

Art Integrated Learning(AIL) in Computer Science

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Class : XII

Section : A

Session : Morning

Topic : Mandala Thangka Art Form of Ladakh

In Tibetan art, the emphasis is placed on the sacred process and devotional aspects of the work rather than the aesthetic qualities and originality of the finished product, as is often the case with Western art. Most works are done anonymously; Personal expression and the selling of Tibetan art are frowned upon. It is said that only highly skilled master artists can paint and render by just reading a description of the deity in the scriptures. An average artist requires referring to the set of rules, and work or drawings

Brady, only silk and cotton are seen all around the religion. From costumes to masks to offering to coverings one can find a whole range of silk and cotton products. In silk, heavy ornamented brocades are only used, which nowadays are made in Benares and Delhi. Traditionally, only handloom Jacquard brocades were used in Buddhism for adorning the idols and lamas of highest orders. For monasteries and other holy purposes, however, traditional textiles are still adhered to.



Most Tibetan painting in the form of murals and frescoes painted on monastery walls. They depict bodhisattvas, scenes from the life of Buddha. Tibetan gods, portraits of famous lamas, apsaras (angel) and demon-like dharmapalas stomping on human bodies. The composition of paintings is often the same: a central image of Buddha, surrounded by smaller, lesser deities. Above the central figure is a supreme Buddha from which the central figure emanated.

Proportions are a very crucial part of Thangka paintings. These comparative measurements are standards for all deities. The basic unit of measurement is called the Ser.



Python Program for the generation of the Pattern:

Drawing a Fractal Tree using Recursive Functions in Python:

- ❖ We will have to import the **turtle** module and create an instance of the turtle using the code **turtle.Turtle()**. The turtle object will be moving around the canvas and drawing the tree
- ❖ Next we will have to make it face upwards using the method **setheading()**
- ❖ A **MINIMUM_BRANCH_LENGTH** will be defined next, to set the minimum threshold for creating further sub-branches

The parameters used in the recursive function are defined below:

- ❖ **t** : the turtle instance
- ❖ **branch_length** : the current length of the branch in pixels
- ❖ **shorten_by** : determines by how many pixels the sub-branches will be shorter than the parent branch
- ❖ **angle** : the angles from which the sub-branches emerge from the parent branch.

THE CODE:

```
import turtle
MINIMUM_BRANCH_LENGTH = 10

def build_tree(t, branch_length, shorten_by, angle):
    if branch_length > MINIMUM_BRANCH_LENGTH:
        t.forward(branch_length)
        new_length = branch_length - shorten_by

        t.left(angle)
        build_tree(t, new_length, shorten_by, angle)

        t.right (angle*2)
        build_tree(t, new_length, shorten_by, angle)

        t.left(angle)
        t.backward(branch_length)

tree = turtle.Turtle()

tree.hideturtle()
tree.setheading(90)
tree.color("green")

build_tree(tree , 45 , 3, 20)

turtle.mainloop()
```

THE OUTPUT :

