Recitation 10

1. What is the worst case complexity of the following:

|  |  |  |
| --- | --- | --- |
|  | Enqueue | Dequeue |
| Array with pointer to next available slot |  |  |
| Array without pointer to next available slot |  |  |
| Circle Array |  |  |
| Singly linked list with head reference and head as the front |  |  |
| Singly linked list with head and tail references with the head as the front |  |  |
| Singly linked list with head and tail references with the tail as the front |  |  |
| Doubly linked list with head and tail references with the head or tail as the front |  |  |

1. Write a method called enqueue that accepts a *CircleArray* and an element to be added into the array. You can access the array, the front and the rear of the *CircleArray*.
2. Given the function below, what is the result of fun(3,2)?

public int fun(int x, int y){

    if(x == 0)

        return y;

    else

        return fun(x – 1, x + y);

}

1. Given the function below, how many total stars are printed as a result of stars(20)? What are the first 3 lines of output?

public void stars(int n){

    int i = 0;

 if(n > 1)

  stars(n – 1);

 for(i = 0; i < n; i++)

     System.out.print(“\*”);

    System.out.println();

}