Project Reports and Demonstrations

Image Processing Games in Python

Due: Tuesday, March 10, before midnight.

Report: Your team should create a report document in pdf format. The report should have the elements illustrated in the following sample report:

> *Title*: Report on the Development of the Game "Crazy Color Challenge".
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> *Authors*: Joe Black, Susan Chartreuse, and Bob White
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> *Game Objective*: Obtain a high score by accurately estimating the dominant hue, saturation, or value magnitudes in areas of an image selected by the computer.
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> *Image Processing Techniques*: The game software computes average saturation, average value, and a histogram of hue values in specific regions of an image.
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> *Collaboration*: Although the team worked together on coming up with ideas for the game, the original idea came from Bob. Joe took the lead on drawing sketches of how the game screen would look. Sue implemented a first version of the game program in Python. Bob collected and organized the images used by the program. Joe took over the lead programming job after Sue's prototype, and Sue put her main effort into helping Joe debug the game logic part of the code. Bob wrote the functions that came up with the color statistics. Bob did the first draft of the report with help from Sue and Joe. Sue and Joe proofread and edited the report. Joe handled turning in the files.
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> *Learning*: Our team learned about some of the key steps of game design, such as coming up with a challenge and deciding how points should be awarded. We learned about how to structure a program as a collection of functions, and Bob got practice in writing software for computing color statistics.
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> *Design Rationale*: Our game is intended to be entertaining and educational. To make it fun, the player is given feedback about success and failure after each action, and the score is reported each time. The images are chosen to be appealing, too. The educational aspects are (a) we provide the player with an explanation of hue, saturation, and brightness that is available at the beginning of the game, and (b) the game rewards players who develop the skill of accurately estimating the color statistics.
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> *How to Run the Game*: Unzip the file CrazyColor.zip. Then double-click the file CrazyColor.

Presentation: There will be short oral presentations on Wednesday, March 11. Aim for 4 minutes. Your oral presentation should consist of a short Powerpoint file, PDF file, or web page that highlights the main points in your report. If the presentation is on the web, give its URL as a final item in the report called "Report URL" after "How to Run the Game". It would be good to show screenshots of your game, too. On Friday, March 13, there will be some time during which classmates play the games developed by others. Be ready to help others play your game.

Turn-In: The teammate whose last name comes first in the alphabet should do the turn-in. Only one teammate should submit for the team. Submit your Python files and the report document electronically to the Project DropBox at Catalyst CollectIt.