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Last Updated Date: 05/01/13

class Patient{

  private Horizontal;

  private Vertical;

  getFace();

  analyzeEyes(){

     results = strabismus();

     results.append(astigmatism());

     results.append(cataracts());

     return results;

  }

  strabismus(){

     // strabismus logic goes here

  }

  astigmatism(){

     //astigmatism logic goes here

  }

  cataracts(){

     // cataracts logic goes here

  }

}

class Eyes{

// include getters and setters

// eye setters must modify regions and crescents.

  private left.jpg

private leftRegion

private leftCrescent

  private right.jpg

private rightRegion

private rightCrescent;

  getEyes(photo){

     \\eyeDetection.py code goes here

// sets left and right

//returns regions

}

class Horizontal **extends**/implements? Eyes {

// include getters and setters

   Horizontal(newPhoto){

     getEyes(photo); // populate left and right from what was

returned from getEyes

  }

  private left.jpg;

  private right.jpg;

  private photo.jpg;

}

class Vertical **extends** Eyes {

// include getters and setters

  Vertical(newPhoto){

      rotate(newPhoto)

      getEyes(newPhoto);

  // populate left and right from what was returned from getEyes

  }

 private left.jpg;

 private right.jpg;

 private photo.jpg;

 rotate(photo){

    // rotate the photo

 }

}

controller(){

 thisPatient =  new Patient(Horizontal(photo from UI), Vertical(photo from UI));

// pass regions that horizontal and vertical’s regions to the UI

if user confirms

continue

else if user resets regions

reset the relevant regions using setter methods

// crescents and pupils will be detected when the new

// patient is made

// pass the keypoints of all the eyes to the UI

if the user confirms

continue

else if user resets keypoints

reset keypoints using setter methods

 print thisPatient.analyzeEyes();

}

TODO

\* place crescent finding code

\* place user reset keypoints code

IDEAS

Eyes has two eye vars left and right and each eye has a pupil each pupil has a crescent and each crescent has a region and keypoints.

RESOURCES

\* Python OOP: <http://net.tutsplus.com/tutorials/python-tutorials/python-from-scratch-object-oriented-programming/>

\*The PIL Image Library seems to be extremely useful. Attached is a possible example of how we can rotate the picture with a simple library call. check it out!

<http://www.daniweb.com/software-development/python/code/216426/rotating-an-image-python>