

Credit Name: Advanced Algorithms and Data Structures

Assignment Name: ReverseList

How has your program changed from planning to coding to now? Please explain?

```
1
{
    //create data array and top variable
    private int[] data;
    private int top;

    //Constructor
    public Stack(int maxItems)
    {
        data = new int[maxItems];
        top = -1;
    }
}
```

First I started by copying the Stack2 code into a new stack for implementation in ReverseList. I also changed the list from storing Objects to integers.

```
//Initialization area
int counter = -1;
Stack reverseOut = new Stack(10);
Scanner input = new Scanner(System.in);
```

Next I moved onto the ReverseList and added a variable for counting the times that the user enters a number, and a Stack object for storing the numbers.

```
//Loop until the stack reaches 10 numbers
while (counter < 9)
{
    //Ask user for a number and add to the counter
    System.out.println("Enter a number (999 to quit): ");
    int newNum = input.nextInt();

    counter += 1;
    reverseOut.push(newNum);
}
```

Next I created the loop that would ask the user to enter up to 10 numbers and push those numbers to the stack.

```
//Check if the user wants to quit
if (newNum == 999)
{
    break;
}

//Add a new number to the stack
counter = 1;
```

I also added the code to the loop to end it if the user wants to quit before the 10 number max.

```
//Display the user's numbers reversed
System.out.print("The list reversed is: ");
for (int i = -1; i < counter; i++)
{
    System.out.print(reverseOut.pop() + " ");
}
```

Finally after the loop I added a for loop that would pop the numbers in the list and display them reversed.