CGraphics Lab Answer Sheet.

Please complete this answer sheet and turn it in at the beginning of class on the due date posted in LEARN.

Part A

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| Question | Answer |
| 1  (7 pts) | ColumnY is which column is going to be selected out of the 50 to fill. And start at the height, then it picks columns in the step function and fills with text. |
| 2  (7 pts) | The last number in the fill style allows it to fade in this case its fading at 0.05 or 5% of the existing colors seep through |
| 3  (7 pts) | Change the code that makes the column it selects as random to this  columnY[i] = i\*pixelsPerColumn; |
| 4  (7 pts) | c.fillStyle = "rgba(0,0,0,0.05)";  becomes  c.fillStyle = "rgba(0,0,0,1)"; |
| 5  (7 pts) | var characters = "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ!@#$%^&\*";  becomes  var characters = "0123456789"; |
| 6  (7 pts) | columnY[i] -= pixelsPerColumn;  if (columnY[i] < 0) {  columnY[i] += height; |

Part B

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| --- | --- |
| 7  (7pts) | The code creates anywhere between 0 and 500 stars and sets them on set paths towards the user simulating an experience that makes it look like you’re moving forward. |
| 8  (7 pts) | Change the canvas move to to c.moveTo(width/2, height/2); |
| 9  (14 pts) | function resetStar(star) {  star.x = width/2;  star.y = height/2;  var speed = randomFloat(.1, 5);  var angle = randomFloat(0, 2\*Math.PI);  star.dx = speed \* Math.cos(angle);  star.dy = speed \* Math.sin(angle);  star.brightness = randomFloat(2, 5);  var r = randomInt(0, characters.length);  star.letter = characters.substring(r, r+1);  }  var characters = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";  var stars = [];  for (var i=0; i<500; i++) {  var star = {};  resetStar(star);  stars.push(star);    }  function step() {  c.fillStyle = "#000";  c.fillRect(0, 0, width, height);  for (var i=0; i<stars.length; i++) {  var star = stars[i];  star.x += star.dx;  star.y += star.dy;  star.brightness = Math.min(star.brightness\*1.05, 255);  var b = Math.round(star.brightness);  c.fillStyle = "rgb(" + b + "," + b + "," + b + ")";  c.fillText(star.letter, star.x, star.y);  star.dx \*= 1.05;  star.dy \*= 1.05;  if (star.x < 0 || star.x > width || star.y < 0 || star.y > height) {  resetStar(star);  }  }  }  loop(step, 20); |