Timed Lab Activity 3

Question 1:

The following code is an example of which of the following? (circle all that apply)

a) Memory Leaks b) Dangling Pointers

[✓ c) Wild Pointers] d) Proper Use of Pointers

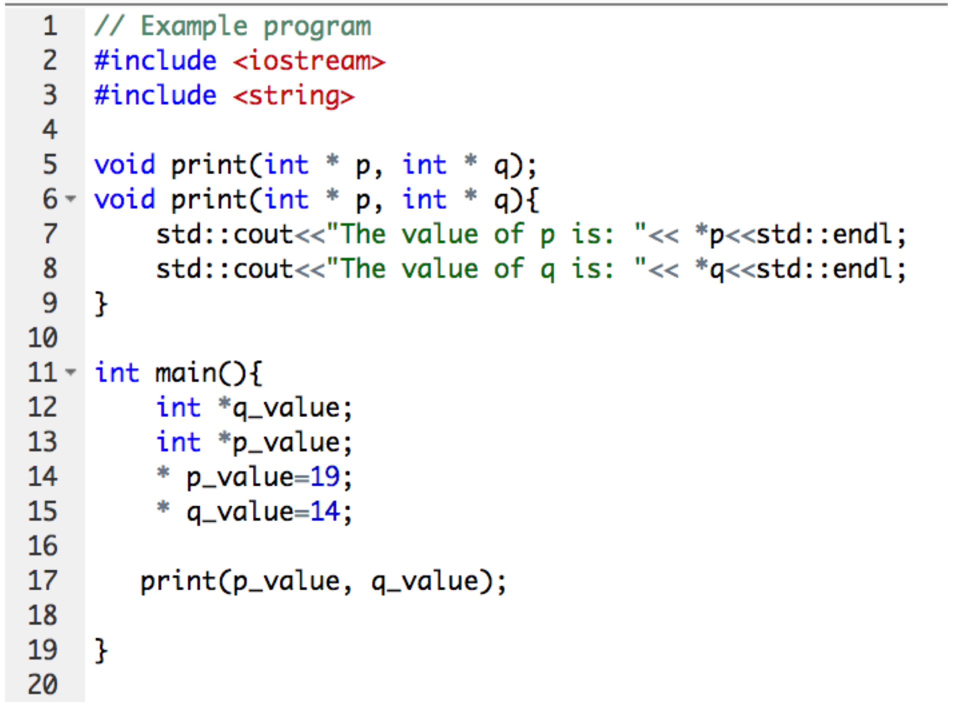
Pointer not initialized, not properly initialized

Question 2:

If there are error(s) in the code correct them.

12 int *q_value{new int};
13 int *p_value{new int};

cpp.sh/4civ



```
1   // Example program
2   #include <iostream>
3   #include <string>
4
5   void print(int * p, int * q);
6   void print(int * p, int * q){
7       std::cout<<"The value of p is: "<< *p<<std::endl;
8       std::cout<<"The value of q is: "<< *q<<std::endl;
9   }
10
11  int main(){
12      int *q_value;
13      int *p_value;
14      * p_value=19;
15      * q_value=14;
16
17     print(p_value, q_value);
18
19  }
20
```

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Question 3:

The following code is an example of which of the following? (circle all that apply)

Didn’t set pointer to nullptr after deleting it

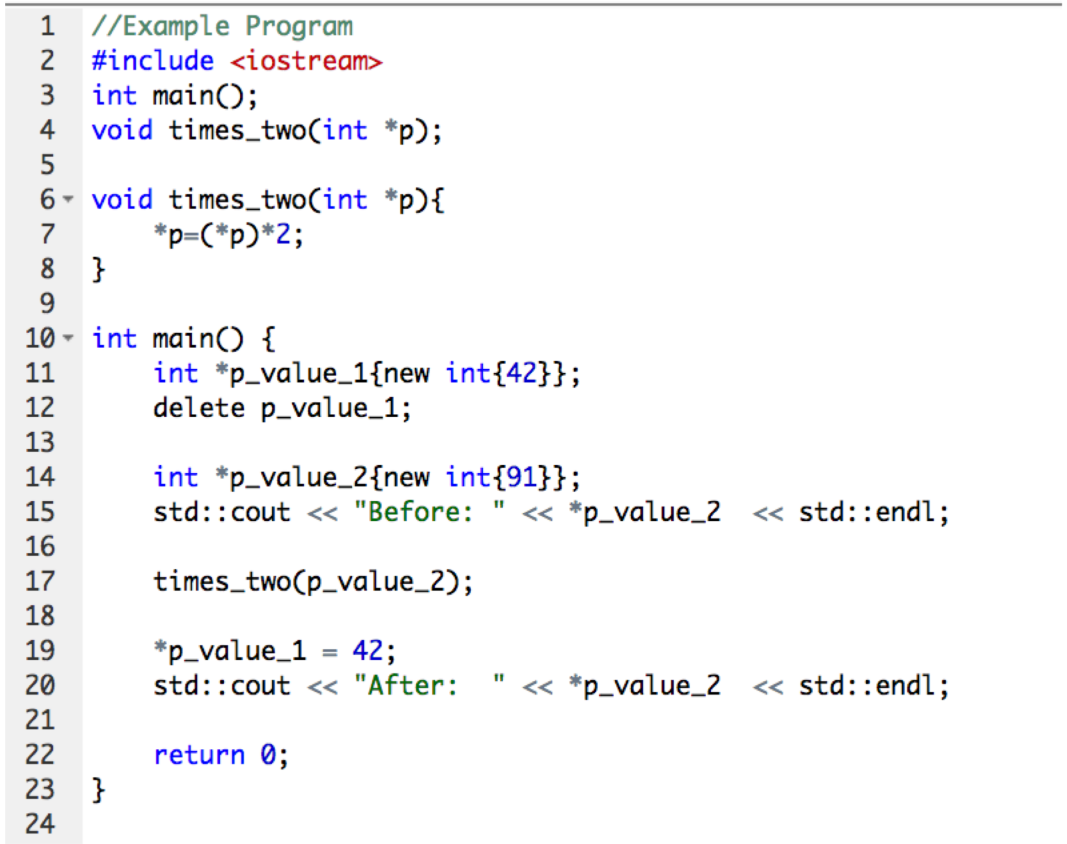
a) Memory Leaks b) [✓ Dangling Pointers]
c) Wild Pointers d) Proper Use of Pointers

Question 4:

If there are error(s) in the code correct them.

13 p_value_1 = nullptr;
19 <delete>

cpp.sh/8qeio



```
 1  //Example Program
 2  #include <iostream>
 3  int main();
 4  void times_two(int *p);
 5
 6  void times_two(int *p){
 7      *p=(*p)*2;
 8  }
 9
10  int main() {
11      int *p_value_1{new int{42}};
12      delete p_value_1;
13
14      int *p_value_2{new int{91}};
15      std::cout << "Before: " << *p_value_2  << std::endl;
16
17      times_two(p_value_2);
18
19      *p_value_1 = 42;
20      std::cout << "After:  " << *p_value_2  << std::endl;
21
22      return 0;
23  }
24
```

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Question 5:

The following code is an example of which of the following? (circle all that apply)

[✓ a) Memory Leaks] b) Dangling Pointers

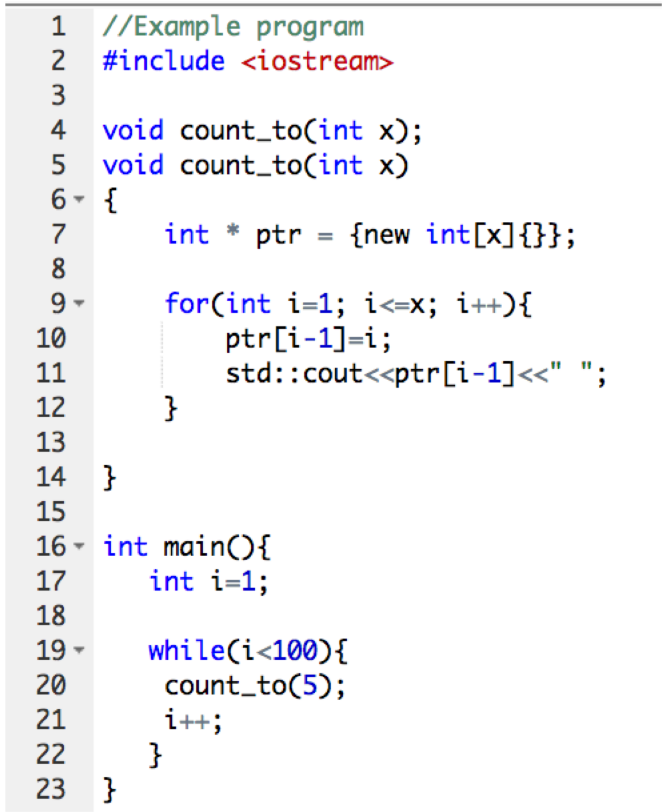
c) Wild Pointers d) Proper Use of Pointers

Question 6:

If there are error(s) in the code correct them.

13 delete ptr;

cpp.sh/2os36



```
1  //Example program
2  #include <iostream>
3
4  void count_to(int x);
5  void count_to(int x)
6  {
7      int * ptr = {new int[x]{}};
8
9      for(int i=1; i<=x; i++){
10         ptr[i-1]=i;
11         std::cout<<ptr[i-1]<<" ";
12     }
13
14 }
15
16 int main(){
17    int i=1;
18
19    while(i<100){
20     count_to(5);
21     i++;
22    }
23 }
```

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Question 7:

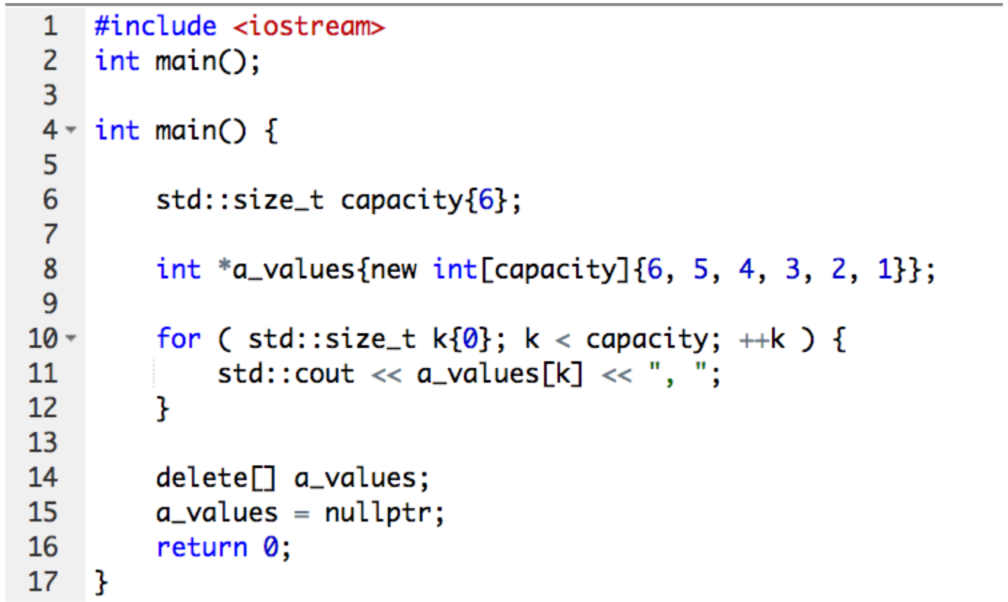
The following code is an example of which of the following?
(circle all that apply)

a) Memory Leaks
b) Dangling Pointers
c) Wild Pointers
[✓ d) Proper Use of Pointers]

Question 8:

If there are error(s) in the code correct them.

cpp.sh/4i4dt



```
#include <iostream>
int main();

int main() {

    std::size_t capacity{6};

    int *a_values{new int[capacity]{6, 5, 4, 3, 2, 1}};

    for ( std::size_t k{0}; k < capacity; ++k ) {
        std::cout << a_values[k] << ", ";
    }

    delete[] a_values;
    a_values = nullptr;
    return 0;
}
```

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Question 9:

The following code is an example of which of the following? (circle all that apply)

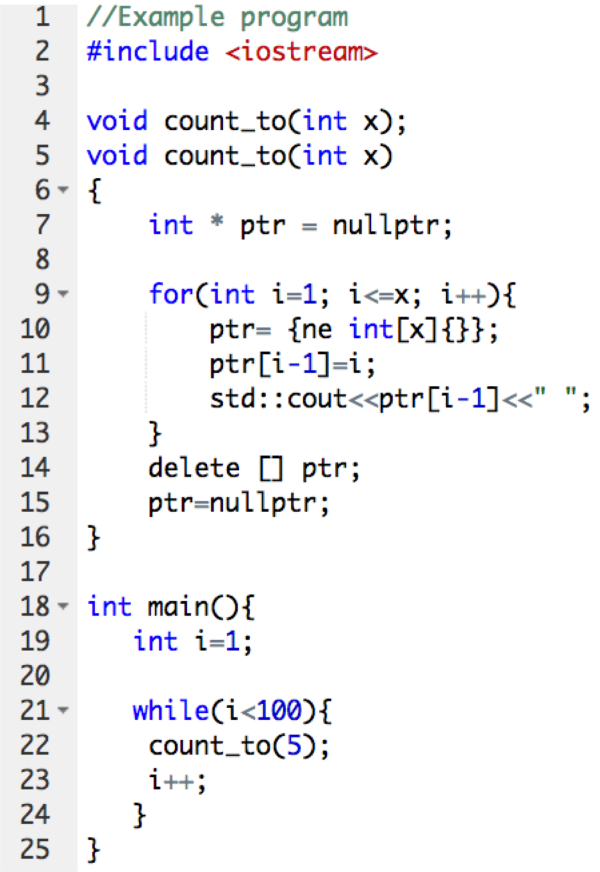
[✓ a) Memory Leaks] b) Dangling Pointers
c) Wild Pointers d) Proper Use of Pointers

Question 10:

If there are error(s) in the code correct them.

Move the deallocation inside loop (move 14, 15 after 12)

cpp.sh/86uos



```
 1  //Example program
 2  #include <iostream>
 3
 4  void count_to(int x);
 5  void count_to(int x)
 6  {
 7      int * ptr = nullptr;
 8
 9      for(int i=1; i<=x; i++){
10          ptr= {ne int[x]{}};
11          ptr[i-1]=i;
12          std::cout<<ptr[i-1]<<" ";
13      }
14      delete [] ptr;
15      ptr=nullptr;
16  }
17
18  int main(){
19     int i=1;
20
21     while(i<100){
22      count_to(5);
23      i++;
24     }
25  }
```