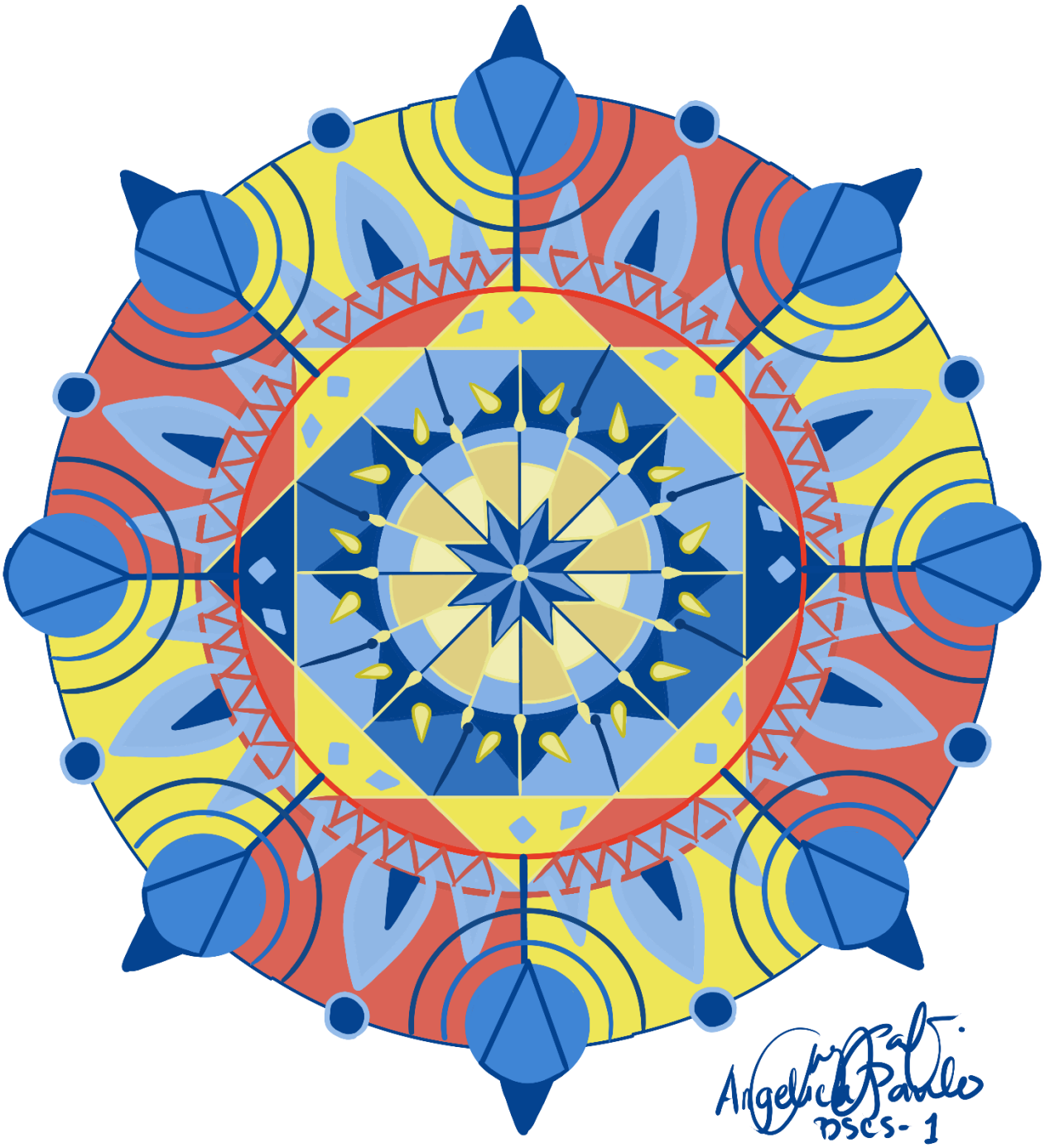
Name: Angelica L. Paulo Output 1

Course/Year: BSCS-1

“My Mandala”



The Mandala was digitally drawn using Autodesk Sketchbook Software. Different shades of primary colors and designs were used.

2. Reflection

Title: Documentary on Decoding the Secret Patterns of Nature – Fibonacci Sequence and the Golden Ratio & Pi.

Title: Places You Won't Believe The Golden Ratio & Fibonacci Sequence Appears

Scientist seeks the patterns of the world and they often turn to a powerful tool in mathematics, they quantify their observations and use mathematical techniques to examine hoping to discover the underlying causes of natures and regularities. I have learned that There is a mysterious connection between mathematics that our nature runs deep. These Fibonacci numbers occur more than we think and they can be observed in a stunning variety of phenomena in nature, an example of this is the spirals formed by flowers, shells and Broccoli.

Golden Ratio is a proportion based on the Fibonacci sequence and can be found almost everywhere in our life. Golden ratio can be seen at the pyramid of Giza, Taj mahal, Spiral Galaxy, DNA, Da Vinci Code and a lot more and It shows how Mathematics is important in the physical world. They describe it as the basis of all beautiful patterns and sometimes referred as divine proportion.

1.What new ideas about mathematics did you learn?

I learned that mathematics is everywhere and it is our Physical reality. I also learned about the Golden ratio where we could find almost anywhere and when applied to designing it creates aesthetically pleasing composition whereas plastic surgeons also use this for their patients.

2. What is it about mathematics that might have changed your thoughts about it?

I don’t really like math because I thought it is just about numbers, formulas and I will not be able to apply it in my life, but after understanding it I learned that everything is interconnected with mathematics and would help me understand the world and solve complex and real problems. For someone like me whose taking up programming should really understand math because it would help me design and develop successful computer programs.

3. What is most useful about mathematics for humankind?

Mathematics help us to think critically about our world, Math is the best way to make sense of the world in a sense that we are all part of a giant mathematical object.

3. Fractals

The Mandelbrot set is an example of fractals named after Benoit Mandelbrot and was one of the first to use computer graphics to create and display fractal geometric images. Mandelbrot set is generated by iteration to repeat the process over again, His discoveries reminds us that the world is complex unpredictable

1.What new ideas about mathematics did you learn?

I learned about self-similarity in fractals where self-similar object is exactly similar to a part of itself, when you zoom in a fractal object it will look like the original shape. I Learned that there are a lot of objects in our world that are self-similar, These objects display self-similar structure over and extended but finite example including snowflakes, mountains, clouds and a lot more. I love to observe nature and I realized that whenever I observe the pattern in natures around me I was already doing math.