AN IMPLEMENTATION OF EFFICIENT SEARCH ENGINE FOR TEMPLE SCULPTURES

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Abstract: In this paper, developed a system as a search engine for find the temple sculpture details. Using this system we can upload an image of missing sculpture, the system will provide the entire sculpture details like name of the sculpture, temple name, state and city of the temple. Once the image is uploaded into the database the comparison of the images is done with three parameters size, color and pixel. First the size of the images are compared, then the color of the images are compared if there's a match with all parameters only then the relevant image is extracted from the database or else it is shown to the user the sculpture is not found in the database.

Keywords: Search engine, Temple sculpture, database

I. INTRODUCTION

Image retrieval is the process of browsing, searching and retrieving images from a large database of digital images. The collection of images in the web are growing larger and becoming more diverse .Retrieving images from such large collections is a challenging problem. One of the main problems they highlighted was the difficulty of locating a desired image in a large and varied collection. While it is perfectly possible to identify a desired image from a small collection simply by browsing, more effective techniques are needed with collections containing thousands of items. To search for images, a user may provide query terms such as keyword, image file/link, or click on some image, and the system will return images "similar" to the query. The similarity used for search criteria could be Meta tags, color distribution in images, region/shape attributes etc. In recent years scale storing of images the need to have an efficient method of image searching and retrieval has increased. It can simplify many tasks in many application areas such as biomedicine, forensics, artificial intelligence, military, education, web image searching. Most of the image retrieval systems present today are text-based, in which images are manually annotated by text-based keywords and when we query by a keyword, instead of looking into the contents of the image, this system matches the query to the keywords present in the database. [2].

RGB color model

The World Wide Web and other sources offer limitless images in standard formats. An image consists of a two-dimensional array of numbers. The color or gray shade displayed for a given picture element (pixel) depends on the number stored in the array for that pixel. The simplest type of image data is black and white. It is a binary image since each pixel is either 0 or 1.

The RGB color model has three basic primary colors red, green and blue. All other colors are obtained by combining them. This model can be thought as a cube, where three non –adjacent and perpendicular corners are R, G and B.As can be seen, RGB is an additive color model, since the combination of green, red and blue gives white. The main purpose of the RGB color model is for the sensing, representation, and display of images in electronic systems, such as conventional photography. The number of pixels used to represent a pixel is called pixel depth. In general application, we require 8 bits for presenting a color, for RGB, we needs = 8*3 = 24 bits, so total number of colors = 2^24 = 16,777,216. But this large number of colors is practically not usable that why we use only 256 colors [1].

II. EXISTING SYSTEM

In existing search engine, such as Google or Yahoo!, uses computer algorithms to search the Internet and identify items that match the characters and keywords entered by a user. Search engines are useful for finding information produced by governments, organizations, groups, and individuals. It is more challenging to narrow results effectively, find relevant material, and assess the legitimacy of information in our search results when using a search engine. It depends on what type of information to find using with the system. In existing there is no proper system for searching of temple sculptures details .If we want to search some temple sculpture in the web ,only the image is displayed to the user. It doesn't display any relevant details of the image what we searched. So this system is very useful to administration people.

III. PROPOSED SYSTEM

This Application helps to fine the temple sculpture details using the images. The theft of sculptures had done in any one found sculpture they don't know details of sculpture to which they have to handover the sculpture. The image which is captured using the camera is already stored in the SQL database. Now the comparison is done using three ways the color of the images structure of the images and the pixel values of the images. The images will automatically be resized and scaled to the same size before being compared. Higher image resolution increases the accuracy of the results

but also may increase the processing time of image matching. So this application help find sculpture though image search and comparison. This system allows you to quickly and easily compare the images with pixel by pixel.

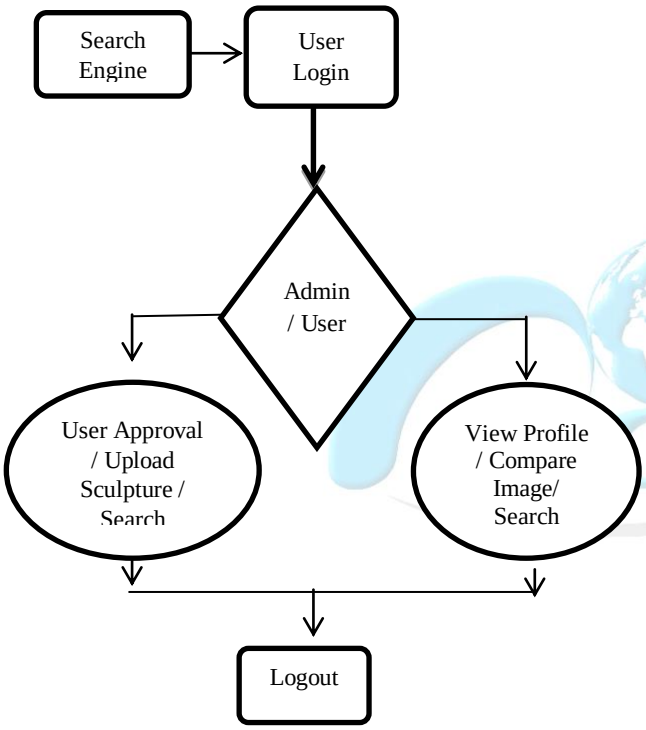
Image comparison procedure

In this system used 3 color histograms (red, green, and blue), it can be worked well for matching images very similar to the database images. For digital images, a color histogram represents the number of pixels that have colors in each of a fixed list of color ranges.

Step 1: Upload the image into database

Step 2: Search the image, if an image an existing database retrieves image details

Step 3: compare image, whether image is existing in the database or returns not found



Proposed System Model

IV.SYSTEM IMPLEMENTATION

This system is online based Efficient Search Engine for Temple Sculptures. The system was developed visual studio 2012 as a frontend and SQL Server 2012 as a backend. This project has two entities such as admin and user.

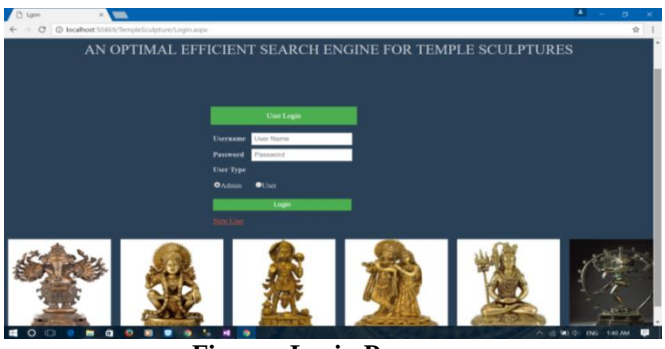
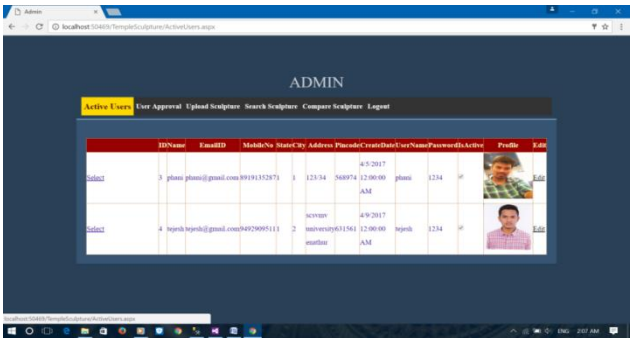


Figure : Login Page

Admin User

Administrator has a full authority to maintain the system with database. The Admin can login through login page .The main function of the administrator is Activate new user for search, User Approval, Upload Sculpture Details,Search Sculpture and Compare Sculpture. Administrator has the provision for view and adds new image sculpture details. Admin upload the image consists of different format of images like .jpg,bmp etc

Figure : Activate User Page



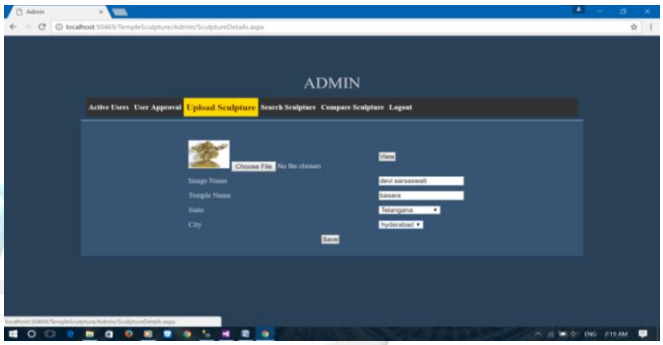


Figure : Admin upload sculpture and its details

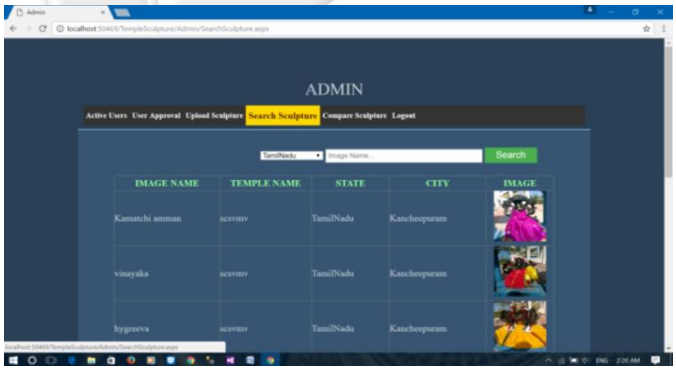


Figure : Admin search sculpture

PseudoCode: Image comparison

```
 public Double Compare(System.Drawing.Image img1_,
System.Drawing.Image img2_)
   {
intpixelNb = img1_.Width * img1_.Height;
       Double percent = 100;
       Bitmap resized_img2_ =
ResizeBitmap((Bitmap)img2_, img1_.Width,
img1_.Height);
for (inti = 0; i< img1_.Width; i++)
       {
for (int j = 0; j < img1_.Height; j++)
```

```
        {
percent -= ColorCompare(((Bitmap)img1_).GetPixel(i,j),
((Bitmap)resized_img2_).GetPixel(i, j)) / pixelNb;
        }
      }
return percent;
   }
public Bitmap ResizeBitmap(Bitmap b, intnWidth,
intnHeight)
   {
      Bitmap result = new Bitmap(nWidth, nHeight);
using (Graphics g =
Graphics.FromImage((System.Drawing.Image)result))
g.DrawImage(b, 0, 0, nWidth, nHeight);
return result;
   }
public Double ColorCompare(Color c1, Color c2)
   {
returnDouble.Parse((Math.Abs(c1.B - c2.B) +
Math.Abs(c1.R - c2.R) + Math.Abs(c1.G -
c2.G)).ToString()) * 100 / (3 * 255);
   }
}
```

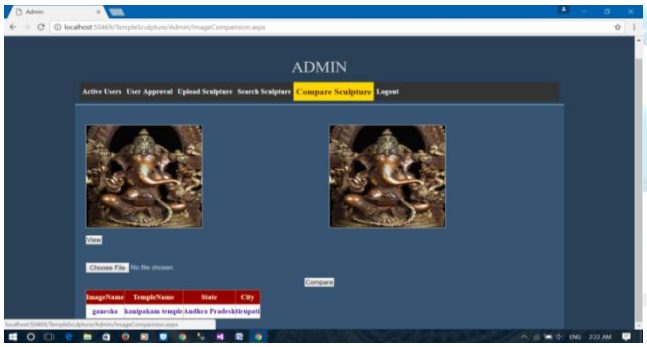


Figure : Admin compare sculpture

User

Another important module is user. A special feature is only upload image and compares Sculpture Details from an application. For this purpose it provides a user authentication mechanism. User has to register with his details and then user gets the approval from admin then only the user will access the application. By log in the user have the options compare image and search image. In the comparison the user needs to upload an image and the application compares the image and display relevant details. In the search module user has to enter the sculpture name then application will displays the details of that sculpture name.

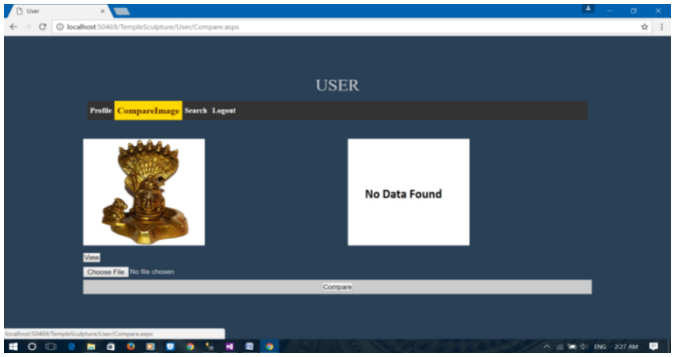


Figure : User compare no image sculpture found

V.CONCLUSION

Currently this system can compared only two dimensional images based on image pixel,size and color of the image parameters, but this can be further extended to three dimensional image comparison, which will give more accurate results. Also only the front part is compared as of now, but the images can be compared from side as well as back to give better results.

VI.REFERENCES

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