

Activity No. 4.2

Pointers

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| Course Code: CPE007 | Program: Computer Engineering |
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6. Output

- Screenshot of Code(Readable):

```

1 #include <iostream>
2 using namespace std;
3
4 int main(){
5     const int size = 10;
6     int scores[size] = {95, 85, 78, 88, 92, 80, 75, 80, 89, 91};
7
8     cout << "scores array: ";
9
10    for (int i = 0; i < size; i++) {
11        cout << scores[i] << " ";
12    }
13
14    cout << endl << endl;
15    for (int i = 0; i < size; i++){
16        cout << "address of element " << i << ":" << &scores[i] << endl ;
17    }
18    cout << endl << endl;
19    int *scorePtr;
20    scorePtr = &scores[0];
21
22    cout << "the address of the array [0]: " << *scorePtr << endl ;
23    cout << "the referenced pointer: " << scorePtr << endl ;
24    cout << endl << endl ;
25
26    int numBytes = sizeof(scores);
27    cout << "The number of bytes of the array is: " << numBytes << endl ;
28
29    return 0;
30}
31

```

- Output of Code(label and compile ALL possible outputs):

```

scores array: 95 85 78 88 92 80 75 80 89 91

address of element 0: 0x78fdd0
address of element 1: 0x78fdd4
address of element 2: 0x78fdd8
address of element 3: 0x78fddc
address of element 4: 0x78fde0
address of element 5: 0x78fde4
address of element 6: 0x78fde8
address of element 7: 0x78fdec
address of element 8: 0x78fdf0
address of element 9: 0x78fdf4


the address of the array [0]: 95
the referenced pointer: 0x78fdd0


The number of bytes of the array is: 40

-----
Process exited after 0.227 seconds with return value 0
Press any key to continue . . .

```

7. Supplementary Activity

This program is a program that outputs the addresses of the elements inside an array, the address of a specific element in the array, and the dereferenced pointer of an element. It does these by using the “&” and “*” symbols inserted at the start of the name of a data type. The “&” symbol is used in finding the address of a value this is used in the second for-loop to display the addresses of an array and in line 20 to store the value of the address of a value to the pointer. The next symbol “*” is used to store the address

8. Conclusion

In this online laboratory lecture I have learnt how to use pointers to find and store addresses of an element in an array using the symbols “&” and “*”, The “&” symbol is used to find the addresses and the “*” is used to store the addresses. The way we used pointers in our activity is by finding the addresses of different elements in an array and storing their addresses in a dereferenced pointer. For me I felt that I did ok in this activity and that I need to keep enhancing my abilities by studying in advance for the next activities.