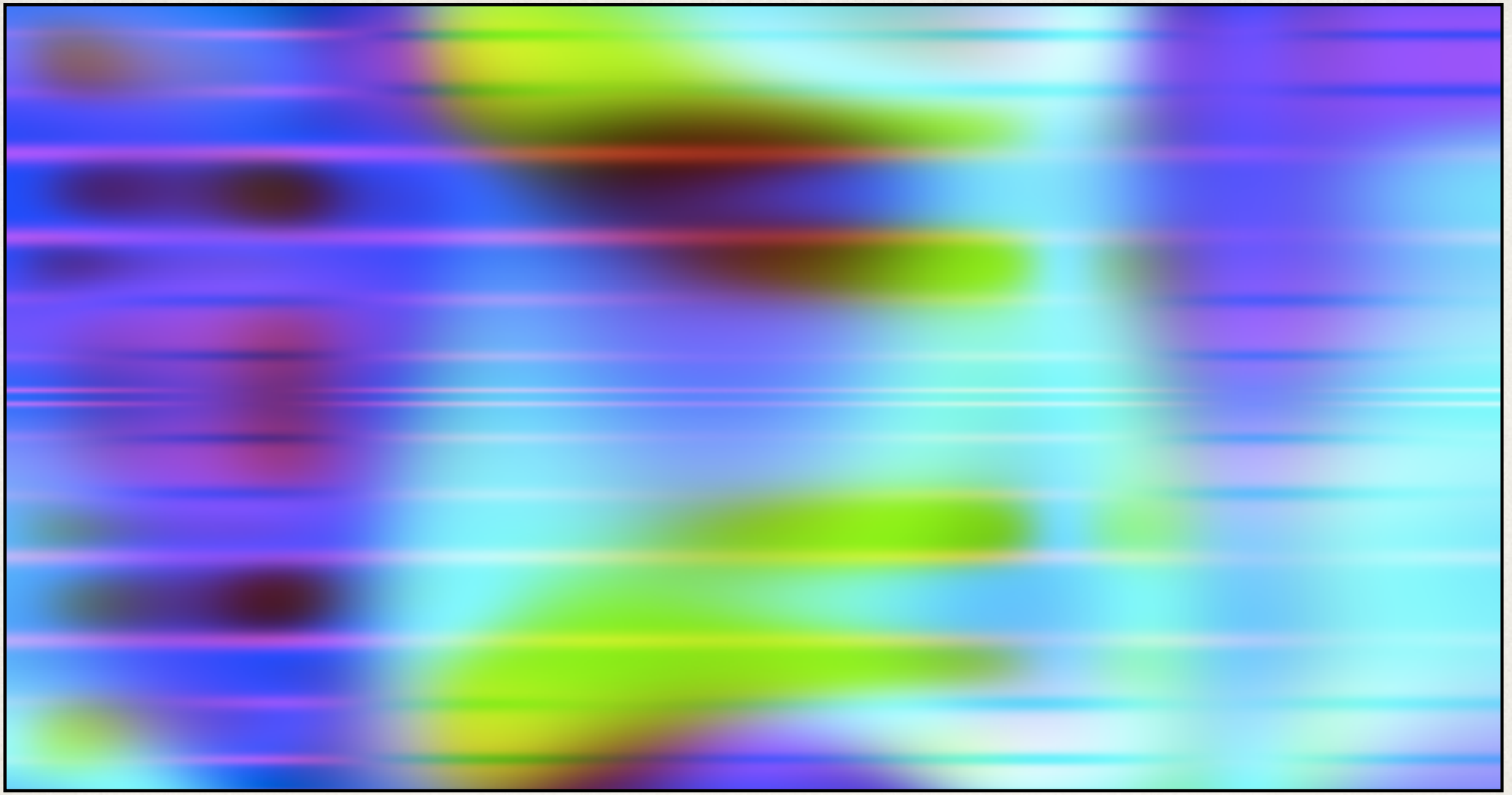


Assignment Project 'RANDOM ART'

CSC319 Object-Oriented Software Development

semester 1/2556 [22 November, 2013]

Overview

This presentation as the part of assignment project 'RANDOM ART'
CSC319 Object-Oriented Software Development

Submitted to: Asst.Prof.Dr. Chonlameth Arpnikanondt

By: Group No. 17
Khemmachart Chutapetch 55130500205
Nontachai Booontavornsakun 55130500239

Our Github: https://github.com/hachiban-ramen

B.Sc.(Computer Science)
School of Information Technology
King Mongkut's University of Technology Thonburi

Overview (cont.)

This presentation will explain about

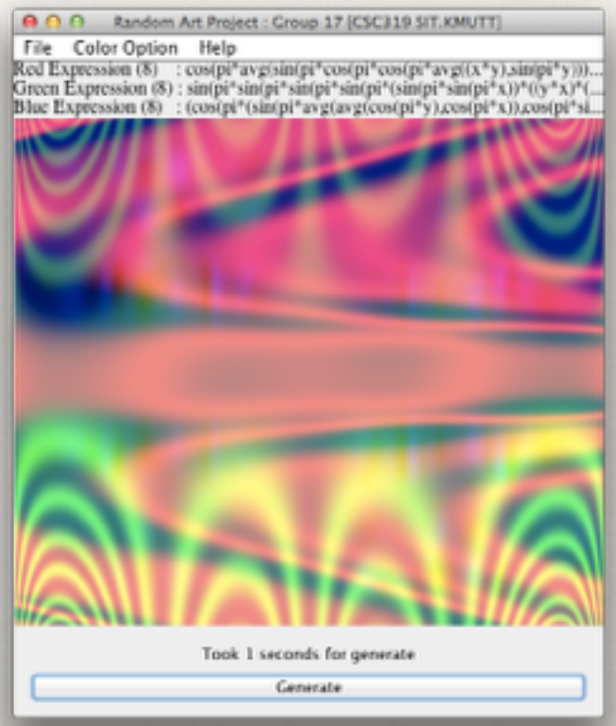
- Graphic User Interface
- Example of Random Art
- Explain menus
- Design pattern
- Algorithm
- Function list and turndown chart

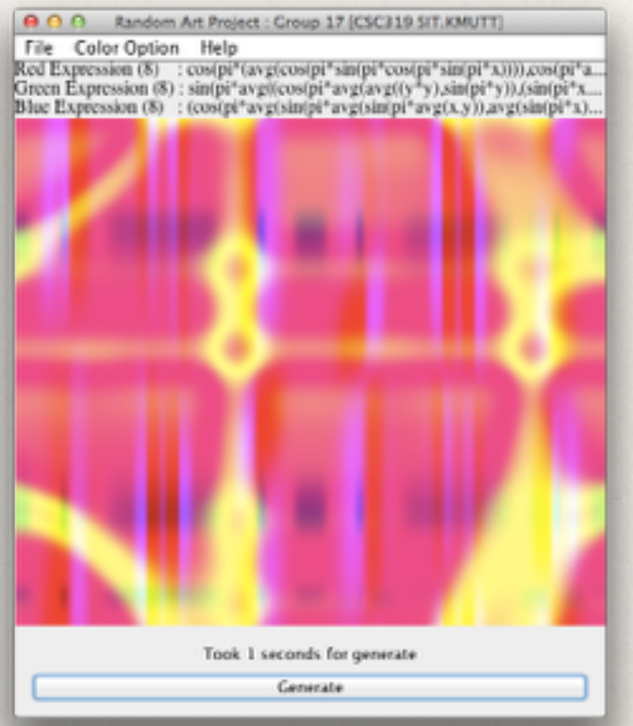
Graphic User Interface

- 1. Title of programs
- 2. Menubar
- 3. Display RGB expression string
- 4. Random art panel
- 5. Time for generate picture
- 6. Generate button

Example of Random Art

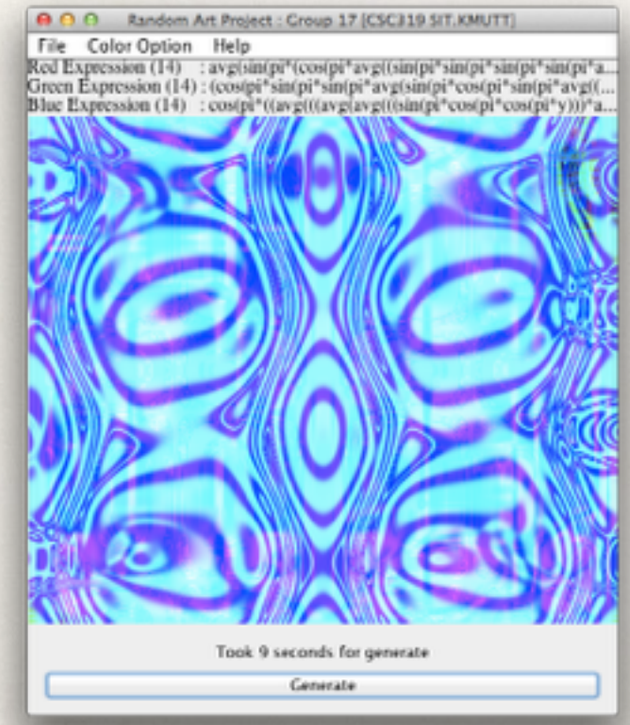
random art represented by
4 hight of tree



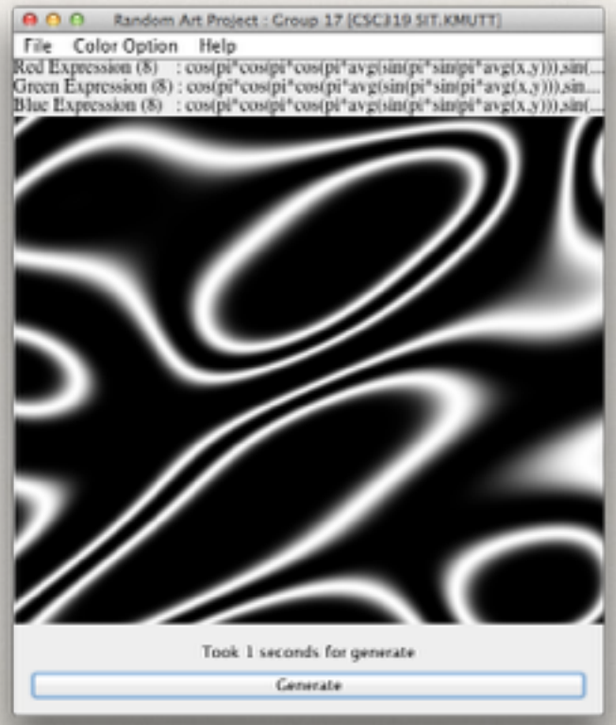


random art represented by 8 hight of tree

Example of Random Art (cont.)



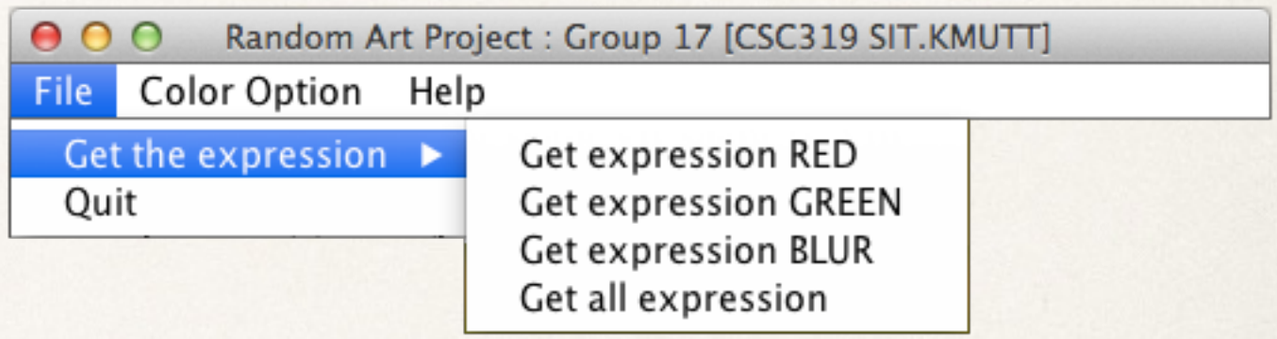
random art represented by
14 hight of tree

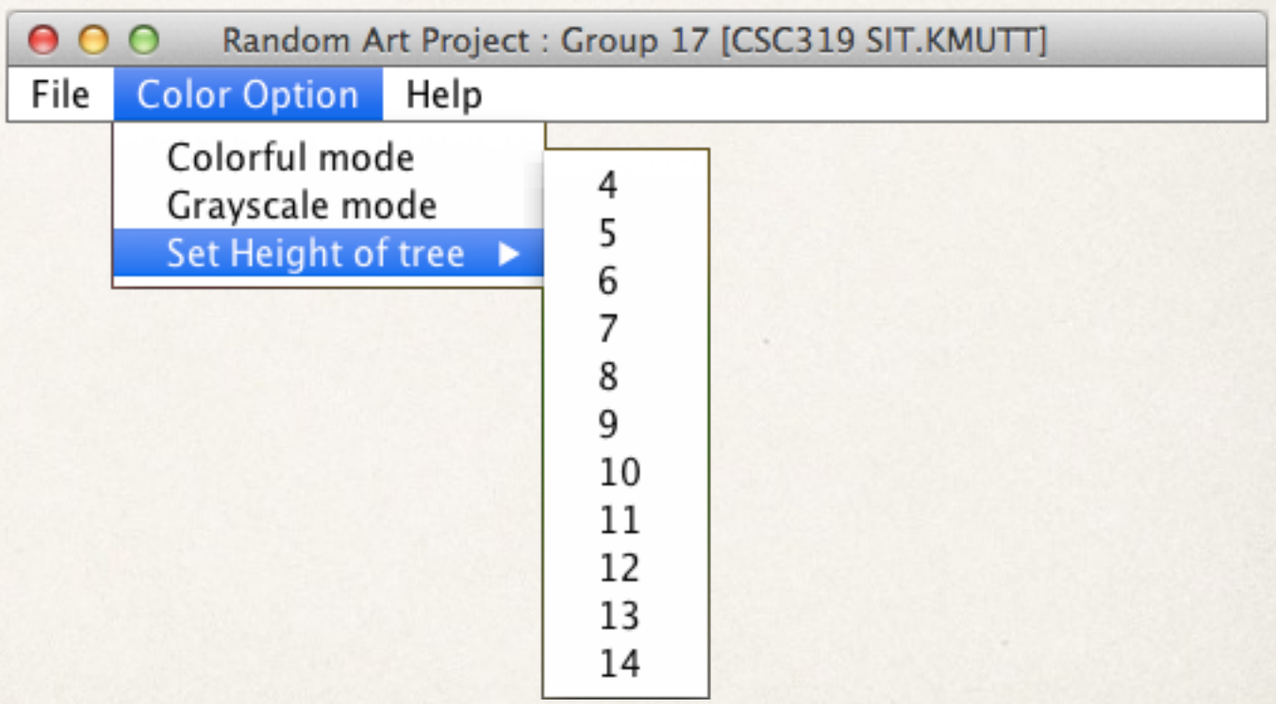


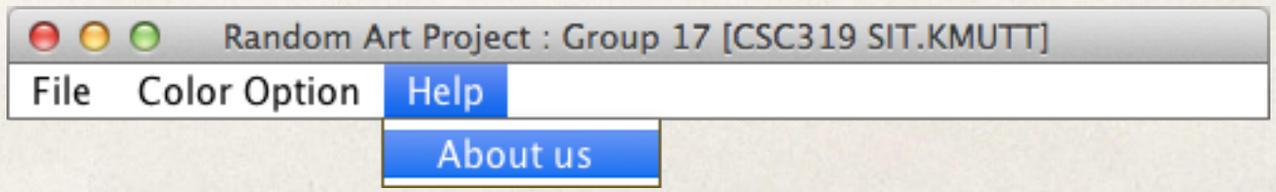
random art represented by grayscale mode

Menu Bar

- Get expression, user can get the expression as string for each color that represented by RGB color.
- Quit to exit the programs.
- Colorful mode, in this mode is using RGB for represent the picture, each color will use difference expression.
- Grayscale mode
  In this mode the picture will use the same expression for three color,
  that's mean pixel will represented in grayscale

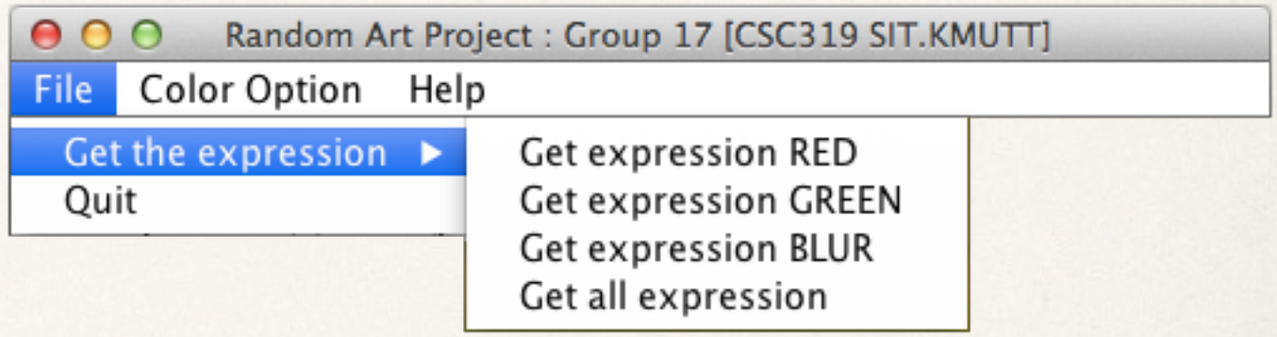


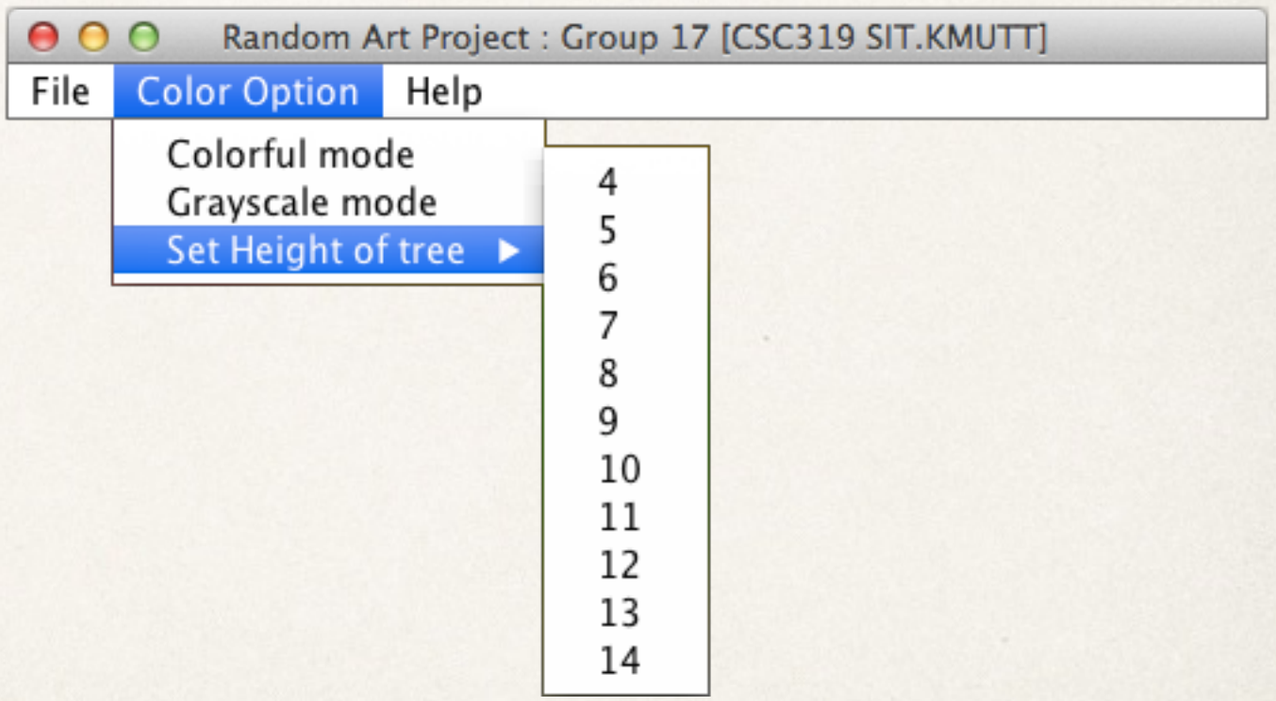




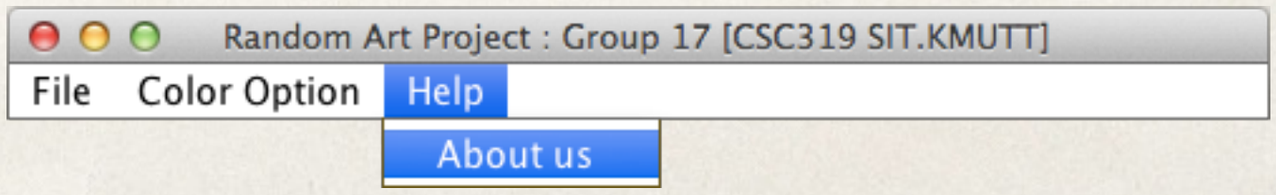
Menu Bar (cont.)

- Set Height of Tree, the picture generated by expression tree, that's mean if expression has deeper height, the picture will has more complex (as you can see in Example of Random Art). In this menu, user can select height of three between 4 unto 14. be careful, program will take more time if more height.



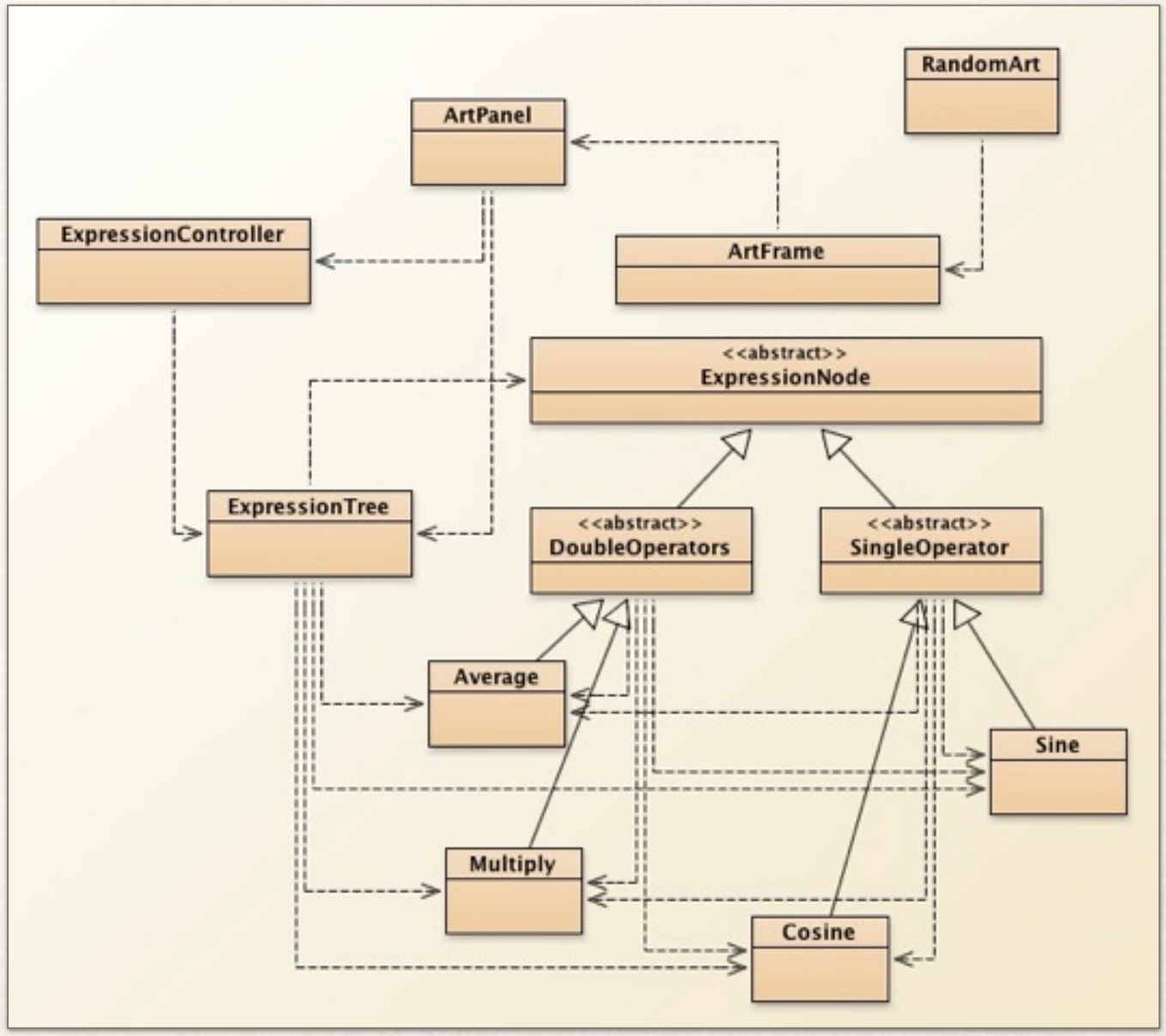


- Help and about us, when user click this menu the dialog will pop-up and show some author information

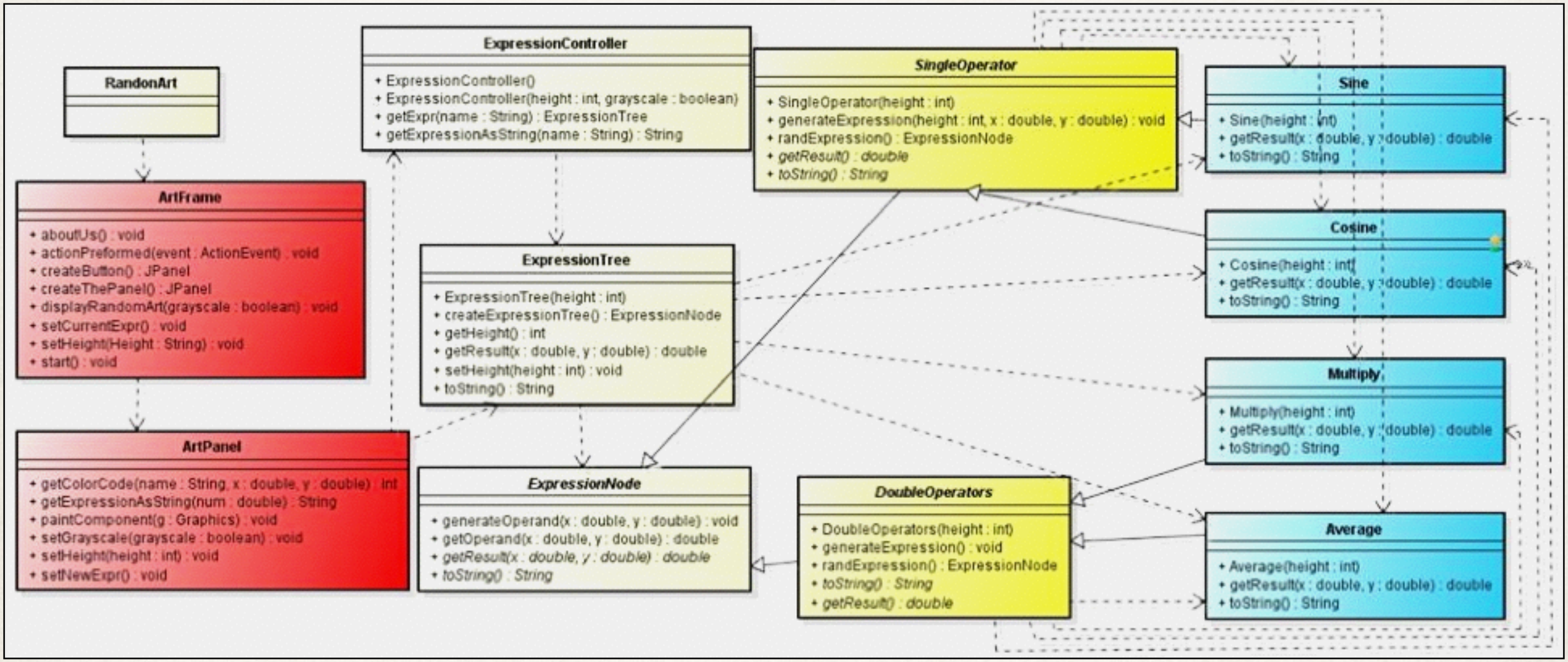


Design pattern

As you can see by the picture in left hand side the design pattern that we used are Compound Patterns and The Decorator Pattern

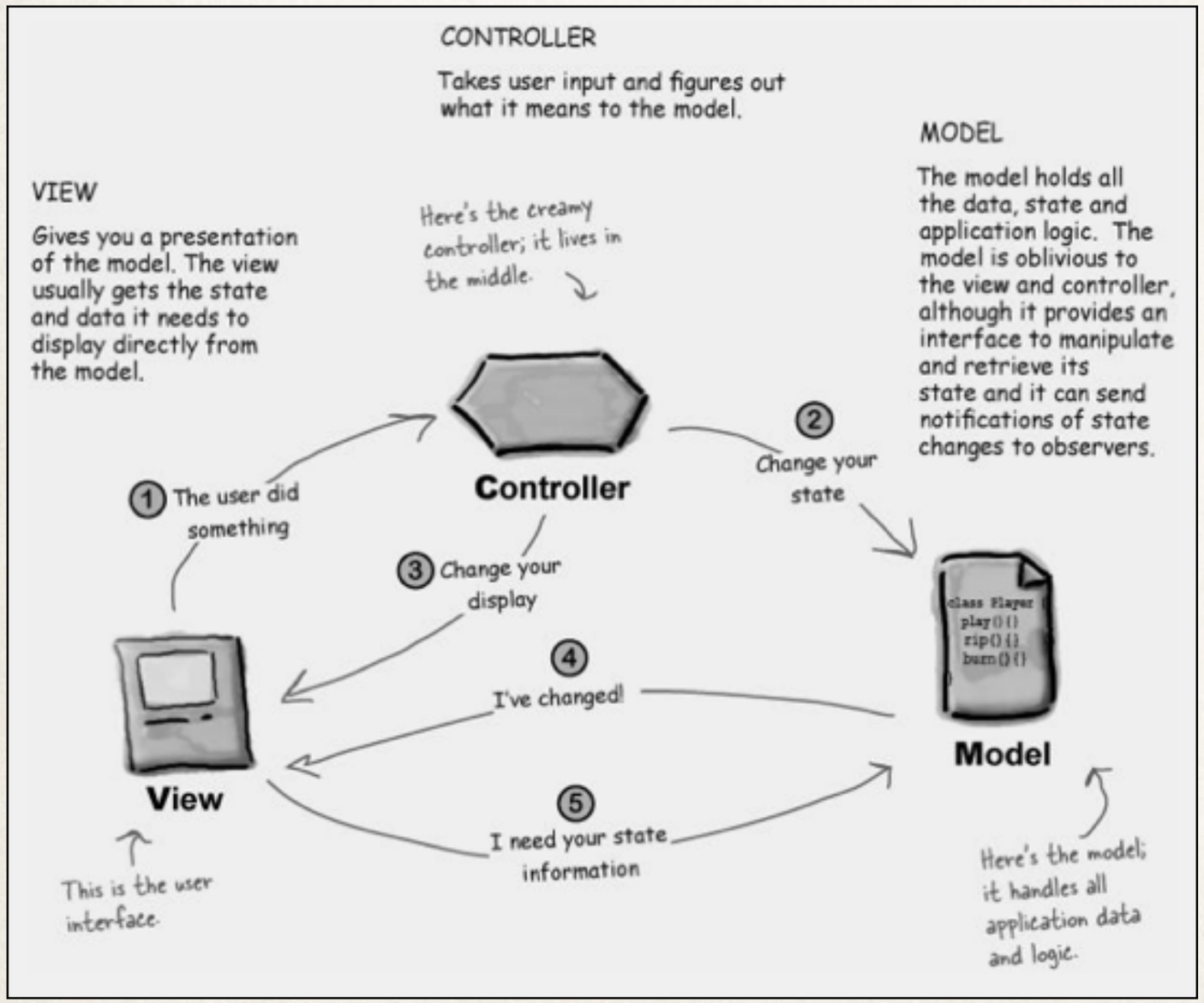


Design pattern (cont.)



UML Diagram

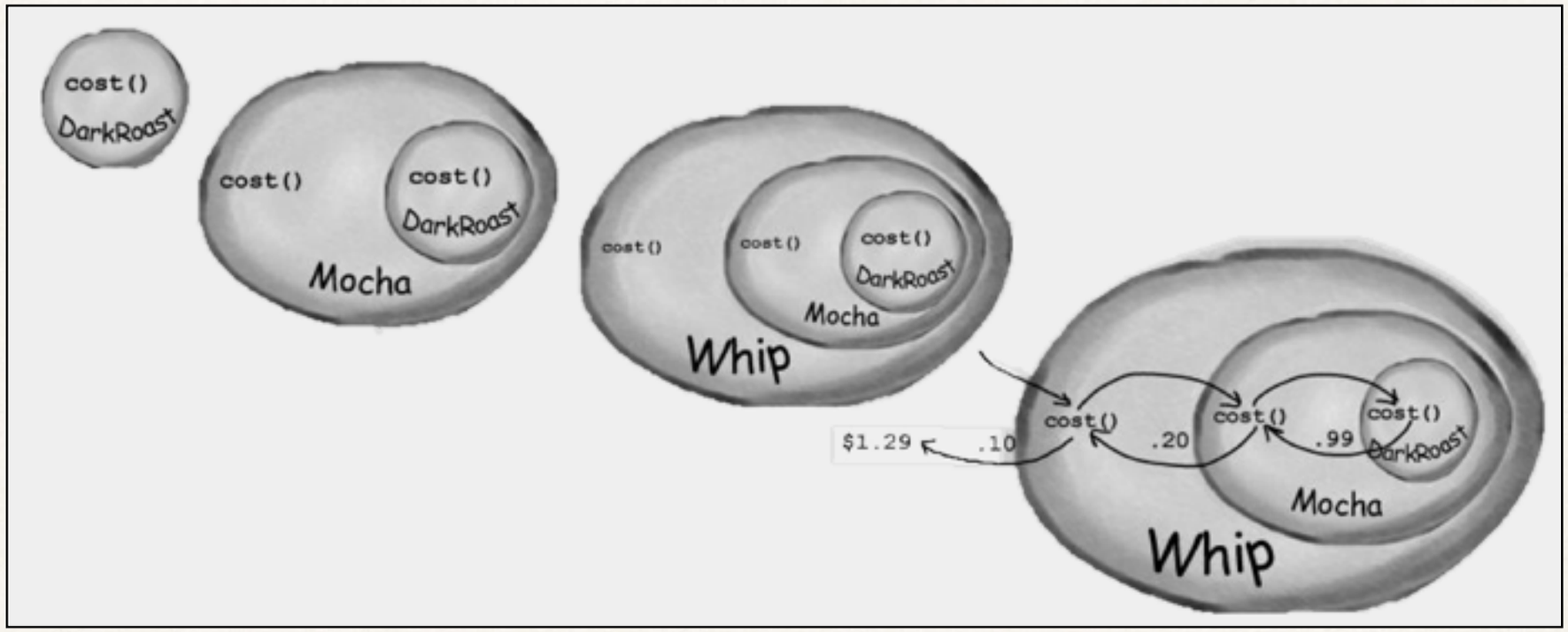
Design pattern (cont.)



Compound Patterns:

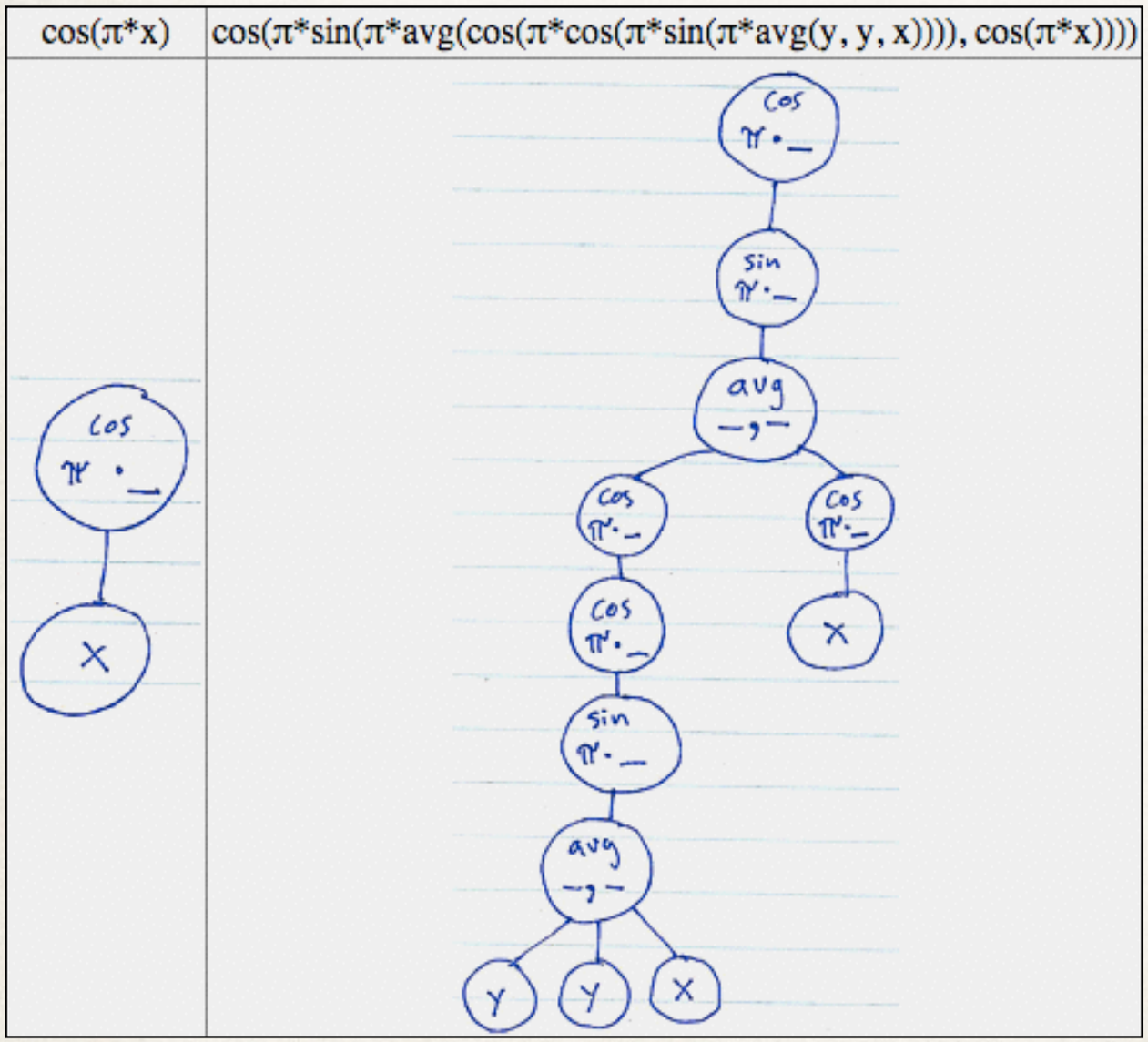
- ArtFrame as View to display what user did something.
- ExpressionController as Controller, keep the function need to be used.
- ExpressionNode as Model, keep all data and information of expression tree

Design pattern (cont.)



Decorator Pattern as our the ExpressionNode. For example, firstly, expression node is like the root or three, when method getResult() in expression node called, it will check the hight that is zero or not, if not will random to create one type of four basic expressions (sin,cos,multiply,and average). Then will call getResult() from their subtree go on and go on util height is equal. When hight is zero, they will return one value of X or Y.

Algorithm



Example of expression tree

We use 'Expression Tree' as our algorithm. In the expression tree we have four basic expression such as, sin, cos, multiply, average.

The expression will random to create one kind of basic expression to be the root and create subtree go on util hight of that node is equal zero (mean it is leaf node), then we choose one value of X or Y and return them.

Finally, in the end the result of X or Y will be generate by that expression.

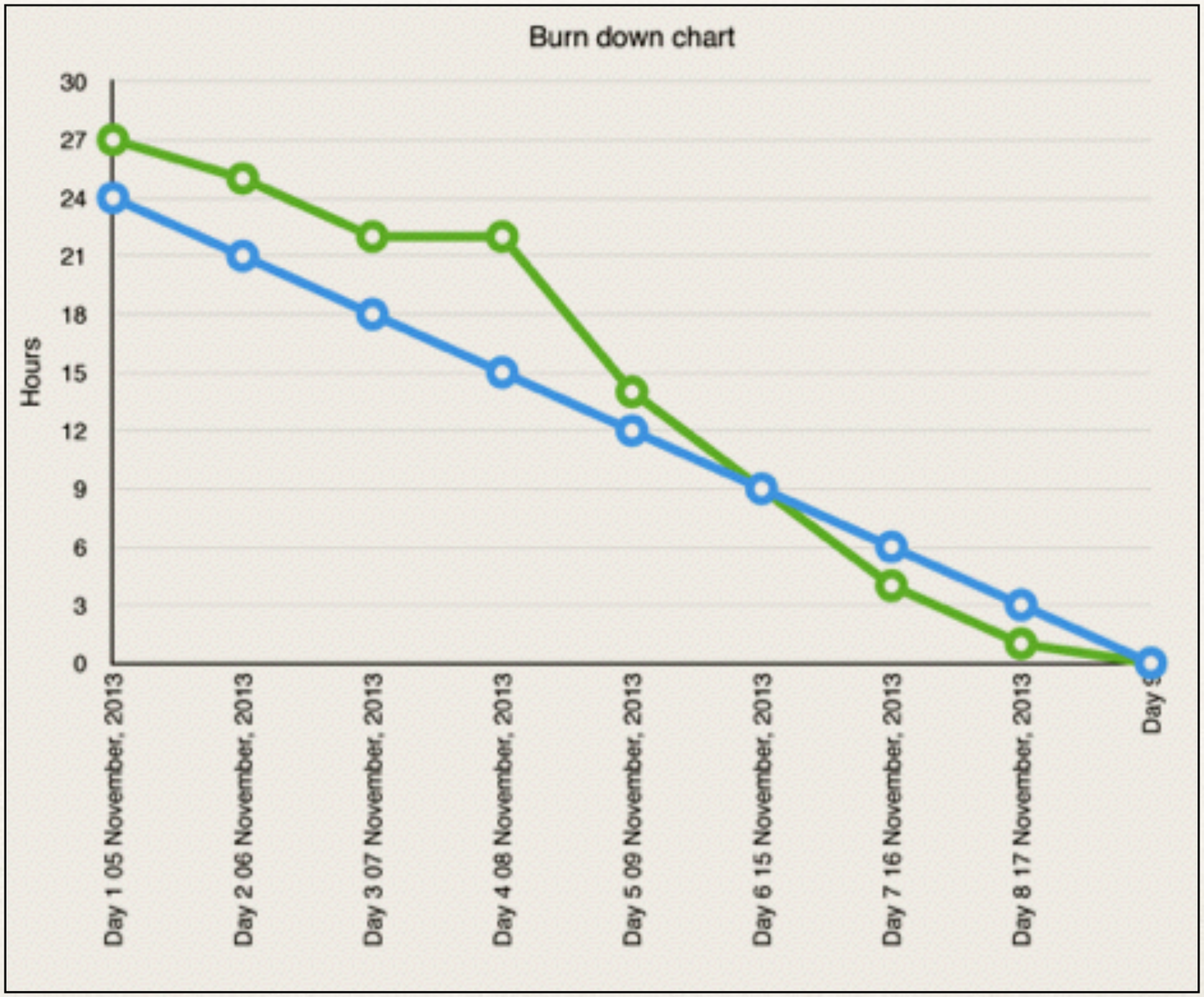
Function list and Burn down chart

Group No. 17

55130500205 Khemmachart Chutapetch
55130500239 Nontachai Booontavornsakun

User Story	Function List	Hours / Days	Day 1 05 November, 2013	Day 2 06 November, 2013	Day 3 07 November, 2013	Day 4 08 November, 2013	Day 5 09 November, 2013	Day 6 15 November, 2013	Day 7 16 November, 2013	Day 8 17 November, 2013	Day 9
As a member, I can read profiles of other members so that I can find someone to date.	Random Expression										
	- Random four operators (*, avg, sin, cos)	5		2	2		1				
	- Make an expression tree	4			1		3				
	- Function for input height of expression tree	2							2		
	Random Art Panel										
	- Function for make a random-art in rectangle	4					4				
	- Function for random-art using expression	4						4			
	- Function for grayscale and colorful option	1						1			
	Graphic User Interface										
	- Design a graphic user interface	2							1	1	
	- Put random art panel	2							1	1	
	- Complete UI	3							1	1	1
	Ideal	27	24	21	18	15	12	9	6	3	0
	Actual	27	27	25	22	22	14	9	4	1	0

Function list and Burn down chart



Q/A

Thank you :D