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TriangleStars User's Manual

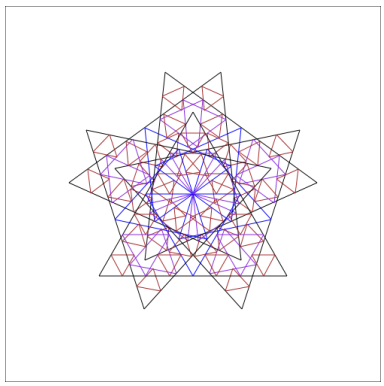
What is the set of all SVG images which can be generated by *TriangleStars*?

The TriangleStars application can generate an SVG image consisting of n^2 stars in an n by n grid.
Each star consists of a number of recursive triangles rotated in relation to the original triangle.
The depth of the triangle is the number of recursive calls made to draw additional triangles within the first one. Each recursive call will select the next colour by index shown in the appendix.
In a single SVG image, all the recursive triangles are the same size and same depth. From one image to another, the recursive triangles can vary in the depth of triangle and the starting color.

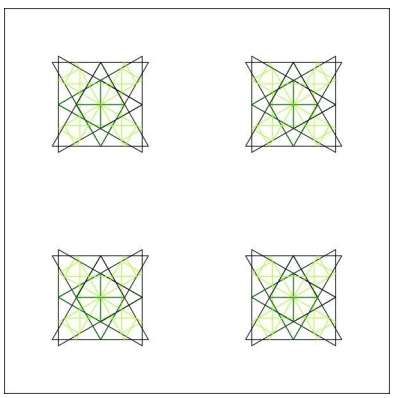
Note: The color input is optional. If you don't in put the color index, it will choose one randomly. The index of colors is in the appendix.

For example:

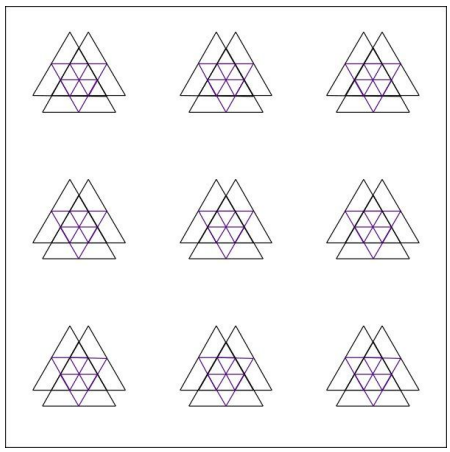
- Star 0 has one star containing 5 recursive triangle with blue as the first sub-triangle color and 4 depth sub-triangles.



- Star1 has 4 stars, each containing 4 recursive triangles with green as the first sub-triangle color and 3 depth sub-triangles.



- Star 2 has 9 stars, each containing 3 recursive triangles with random color as the first sub-triangle and 2 depth sub-triangles. Note, because the colour is chosen randomly you may not get this exact image.



What application(s) are supported by *TriangleStars*?

TreeRings supports one application: TriangleStarSplit.sh.
To invoke TriangleStarSplit.sh from the Linux command line:
bash TriangleStarSplit.sh depth_of_triangles starting_colour depth_of_star number_of_stars

Constraints: depth_of_triangles, depth_of_star, and number_of_stars must all be positive integers, and while they are all supported for any positive integer, the exponential nature of many parts of this program make numbers larger than 7 take longer periods of time and generate images that are less clean.
starting_colour must be between 0 and 147 inclusive.

What shell commands are used to generate the SVG images above?

To generate Star 0:

bash TriangleStarSplit.sh 4 9 5 1

To generate Star 1:

bash TriangleStarSplit.sh 3 55 4 2

To generate Star 2:

bash TriangleStarSplit.sh 2 3 3

Appendix: List of Colors

0	AliceBlue	37	DarkSlateGrey	74	LightPink	111	PaleVioletRed
1	AntiqueWhite	38	DarkTurquoise	75	LightSalmon	112	PapayaWhip
2	Aqua	39	DarkViolet	76	LightSeaGreen	113	PeachPuff
3	Aquamarine	40	DeepPink	77	LightSkyBlue	114	Peru

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4	Azure	41	DeepSkyBlue	78	LightSlateGray	115	Pink
5	Beige	42	DimGray	79	LightSlateGrey	116	Plum
6	Bisque	43	DimGrey	80	LightSteelBlue	117	PowderBlue
7	Black	44	DodgerBlue	81	LightYellow	118	Purple
8	BlanchedAlmond	45	FireBrick	82	Lime	119	RebeccaPurple
9	Blue	46	FloralWhite	83	LimeGreen	120	Red
10	BlueViolet	47	ForestGreen	84	Linen	121	RosyBrown
11	Brown	48	Fuchsia	85	Magenta	122	RoyalBlue
12	BurlyWood	49	Gainsboro	86	Maroon	123	SaddleBrown
13	CadetBlue	50	GhostWhite	87	MediumAquaMarine	124	Salmon
14	Chartreuse	51	Gold	88	MediumBlue	125	SandyBrown
15	Chocolate	52	GoldenRod	89	MediumOrchid	126	SeaGreen
16	Coral	53	Gray	90	MediumPurple	127	SeaShell
17	CornflowerBlue	54	Grey	91	MediumSeaGreen	128	Sienna
18	Cornsilk	55	Green	92	MediumSlateBlue	129	Silver
19	Crimson	56	GreenYellow	93	MediumSpringGreen	130	SkyBlue
20	Cyan	57	HoneyDew	94	MediumTurquoise	131	SlateBlue
21	DarkBlue	58	HotPink	95	MediumVioletRed	132	SlateGray
22	DarkCyan	59	IndianRed	96	MidnightBlue	133	SlateGrey
23	DarkGoldenRod	60	Indigo	97	MintCream	134	Snow
24	DarkGray	61	Ivory	98	MistyRose	135	SpringGreen
25	DarkGrey	62	Khaki	99	Moccasin	136	SteelBlue
26	DarkGreen	63	Lavender	100	NavajoWhite	137	Tan
27	DarkKhaki	64	LavenderBlush	101	Navy	138	Teal
28	DarkMagenta	65	LawnGreen	102	OldLace	139	Thistle
29	DarkOliveGreen	66	LemonChiffon	103	Olive	140	Tomato
30	DarkOrange	67	LightBlue	104	OliveDrab	141	Turquoise
31	DarkOrchid	68	LightCoral	105	Orange	142	Violet
32	DarkRed	69	LightCyan	106	OrangeRed	143	Wheat
33	DarkSalmon	70	LightGoldenRodYellow	107	Orchid	144	White
34	DarkSeaGreen	71	LightGray	108	PaleGoldenRod	145	WhiteSmoke
35	DarkSlateBlue	72	LightGrey	109	PaleGreen	146	Yellow
36	DarkSlateGray	73	LightGreen	110	PaleTurquoise	147	YellowGreen