22AIE205-INTRODUCTION TO PYTHON

PROJECT SYNOPSIS

PROJECT TOPIC :

**SKETCHY – PAINT APPLICATION**

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DESCRIPTION:

Able to express ourselves through artforms is very creative and a form of skill polishing activity. Digital art is the most versatile form of any artwork as it enables us to bring our imagination to life without any need of physical sketch and paint work. Paint application provides users with a wide range of sketching and painting options which helps them to complete their work more efficiently and cost effectively. Nowadays digital arts even goes for online sales which makes people all around the world to view and purchase those works.

OBJECTIVES :

To create a well featured painting application for users which provide them with beginner friendly experience and well structured functionalities for activities like sketching, painting, upload images and apply filters. Users can access custom brushes and shapes to accomplish their work efficiently and more creatively. Users will be able to save their work to a virtual gallery and view them.

MODULES :

* **Polished User Interface (UI) :**

Design and layout of the main canvas. Creating toolbar for easy access to various tools and Palette for selecting colors.

* **Brush and Shape Customization Module:**

Implement a variety of customizable brushes and shapes. Allow users to adjust brush size, opacity, and other parameters. Providing options for importing custom brushes and shapes.

* **Canvas Interaction Module:**

Enable sketching and painting on the canvas. Implementing undo and redo functionalities. Handling user interactions like touch, pen, or mouse events.

* **Image Editing Module:**

Allow users to upload images to the canvas and implement image cropping functionality with option for filter modification.

* **Virtual Gallery Module:**

Create a personalized virtual gallery for each user.

Save and organize artworks in the gallery.

* **Testing and Quality Assurance:**

Conduct thorough testing of each module. Identify and fix bugs to

ensure a seamless and bug-free user experience.

IMPLEMENTATION :

The python implementation includes creating a beginner friendly GUI using Tkinter GUI toolkit available in the python library and using PyQt or PySide for the sketching and painting features. We will make use of MySQL database to store the previous state of the work thereby providing the choice to undo or redo their work. We will store the canvas state as json string and serialize it into the mysql database.