A floor plan is an abstract representation of a building floor and defined by the distribution of walls and space.  For this project, floor plans are represented by ASCII characters, with walls being “#” and empty spaces being “ “ (white space). A room is defined by a cluster of adjacent spaces surrounded by walls and doors. A door is defined by a single space that divides two collinear walls.

Here is a simple example of a floor with 3 rooms:

##########

#   #    #

#   #    #

## #### ##

#        #

#        #

##########

We want to make the rooms easily distinguishable from each other by using colors.

Write a simple piece of software that receives an ASCII floor plan and prints a nice, beautiful and colorful rendering of the floor plan with the rooms colorized.

For this project, consider:

* All spaces are reachable.
* You can assume there are no rooms 1 space wide (for example, narrow hallways).
* Use any programming language you like.
* Use your creativity for color choice and rendering style.
* Spend no more than 1 hour.

As an example, this input:

##########

#   #    #

#   #    #

## #### ##

#        #

#        #

#  #######

#  #  #  #

#        #

##########

should output something like:

##########

#   #    #

#   #    #

## #### ##

#        #

#        #

#  #######

#  #  #  #

#        #

##########

Have fun!