Graphics 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) | The role of the array columnY determine the position of the chain. The elements of column in step(), the element will start at new position of the columns. When the elements fade out, the new elements start at the position below the previous elements. |
| 2  (7 pts) | c.fillStyle = "rgba(0,0,0,0.05)";  The alpha element of the rgba edit the transparent of the color. |
| 3  (7 pts) | To change the rain falls in a orderly way, change columnY[i] = randomInt(0, height); to the new code below.  New Code: columnY[i] = i\*10 |
| 4  (7 pts) | To make the rain doesn’t leave a trail change the alpha element in c.fillStyle = "rgba(0,0,0,0.05)"; from 0.5 to 1.  New Code: c.fillStyle = "rgba(0,0,0,0,1)"; |
| 5  (7 pts) | Erase ABCDEFGHIJKLMNOPQRSTUVWXYZ!@#$%^&\* from the var characters = "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ!@#$%^&\*";.  New Code: var characters = "0123456789"; |
| 6  (7 pts) | To change the direction of the rain, change the + sign into 0 sign in columnY[i] += pixelsPerColumn;.  New Code: columnY[i] -= pixelsPerColumn; |

Part B

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| 7  (7pts) | The resetStar() can edit the star’s speed, angle, and brightness. The star() able to resize the amount of star. The step() sets the color of the background and start, position editing, the shape and color of the star. |
| 8  (7 pts) | Change c.fillStyle = "#0000"; to c.fillStyle = "#0001";.  New Code: c.fillStyle = "#0001"; |
| 9  (14 pts) | function resetStar(star) {  var r = randomInt(0, characters.length);  star.c = characters.substring(r, r+1);  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, 500);  }  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];  c.fillText(star.c, star.x, star.y);  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 + ")";  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); |