CS 161 Intro to CS I

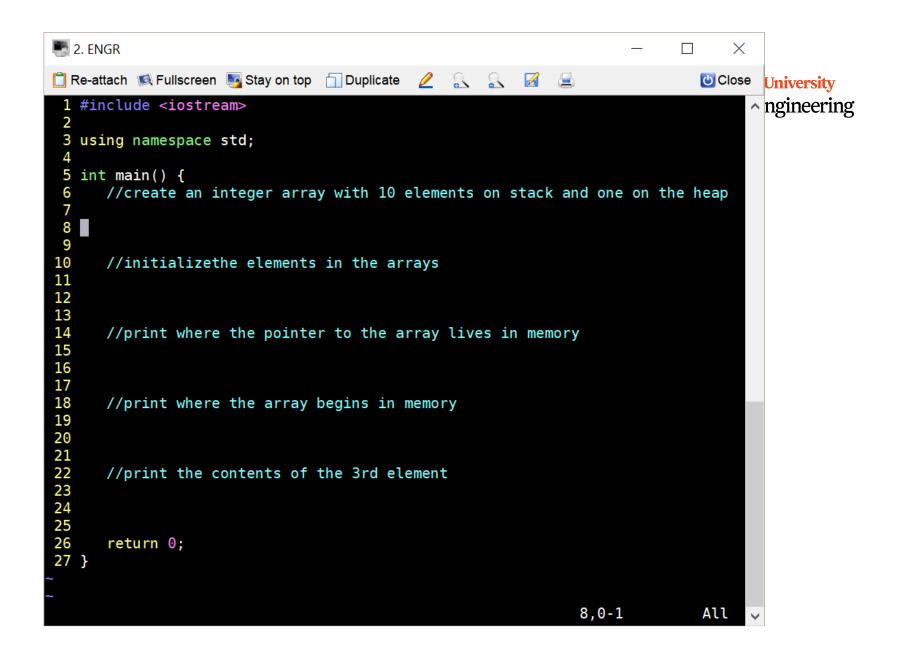
Finish Recursion/Begin Memory Model

Odds and Ends

Assignment 5 design due



2



```
2. ENGR
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                                                                                    ngineering
20 int main() {
21
22
      //create an integer array with 10 elements on stack and one on the heap
23
      int array[10]={3}; //does not initialize all elements to 3, only 1st
24
      int array1[]={1,2,3,4,5,6,7,8,9,10};
25
      int *array heap;
26
      array heap=new int[10];
27
28
      //initializethe elements in the arrays
      for(int i=0; i<10; i++) {
30
         array[i]=i;
31
         array heap[i]=i+1;
32
33
      //print where the pointer to the array lives in memory
      cout << "stack array pointer lives: " << array << endl;</pre>
34
      cout << "heap array pointer lives: " << array heap << endl;</pre>
35
36
      //print where the array begins in memory
37
      cout << "where stack array begins: " << array << endl;</pre>
38
      cout << "where stack array begins: " << &(array[0]) << endl;</pre>
      cout << "where heap array begins: " << array heap << endl;</pre>
39
      cout << "where heap array begins: " << \&(array heap[0]) << endl;
40
41
      //print the contents of the 3rd element
42
      cout << "contents of 3rd element stack: " << array[2] << endl;</pre>
43
      cout << "contents of 3rd element stack: " << *(array+2) << endl;</pre>
      cout << "contents of 3rd element heap: " << array heap[2] << endl;</pre>
44
45
      cout << "contents of 3rd element heap: " << *(array heap+2) << endl;</pre>
46
47
      delete [] array heap;
48
                                                               48,0-1
                                                                              90%
```

Passing a 1-D Array (Static/Dynamic) Oregon State University College of Engineering

```
int main() {
  int array[5];
  pass_1darray(array);
void pass_1darray(int *a) {
  cout << "Array at zero: " << a[0] << endl;</pre>
}
OR
void pass_1darray(int a[]) {
  cout << "Array at zero: " << a[0] << endl;
}
```





- How do I initialize an array in a function?
- How can I print the contents of the array in a function?
- How about printing the address of the pointer to the array and the address of where the array begins in a function?

How would I create an array in a function?

