

COSC2406 Lab 5 – Looping

Coding: submit all asm files to the LMS.

Input to an Array. Write a program to collect 10 unsigned DWORD values and store them in an array. We know that there are 10 numbers in the array, so we need to loop 10 times. To do this, move the value 10 into ECX: this is like the variable *i* in a for loop in java, except it counts the number of iterations left, not the number of iterations completed. You'll need to make a label at the top of your loop (only the part you want to repeat) and add the LOOP instruction to point to that label at the end. The loop will automatically stop when ECX is zero. Use indexed operands for the array addressing.

Displaying the Array. Modify your program to loop through the array and display the array elements on one line, separated by commas, without a comma after the last item. You'll need another loop for this - setup as before, but use a different label. At this point, your program should produce the following output:

```
Enter Number: 1
Enter Number: 2
Enter Number: 3
Enter Number: 4
Enter Number: 5
Enter Number: 6
Enter Number: 7
Enter Number: 8
Enter Number: 9
Enter Number: 10

[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

C:\Users\console\source\repos\Project1\Debug\Project1.exe (process 3860) exited
with code 0.
Press any key to close this window . . .
```

Processing the Array. Modify your program again to sum all 10 values together and display the result. Do this after you print the array elements. You'll need another loop for this - setup as before, but use a different label. When all parts are completed, your program should give this output:

```
Enter Number: 1
Enter Number: 2
Enter Number: 3
Enter Number: 4
Enter Number: 5
Enter Number: 6
Enter Number: 7
Enter Number: 8
Enter Number: 9
Enter Number: 10

[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
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C:\Users\console\source\repos\Project1\Debug\Project1.exe (process 6948) exited
with code 0.
Press any key to close this window . . .
```