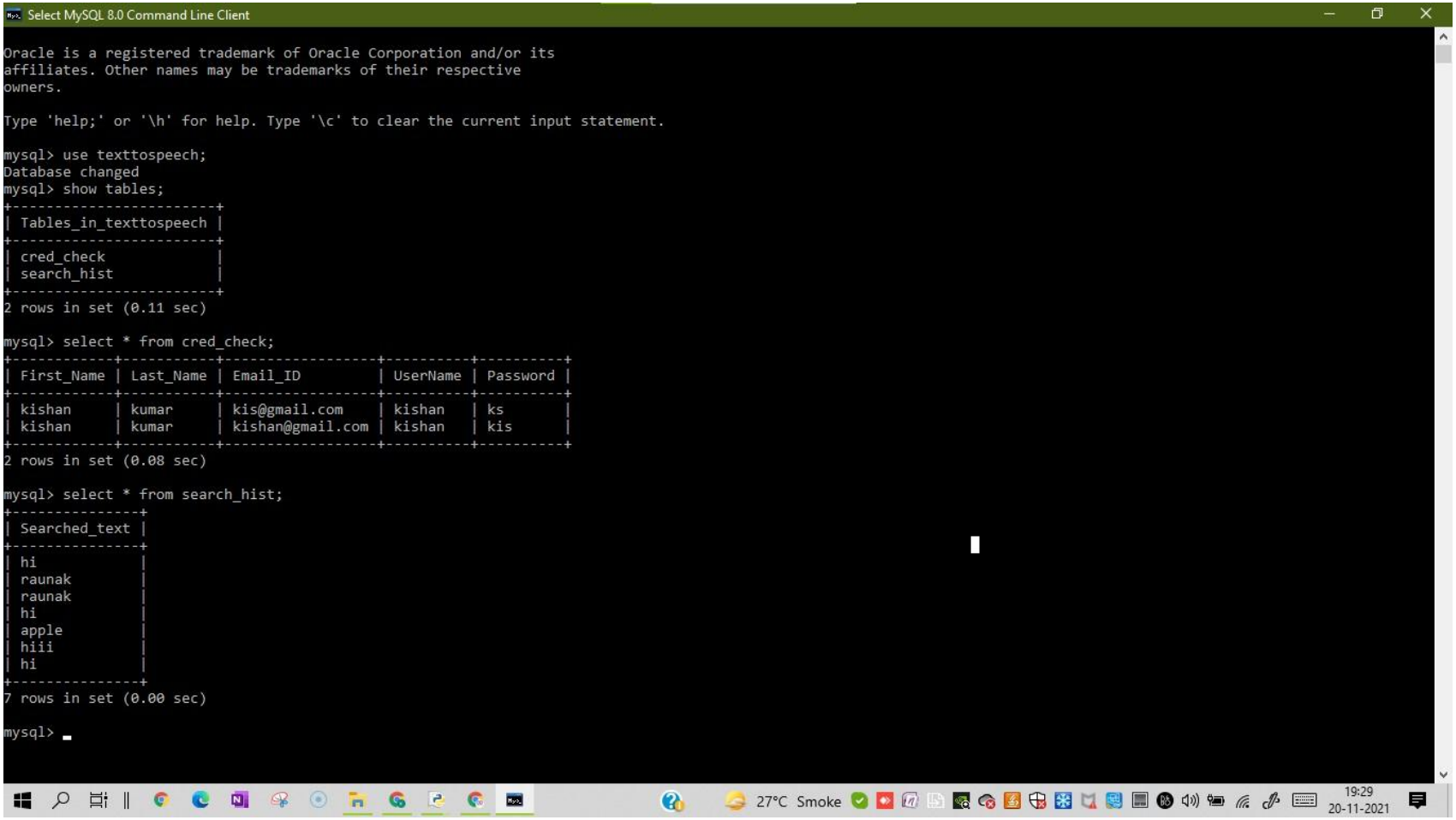
MYSQL

- MySQL is a relational database management system (RDBMS) developed by Oracle that is based on structured query language (SQL).
- A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or a place to hold the vast amounts of information in a corporate network. In particular, a relational database is a digital store collecting data and organizing it according to the relational model. In this model, tables consist of rows and columns, and relationships between data elements all follow a strict logical structure. An RDBMS is simply the set of software tools used to actually implement, manage, and query such a database.

MYSQL

- 1. from tkinter import * : -
- It is used to import all the functions and modules in it.
- 2. from tkinter import ttk : -
- It’s a module which provide access to Tk themed widgets.
- 3.from PIL import Image, ImageTk : -
- The ImageTk module contains support to create and modify Tkinter BitmapImage and PhotoImage.
- 4.import mysql.connector : -
- To create connection to the MySQL server.
- 5.import numpy as np : -
- It is used to import the all functionalities of numpy like multidimensional array and matrix data structure.

SCREENSHOT


Select MySQL 8.0 Command Line Client
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> use texttospeech;
Database changed
mysql> show tables;
+------------------------+
| Tables_in_texttospeech |
+------------------------+
| cred_check |
| search_hist |
+------------------------+
2 rows in set (0.11 sec)
mysql> select * from cred_check;
+------------+-----------+-----------------+----------+----------+
| First_Name | Last_Name | Email_ID | UserName | Password |
+------------+-----------+-----------------+----------+----------+
| kishan | kumar | kis@gmail.com | kishan | ks |
| kishan | kumar | kishan@gmail.com | kishan | kis |
+------------+-----------+-----------------+----------+----------+
2 rows in set (0.08 sec)
mysql> select * from search_hist;
+---------------+
| Searched_text |
+---------------+
| hi |
| raunak |
| raunak |
| hi |
| apple |
| hiii |
| hi |
+---------------+
7 rows in set (0.00 sec)
mysql>
27°C Smoke
19:29
20-11-2021

CONCLUSION

- Effective implementation of this software will help people in learning languages which you dont know. It helps in preparation of speeches by hearing your work read aloud.

It will helps in listening e-books or e-material during journey. And it will avoid eyestrain from too much reading.

REFRENCES

- SPYDER (CODING PLATFORM)

- NUMPY (LIBRARY)
- https://numpy.org/

- STACKOVERFLOW
- https://stackoverflow.com

- WIKIPEDIA
- https://www.wikipedia.org/

THANK YOU