

COP 3337 Assignment 2

Problem 1

- a. `long * IPtr;`
- b. `IPtr = &value1;`
- c. `std::cout << *IPtr;`
- d. `value2 = *IPtr;`
- e. `std::cout << value2;`
- f. `std::cout << &value1;`
- g. `std::cout << IPtr;`

The value printed by the above statement is the same as the address of value1.

Problem 2

The function in this program adds up all elements of an integer array and returns the sum. This is a recursive function that adds each element starting with the first one then going to the last. The function starts by checking if the size input is one. If it is, the first element in the array is returned. Otherwise, the last element plus the function with size minus one is returned. For this particular program, an integer array and size integer variable are initialized and passed through the function which is set equal to variable x. the value of x that is printed at the end of the program is 55.

Problem 3

```
Enter the number: 4
The number of even digits is 1
```

```
Enter the number: 1
The number of even digits is 0
```

```
Enter the number: 0
The number of even digits is 1
```

```
Enter the number: 10434052
The number of even digits is 5
```

```
Enter the number: 278
The number of even digits is 2
```

```
Enter the number: 100893
The number of even digits is 3
```

Problem 4

```

You rolled 4 + 2 = 6
Point is 6
You rolled 2 + 6 = 8
Keep rolling
You rolled 1 + 2 = 3
Keep rolling
You rolled 4 + 2 = 6
You win

You rolled 6 + 3 = 9
Point is 9
You rolled 3 + 3 = 6
Keep rolling
You rolled 5 + 1 = 6
Keep rolling
You rolled 3 + 5 = 8
Keep rolling
You rolled 2 + 4 = 6
Keep rolling
You rolled 2 + 1 = 3
Keep rolling
You rolled 1 + 6 = 7
You lose

You rolled 1 + 6 = 7
You win

You rolled 6 + 5 = 11
You win

You rolled 6 + 4 = 10
Point is 10
You rolled 3 + 4 = 7
You lose

```

Problem 5

```

Enter a string: hey
e: 1 times
h: 1 times
y: 1 times

Enter a string: testing!
e: 1 times
g: 1 times
i: 1 times
n: 1 times
s: 1 times
t: 2 times

Enter a string: Please WORK
a: 1 times
e: 2 times
k: 1 times
l: 1 times
o: 1 times
p: 1 times
r: 1 times
s: 1 times
w: 1 times

Enter a string: Welcome to New York!
c: 1 times
e: 3 times
k: 1 times
l: 1 times
m: 1 times
n: 1 times
o: 3 times
r: 1 times
t: 1 times
w: 2 times
y: 1 times

Enter a string: Florida Poly
a: 1 times
d: 1 times
f: 1 times
i: 1 times
l: 2 times
o: 2 times
p: 1 times
r: 1 times
y: 1 times

```