MINI PROJECT REPORT

On

"HUMANOID"



Department of Computer Engineering and Application

Institute of Engineering and Technology

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(Technical Trainer)

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DECLARATION

We hereby declare that the project entitled -"HUMANOID", which is being submitted as Mini project of 6th semester in Computer Science and Engineering to GLA University, Mathura, UP is an authentic record of our genuine work under the supervision of our mentor Dr. Manoj Varshney.

Group Members:

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Course: B.Tech (Computer Science and Engineering)

Year: 3rd

Semester: 6th

Supervised by: Dr Manoj Varshney (Technical Trainer)

GLAUniversity

CERTIFICATE

| CENTIFICATE |
|---|
| This is to certify that the above statements made by the candidates a correct to the best of my/our knowledge and belief. |
| Supervisor |
| Dr. Manoj Varshney Technical Trainer |
| Dept of CEA, GLA University |
| |
| PROGRAM COORDINATOR: |

(Shashi Shekhar)

ACKNOWLEDGEMENT

A task or project cannot be completed alone. It requires the effort of many individuals .On the very outset of this project , we would like to extend our sincere and heartfelt obligations towards all the personages who helped us in this project . Without their active guidance ,help, cooperation and encouragement , we would not have made headway in the project.

It is our privilege to express our sincerest regards to our project mentor, Dr Manoj Varshney, for his valuable inputs, able guidance, encouragement, whole-hearted cooperation and constructive criticism throughout the duration of our project.

We are highly grateful to our Head of Department Mr Rohit Agrawal for encouraging us and providing necessary facilities during the course of work .At last but not least, gratitude goes to all faculty members who directly or indirectly helped me in this project.

Aditi Tyagi (191500054)

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Humanoid

ABSTRACT

Nowadays peoples are getting very fond of taking pictures but some of them are not according to our choices, so we are making a website where users can upload green screen with picture to replace the background with any image of their choice.

They can transport themselves anywhere in the world, and beyond, with green screen. They can also apply various filters to enhance their photographs. Morever, OCR(Optical Character Recognition) will allow users to perform many actions in few minutes, such as copy text from the aforementioned documents and modify it, instead of wasting time on retyping it.

Atlast our website will also provide speech recognition and language translator tool which can be useful for people in their dailylife.

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INTRODUCTION

Objective

Our Objective is to design and create a platform from where users can access the features of Green Screen background change, Secondly we are goig to add the feature of filter choosing on the uploaded image, then there will be Optical Character Regonition (OCR), i.e the text in image will be converted to pdf, then there will be speech recognition and language translator.

Sources

The source of our project will be available at the following link:-

https://github.com/khushia1721/Humanoid

Problem Statement

The website "Humanoid", as the name suggests will do our work automatically. Nowadays, people face problems with their photos as the background in their image is not of their choice. So they can use green screen background which lets you drop in whatever background images they want. It is cheaper option and will shorten production time. It is mainly used in film or series production. Normal photos can also be upgraded by adding filters.

Sometimes, we need to get the information written in images, but from images we cannot directly use it which usually waste time in retyping. So our website provides OCR which enables scanned documents and images to be transformend into searchable and editable document formats. Thus solving the problem of retyping.

REQUIREMENTS

> SOFTWARE REQUIREMENTS

- 1. Languages used :- HTML, CSS & Javascript
- 2. IDE Used: Visual Studio Code
- **3.** Web Browser: Google Chrome, Microsoft Edge or any other web browser

GitHub: GitHub is a web-based version-control and collaboration platform for software developers. Microsoft, the biggest single contributor to GitHub, initiated an acquisition of GitHub for \$7.5 billion in June,

2018. GitHub, which is delivered through a software-as-a-service (SaaS) business model, was started in 2008 and was founded on Git, an open source code management system created by Linus Torvalds to make software builds faster. GitHub Repository: A GitHub repository can be used to store a development project. It can contain folders and any type of files (HTML, CSS, JavaScript, Documents, Data, Images). A GitHub repository should also include a license file and a README file about the project. A GitHub repository can also be used to store ideas, or any resources that you want to share.

Visual Studio Code: Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and has a rich ecosystem of extensions for other languages (such as C++, C#, Java, Python, PHP, Go) and runtimes (such as .NET and Unity). Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality. Microsoft has released Visual Studio Code's source code on the VS Code repository of GitHub.com, under the permissive MIT License, while the compiled binaries are freeware.

> HARDWARE REQUIREMENTS

• Processor Required: Intel i3, i5, i7 or i9

• Operating System: Windows 8/10, Linux

• RAM: minimum 8GB

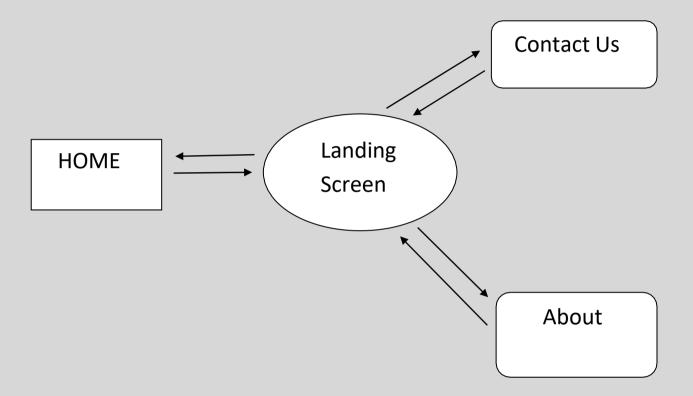
• Hardware Devices: Computer System

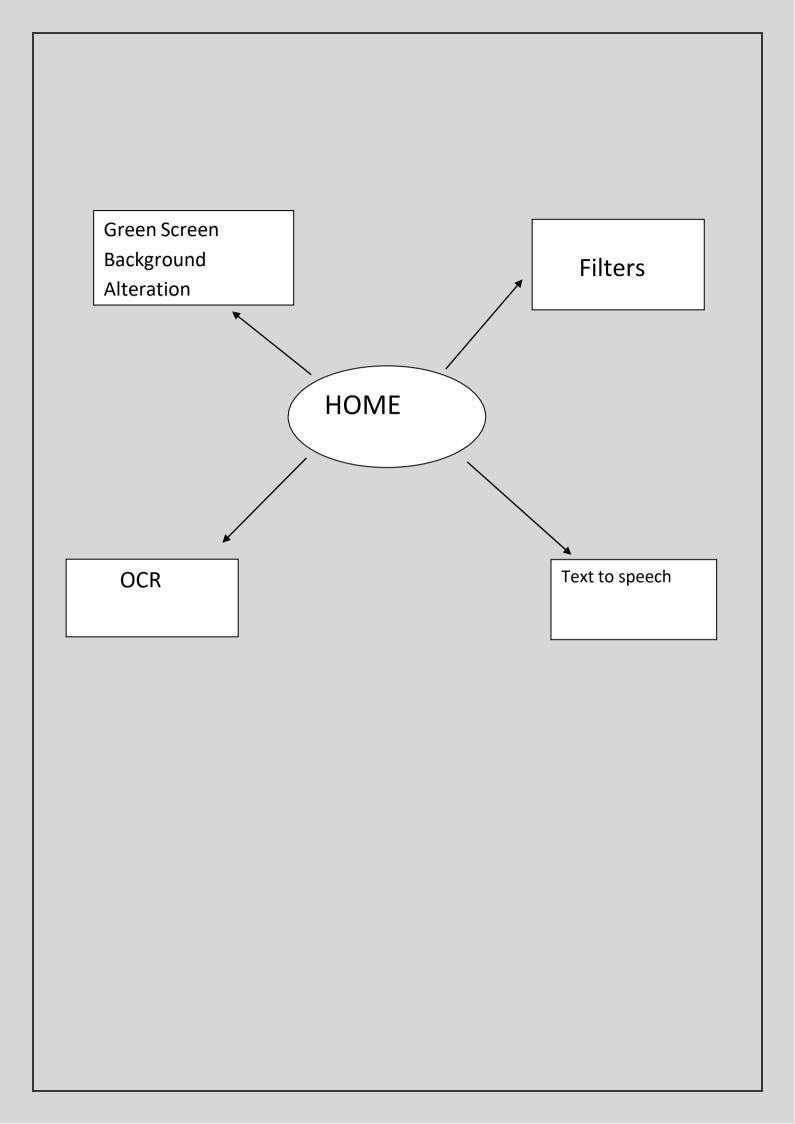
• Hard Disk: minimum 256G

Modules and Functionality

- Landing screen: The first page is landing page where you can navigate to home page, contact us, and about page.
- Main page:It will contain many choices from which user can select on which to work upon.
- Background alteration: In this user can upload foreground green screen image which he/she can change into their preferable background and can apply filters according to their likings.
- OCR(Img to PDF): OCR stands for "Optical Character Recognition." It is a technology that recognizes text within a digital image. It is commonly used to recognize text in scanned documents and images.
- Text to Speech: It will convert text written to speech.

Data Flow Diagram





TECHNOLOGIES USED:

HTML

Hypertext Markup Language revision 5 (HTML5) is markup language for the structure and presentation of World Wide Web contents. HTML5 supports the traditional HTML and XHTML-style syntax and other new features in its markup, New APIs, XHTML and error handling.

There are three organizations that are currently in charge of the specification of HTML5:

- 1. Web Hypertext Application Technology Working Group (WHATWG) created the HTML5 specification and is in charge of the HTML5 development that provides open collaboration of browser vendors and other involved parties.
- 2. World Wide Web Consortium (W3C) is in charge with delivering the HTML5 specification.
- 3. Internet Engineering Task Force (IETF) is in charge of the development of HTML5 WebSocket API.

New features of HTML5 include:

- New parsing rules that are not based on SGML but are oriented towards flexible parsing and compatibility.
- Support of use of inline Scalar Vector Graphics (SVG) and Mathematical Markup Language (MathML) in text/html.
- New available elements include article, aside, audio, bdi, canvas, command, datalist, details, embed, figcaption, figure, footer, header, hgroup, keygen, mark, meter, nav, output, progress, rp, rt, ruby, section, source, summary, time, video and wbr.
- New available types of form controls include dates and times, email, url, search, number, range, tel and color. New available attributes of charset on meta and async on script.

Global attributes that can be applied for every element that include id, tabindex, hidden, data-* or customer data attribute.

CSS3

Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. CSS3 is a latest standard of css earlier versions(CSS2). The main difference between css2 and css3 is follows –

- Media Queries
- Namespaces
- Selectors Level 3
- Color

CSS3 modules

CSS3 is collaboration of CSS2 specifications and new specifications, we can called this collaboration is module. Some of the modules are shown below –

- Selectors
- Box Model
- Backgrounds
- Image Values and Replaced Content
- Text Effects
- 2D Transformations
- 3D Transformations
- Animations
- Multiple Column Layout
- User Interface

Use and Need of CSS3

CSS3 is used with HTML to create and format content structure. It is responsible for colours, font properties, text alignments, background images, graphics, tables, etc. It provides the positioning of various elements with the values being fixed, absolute, and relative.

JavaScript

JavaScript was initially created to "make web pages alive".

The programs in this language are called scripts. They can be written right in a web page's HTML and run automatically as the page loads.

Scripts are provided and executed as plain text. They don't need special preparation or compilation to run.

JavaScript is the world's most popular programming language.

JavaScript is the programming language of the Web.

JavaScript is easy to learn.

Today, JavaScript can execute not only in the browser, but also on the server, or actually on any device that has a special program called the JavaScript engine.

The browser has an embedded engine sometimes called a "JavaScript virtual machine".

Different engines have different "codenames". For example:

- V8 in Chrome, Opera and Edge.
- SpiderMonkey in Firefox.
- There are other codenames like "Chakra" for IE, "JavaScriptCore", "Nitro" and "SquirrelFish" for Safari, etc.

Modern JavaScript is a "safe" programming language. It does not provide low-level access to memory or CPU, because it was initially created for browsers which do not require it.

JavaScript's capabilities greatly depend on the environment it's running in. For instance, Node.js supports functions that allow JavaScript to read/write arbitrary files, perform network requests, etc.

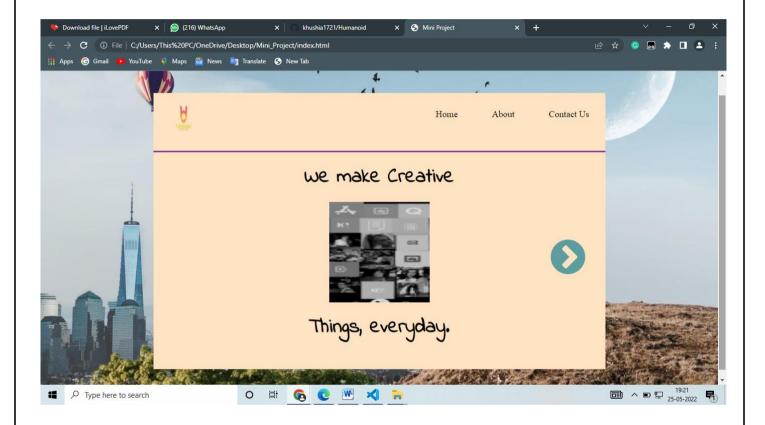
In-browser JavaScript can do everything related to webpage manipulation, interaction with the user, and the webserver.

For instance, in-browser JavaScript is able to:

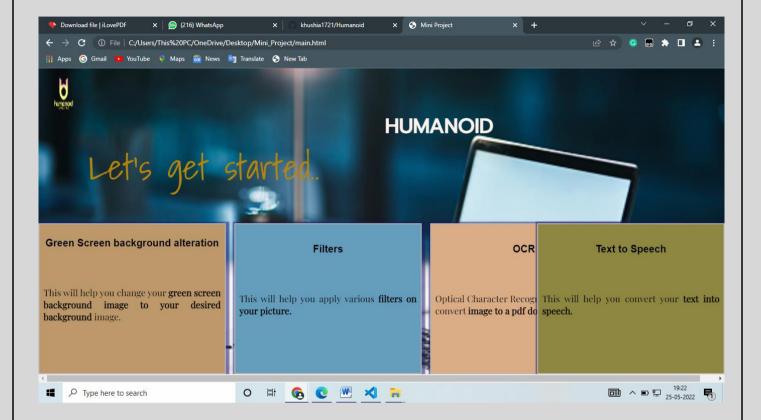
- Add new HTML to the page, change the existing content, modify styles.
- React to user actions, run on mouse clicks, pointer movements, key presses.
- Send requests over the network to remote servers, download and upload files (so-called AJAX and COMET technologies).
- Get and set cookies, ask questions to the visitor, show messages.
- Remember the data on the client-side ("local storage").

List of Figures

Landing Page



Home



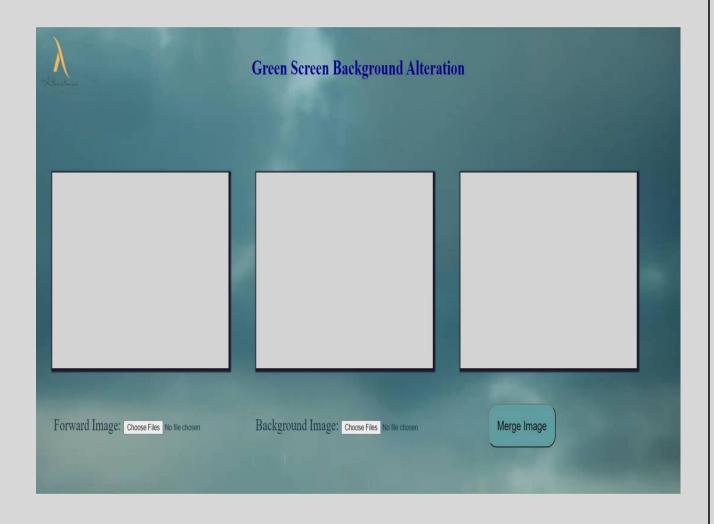
About



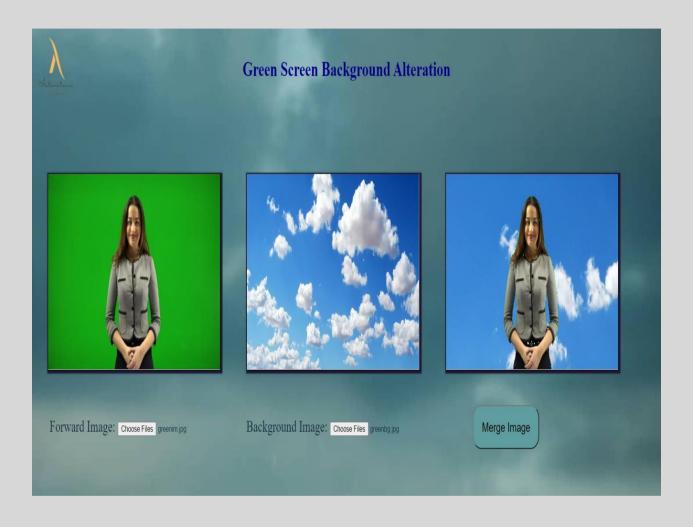
Contact Us



Green Screen Background Alteration



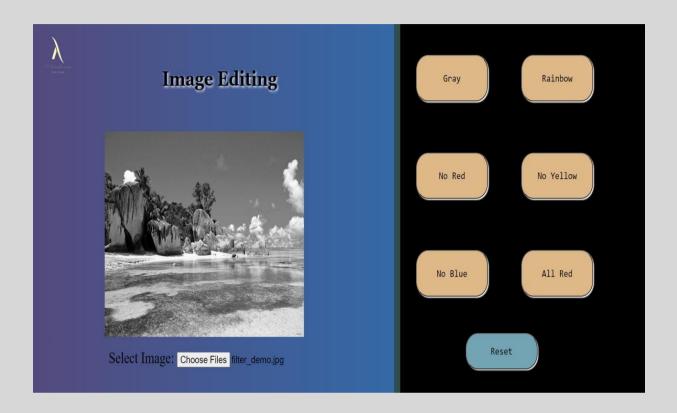
Working of Green Screen Background Alteration

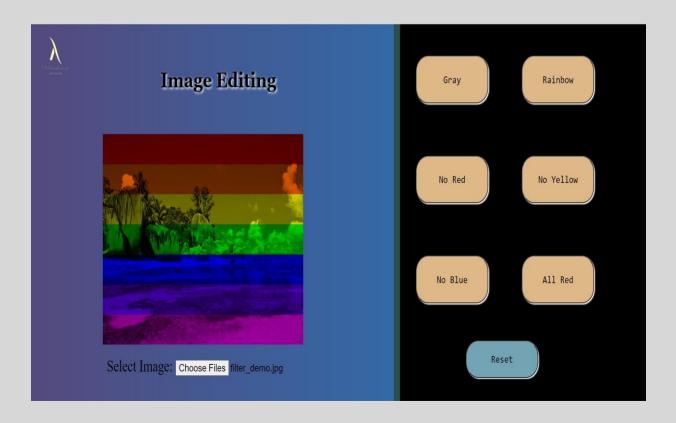


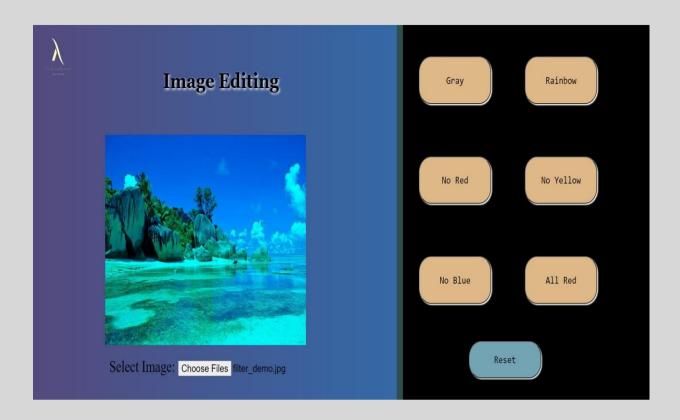
Filters



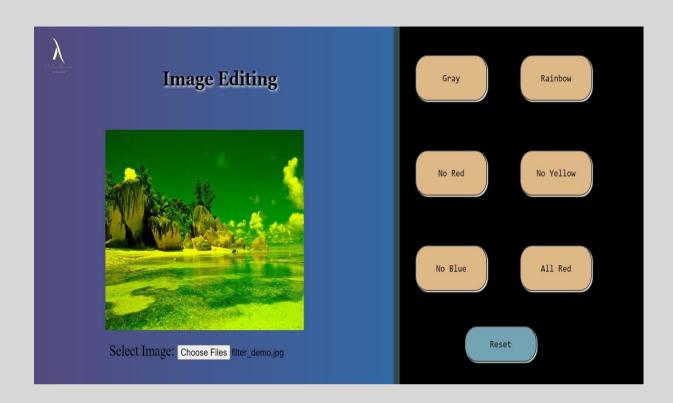
Various Filters can be applied to the images.

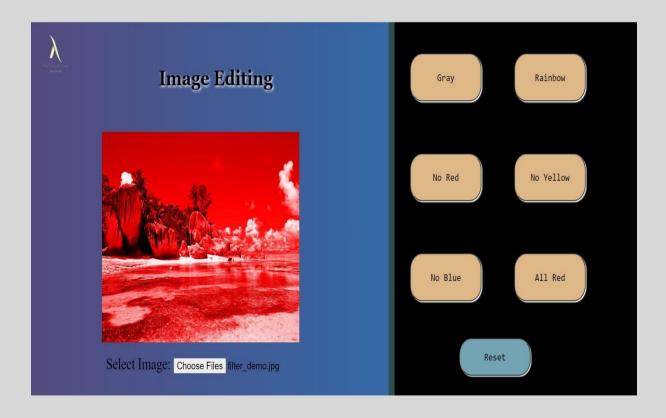






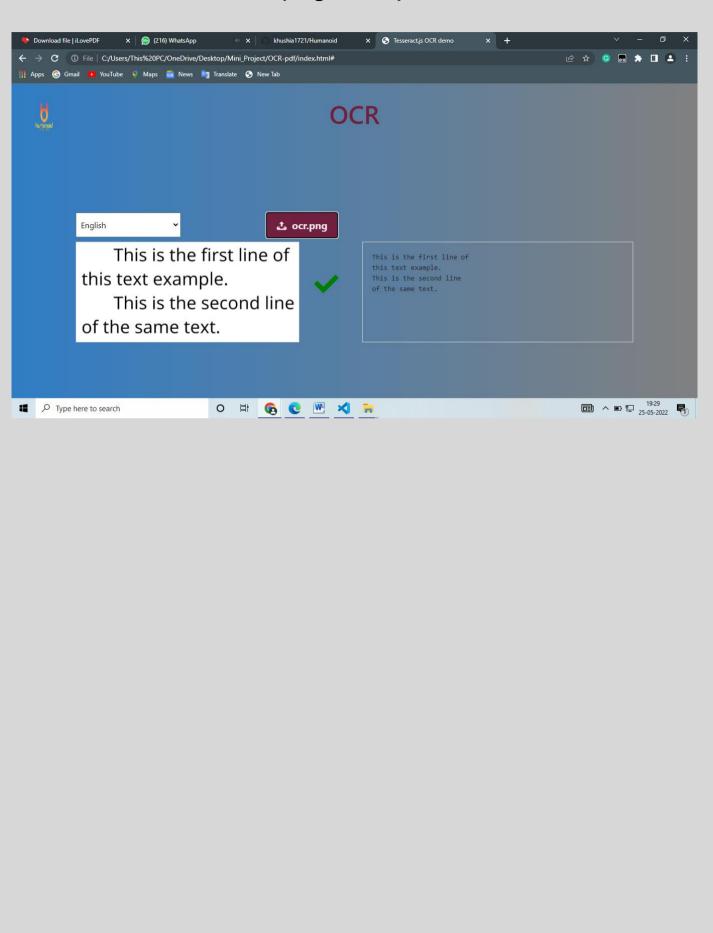








OCR (Img to PDF)



English v & aknow.jpg

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to my Chemistry teacher "Miss.Jaishree Jadham" for their able guidance and support in completing my Project.

I would also like to extend my gratitude to the Principal Mam "Dr.Mrs.Komal Jain" and Vice Principal Sir "Mr.Swapnil Jain" for providing me with all the facility that was required.

DATE: GULSHAN SONGARA 25/09/2017 12th "Maths" 'A'

ACKNOWLEDGEMENT

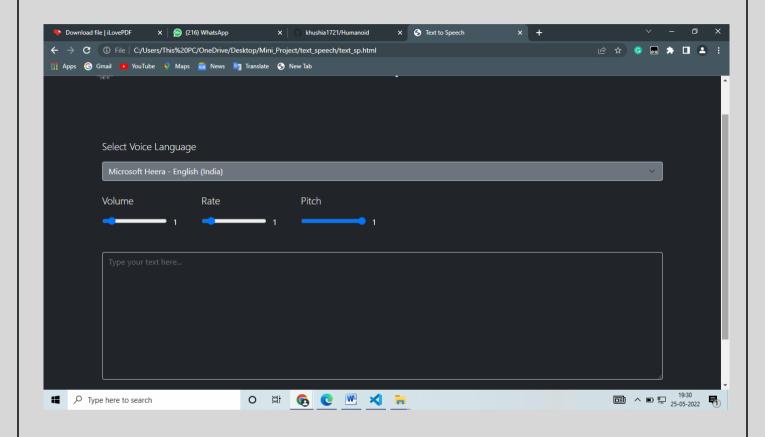
I would like to express my special thanks of gratitude to my Chemistry teacher "Miss.Jaishree Jadham" for their able guidance and support in completing my Project.

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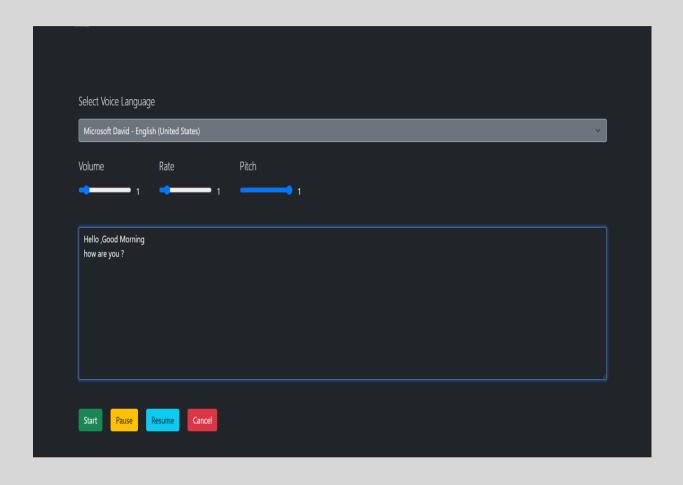
DATE: GULSHAN SONGARA

25/09/2017 12th "Maths" 'A'

Text to Speech



Working of text to speech



Codes

Index.html

```
!DOCTYPE html>
<html lang="en">
   <meta charset="UIF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   @import url('https://fonts.googleapis.com/css2?family=Josefin+Sans:wght@300&display=swap');
@import url('https://fonts.googleapis.com/css2?family=Indie+Flower&display=swap');
           margin: 0;
padding: 0;
       body
           background image: linear gradient(to right, ☐ grey, ☐ rgb(88, 119, 131), ☐ grey);
           background-image: url(./images/body_bg2.jpg);
           background-repeat: no-repeat;
           background-size: cover;
       .landing
           width: 900px;
height: 550px;
           background-color: bisque;
           margin-left: auto;
           margin-right: auto;
margin-top: 80px;
```

Main.html

```
DOCTYPE html>
<html lang="en">
  <meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Mini Project</title>
   <div class="heading">
      <marquee behavior="alternate" direction="right" scrollamount="20" >AUTOMATONUS</marquee>
   <div class="upperbox">
      <div class="box1">
                 <button id="box1" onclick="window.location.href='./greenscreen/green.html'">
                     <h2>Green Screen background alteration</h2>
                     This will help you change your <b>green screen background image to your desired background</b> image.
                  <button id="box2" onclick="window.location.href='./addfilter/filter.html'">
                     This will help you apply various <b>filters on your picture.</b>
```

About.html

```
!DOCTYPE html>
<html lang="en":

«meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>about</title>

           @import url('https://fonts.googleapis.com/css2?family=Playfair+Display:wght@500&display=swap');
@import url('https://fonts.googleapis.com/css2?family=Nunito:ital,wght@1,200&display=swap');
body
                background-image: url(../images/body_bg2.jpg);
                background-repeat: no-repeat;
                background-size: cover;
                margin-top: 80px;
                width: 900px;
                height: 550px;
                 background-color: bisque;
                margin-left: auto;
                margin-right: auto;
                font-family: 'Playfair Display', serif;
text-align: center;
                margin: 2px;
font-size: 30px;
                display: inline;
margin-left: 300px;
                 top:-25px;
```

```
font-size:25px;
margin: 20px;
text-align: justify;
padding-top: 10px;
font-family: 'Nunito', sans-serif;

//style>

</head>

//style>

//style

//style>

//style

//style

//style>

//style

//styl
```

Contact.html

```
!DOCTYPE html:
<html lang="en">
   <meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Contact</title>
       @import url('https://fonts.googleapis.com/css2?family=Playfair+Display:wght@500&display=swap');
          background-image: url(../images/body_bg2.jpg);
           background-repeat: no-repeat;
          background-size: cover;
           margin-top: 80px;
       }
img
           padding: 10px;
          width: 900px;
          height: 550px;
          background-color: bisque;
          margin-left: auto;
          margin-right: auto;
           font-family: 'Playfair Display', serif;
           text-align: center;
           padding-top: 20px;
           font-size: 30px;
           display: inline-block;
```

```
i
{
    margin: 30px;
}
#para1
{
    display: inline-block;
    margin-right: 190px;
    position: relative;
    left: 5px;
}
#para2
{
    display: inline-block;
    margin-right: 163px;
}
#head
{
    font-size: 25px;
    text-align: center;
}
a
    {
    text-decoration: none;
    font-size: 18px;
    color: □darkblue;
}
</style></style>
```

Green.html

```
(!DOCTYPE html>
   <meta charset="UTF-8">
   <meta http-equiv="X-UA-Compatible" content="IE=edge">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Green Screen</title>
   <script src="https://www.dukelearntoprogram.com/course1/common/js/image/SimpleImage.js"></script>
   <script src="greenjs.js"></script>
   .
<a href="../index.html"><img src="../images/logo_automatonus-removebg-preview.png" width="100px" height="100px"></a>
   <h1>Green Screen Background Alteration</h1>
   <canvas id="pic1"></canvas>
<canvas id="pic2"></canvas>
   <canvas id="pic3"></canvas>
   Forward Image:
       <input type="file" id="fgFile" multiple="false" onChange="frontimg()">
      Background Image:
       <input type="file" id="bgFile" multiple="false" onChange="backimg()">
   <input id="merge" type="button" value="Merge Image" onClick="merge()">
```

Filter.html

```
<IDDCTYPE html>
<intno lang="en">
<intno lang="en"
<intno lang="en">
<intno lang="en"
<intno lang="en"
<intno lang="en">
<intno lang="en"
<intno l
```

Ocr.html

```
C:\Users\Yashika Gupta\OneDrive\Desktop\FullStack_practical\Mini_Project\OCR-pdf
  <meta charset='utf-8'>
<meta http-equiv='X-UA-Compatible' content='IE=edge'>
  <title>Tesseract.js OCR demo</title>
  <meta name='viewport' content='width=device-width, initial-scale=1'>
<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
  k rel="stylesheet" href="style/ocr.css";

<script src="https://code.jquery.com/jquery-3.3.1.min.js"></script>
<script src="https://kit.fontawesome.com/4414288e8e.js"></script>

  <script src='js/tesseract.min.js'></script>
       <a href="../index.html"><img src="../images/logo_automatonus-removebg-preview.png" width="130px" height="130px" style=
                           <select id="langsel">
                                <option value='eng' selected> English </option>
                    <div class="col-12 col-md-4 mt-3 mt-md-0">
                               <input type="file" name="file-1[]" id="file-1" class="inputfile inputfile-1" data-multiple-caption=
<label for="file-1"><svg xmlns="http://www.w3.org/2000/svg" width="20" height="17" viewBox="0 0 20</pre>
               <div class="row">
                   <div class="col-12 col-md-1">
                      <i id="arrow-right" class="fas fa-arrow-right d-none d-md-block"></i><i id="arrow-down" class="fas fa-arrow-down d-block d-md-none"></i></i>
```

Text_sp.html

CONCLUSION

These filters and background changing activities goes hand in hand in our daily life as people of this generation are very fond of clicking pictures and uploading them on social media, also OCR will help of us save our time of retyping and by this we can use information contained in Images and use and edit them directly.

Text to speech conversion can help in preparation of speeches by .hearing your work ,read aloud.It also avoids eyestrain from too much reading.

Overall our website can be handy for daily use.

Project Repository:-

https://github.com/khushia1721/Humanoid

BIBLIOGRAPHY

The content for the report has been taken from the following sources.

- o www.geeksforgeeks.org
- o <u>www.youtube.com</u>
- o <u>www.tutorialspoint.com</u>
- o www.w3schools.com
- o <u>www.coursera.org</u>