

Report for Assignment 5A

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1 Introduction -random placement

My idea is I will place the shapes randomly then check if any shapes are overlapping ,if it is overlapping then again randomly select positions .Now, keep running this loop until a valid output comes ,now give the valid output containing non overlapping shapes as final output

2 Input file

The input file i.e. input.txt file should contain the data as following manner

rectangle	24.27	15
circle	4	
circle	2	
circle	1	
square	3	
square	2	
square	5	

3 Script

- For this script I have used matplotlib,random ,shapely library.
- First I have analysed the input.txt .then converted this data into a list
- Then,I have taken the dimensions of the rectangle as domain for our entire plot.
- I analysed the biggest shape.
- after that I have put shapes at random positions and checked if they are overlapping with intersections() of shapely library, the final output will be the figures which are not overlapping and inside the rectangle

4 Output file

I have created a ouput.txt file by looping all the shapes their dimensions and their positions one by one

5 Plotting and saving the image

I have plotted the genarated shapes by using matplotlib, first by sorting if the shape is square or circle and then using the respective properties to plot

6 Output Image

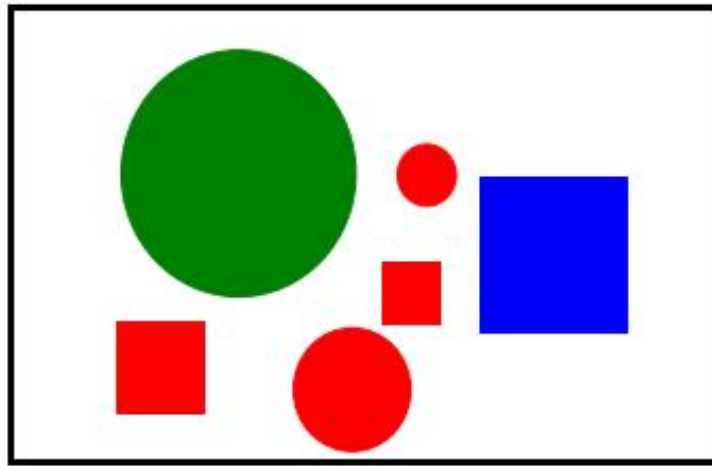


Figure 1: My final output