

STEP 1: Static variable `max_ref` is declared at class level, Instantiate the main class and an array of type `int` is created and instantiated.

STEP 2: The length of the declared array is stored in an `int` variable.

STEP 3: Static method `lis` is called and the array and the length of it is passed and the variable `max_ref` is instantiated to 1

STEP 4: The call to another static method `_lis` is done and the array elements and the length of it is passed to as parameters

STEP 5: An `if` statement is used to check the value of `n` and returns 1 if it is equal to 1

STEP 6: Local variables `res` and `max_ending_here` of type `int` is instantiated to 1

STEP 7: A `for` loop is declared with `int i` and variable `res` is assigned to the current element position in the array list

STEP 8: An `if` statement is used if the element being passed is less than the total number of elements in the array

STEP 9: If `True` the value of `max_ending_here` is incremented with the value of `res`

Step 10: The value of `max_ending_here` is assigned to `max_ref` and returns the value of `max_ending_here`.

STEP 11: The value of `max_ref` is returned in the `lis` method

STEP 12: The value of `max_ending_here` is printed in the main method