

Quiz 6

CS 241 Data Organization using C

Fall 2018

1. (3 point) The book defined a point struct that had an x and a y coordinate, both ints. Using this struct, define a struct called “circle” which has a point (indicating the center of the circle) and a radius (which is an int).

```
struct circle
{
    struct point center;
    int radius;
};
```

2. (4 points) Using the struct from the last question, create a function called “makecircle” that takes in three arguments (the x coordinate of the center, the y coordinate of the center, and the radius of the circle) and uses them to create a new instance of a circle struct which the function should return. This function should not use any function involving points that the book defines.

```
struct circle makecircle(int x, int y, int radius)
{
    struct circle newcircle;
    newcircle.center.x = x;
    newcircle.center.y = y;
    newcircle.radius = radius;
    return newcircle;
}
```

OR

```
struct circle makecircle(int x, int y, int radius)
{
    struct circle newcircle;
    struct point centerpt;
    centerpt.x = x;
    centerpt.y = y;
    newcircle.center = centerpt;
    newcircle.radius = radius;
    return newcircle;
}
```