

1) (10 pts) DSN (Dynamic Memory Management in C)

Suppose we have an array of structures containing information about Cartesian points. The struct shown below contains two integers, one for the x coordinate and one for the y coordinate. For this problem, write a function, `createPoints`, to create some random Cartesian points with each coordinate set to a random integer in between 0 and 10, inclusive.

`createPoints` takes in the number of points to be created, *numPoints*. Your function should dynamically allocate an array of *numPoints* `CartPoints` structs and set each of their x and y coordinates with pseudorandom integer values in between 0 to 10, inclusive. You may assume that the random number generator has been seeded already. Your function should return a pointer to the array that was created and initialized.

```
typedef struct CartPoint {
    int x;
    int y;
} CartPoint;

CartPoint* createPoints(int numPoints) {
    int i;
```

```
}
```