In the Name of Allah, the Most Gracious, the Most Merciful

## **COMSATS UNIVERSITY ISLAMABAD**



**Submitted By:** 

**HUMDA TARIQ** 

**Submitted To:** 

**MAM YASMEN** 

**❖ Course**: Computer network(lab)

**❖** Assignment NO: First

**❖** Registration No: **SP22-BCS-128** 

```
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    (globals)

Project Clas    Q1.cpp ×
           1 #include <iostream>
            2 using namespace std;
            4pint main() {
            5
                    int num = 42;
                    int* ptr = #
            6
            8
                    cout << "Value of num: " << num << endl;</pre>
                   cout << "Value pointed to by ptr: " << *ptr << endl;</pre>
            9
           10
           11
                    return 0;
           12 <sup>[</sup> }
           13
3 Compiler ☐ Resources 6 Compile Log 6 Debug 5 Find Results 6 Console 5 Close
```

```
using namespace std;
int main() {
  int num = 42;
  int* ptr = #

  cout << "Value of num: " << num << endl;
  cout << "Value pointed to by ptr: " << *ptr << endl;
  return 0;
}</pre>
```

## **QUESTION NO:2**

#include <iostream>

#include <iostream>
using namespace std;

```
int main() {
    int* arr = new int[5];
    for (int i = 0; i < 5; i++) {
         arr[i] = i * 2;
    for (int i = 0; i < 5; i++) {
         cout << arr[i] << " ";
    delete[] arr;
    return 0;

        ★
        ✓

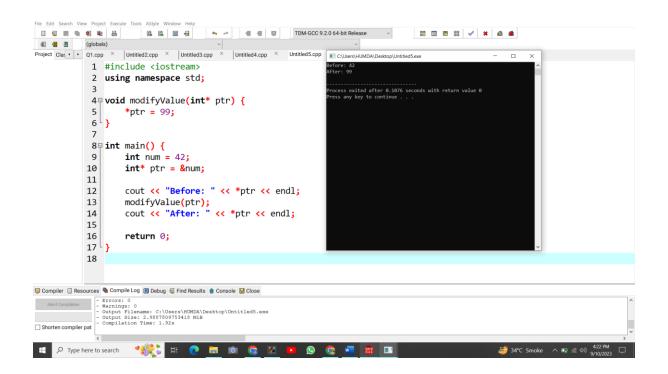
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        ✓

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            1 #include <iostream>
            2 using namespace std;
                                                          ocess exited after 0.119 seconds with return value 0 ess any key to continue . . . .
            4₽ int main() {
                   int* arr = new int[5];
                   for (int i = 0; i < 5; i++) {
    arr[i] = i * 2;</pre>
             8
             9
           10
                   for (int i = 0; i < 5; i++) {
   cout << arr[i] << " ";</pre>
           11 🖣
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           15
                   delete[] arr;
           16
           17
                    return 0;
           18 <sup>[</sup> }
           19
© Compiler ☐ Resources ® Compile Log ® Debug ③ Find Results ® Console ☑ Close
```

# **QUESTION NO:3** #include <iostream> using namespace std; void printMessage() { cout << "Hello, from the function!" << endl;</pre> } int main() { void (\*funcPtr)() = printMessage; funcPtr(); return 0; g g 😑 🖶 a a a Project Clas · P Q1.cpp × Untitled2.cpp × Untitled3.cpp 1 #include <iostream> 2 using namespace std; 4₽ **void** printMessage() { cout << "Hello, from the function!" << endl;</pre> 8 int main() { 9 void (\*funcPtr)() = printMessage; funcPtr(); 11 12 return 0; 13 <sup>[</sup> } S Compiler ☐ Resources Compile Log Debug Find Results Console ☐ Close

```
QUESTION NO:4
#include <iostream>
using namespace std;
int main() {
   int num = 42;
   int* ptr = #
   int** ptr2 = &ptr;
   cout << "Value of num: " << num << endl;</pre>
   cout << "Value pointed to by ptr: " << *ptr << endl;
   cout << "Value pointed to by ptr2: " << **ptr2 << endl;
   return 0;
                               TDM-GCC 9.2.0 64-bit Release
 a 4 I
1 #include <iostream>
          2 using namespace std;
                                                                          inted to by ptr: 42
inted to by ptr2: 42
          4 pint main() {
                int num = 42;
                                                                         ss exited after 0.1342 seconds with return value 0 any key to continue . . . _
                int* ptr = #
int** ptr2 = &ptr;
          8
                cout << "Value of num: " << num << endl;
cout << "Value pointed to by ptr: " << *ptr << endl;
cout << "Value pointed to by ptr2: " << **ptr2 << endl;</pre>
          9
         10
         11
         12
         13
                return 0;
         14 <sup>[</sup> }
         15
S Compiler ☐ Resources Compile Log Debug Find Results Console ☐ Close
```

```
QUESTION NO:5
#include <iostream>
using namespace std;
void modifyValue(int* ptr) {
  *ptr = 99;
}
int main() {
  int num = 42;
  int* ptr = #
  cout << "Before: " << *ptr << endl;
  modifyValue(ptr);
  cout << "After: " << *ptr << endl;
  return 0;
```

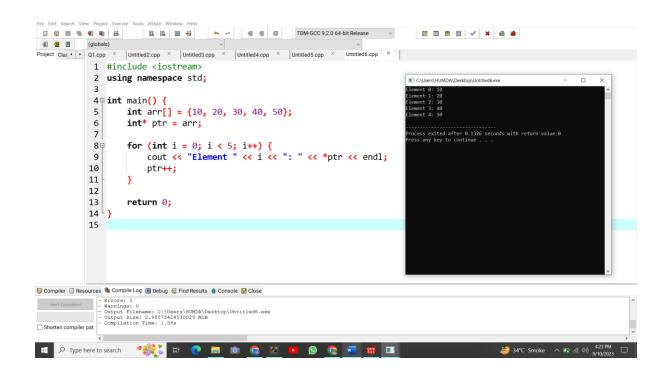


```
#include <iostream>
using namespace std;
```

```
int main() {
  int arr[] = {10, 20, 30, 40, 50};
  int* ptr = arr;

for (int i = 0; i < 5; i++) {
    cout << "Element " << i << ": " << *ptr << endl;
    ptr++;
  }

return 0;
}</pre>
```



```
#include <iostream>
using namespace std;
```

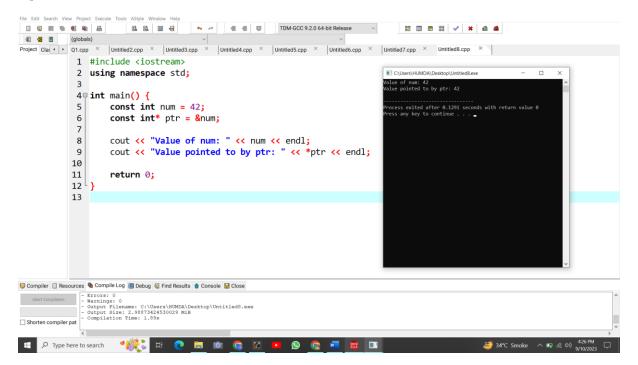
```
int main() {
  int num1 = 42, num2 = 84, num3 = 126;
  int* arr[] = {&num1, &num2, &num3};

for (int i = 0; i < 3; i++) {
    cout << "Value " << i + 1 << ": " << *arr[i] << endl;
  }

return 0;
}</pre>
```

```
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            (globals)
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              1 #include <iostream>
               2 using namespace std;
               4 pint main() {
               5
                      int num1 = 42, num2 = 84, num3 = 126;
                                                                                                        ocess exited after 0.132 seconds with return value 0 ess any key to continue . . .
               6
                       int* arr[] = {&num1, &num2, &num3};
                       for (int i = 0; i < 3; i++) {
  cout << "Value " << i + 1 << ": " << *arr[i] << endl;</pre>
               8 🖣
               9
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             12
                       return 0;
             13 <sup>[</sup> }
             14
S Compiler ☐ Resources 🖥 Compile Log 🔞 Debug 🚭 Find Results 🏚 Console 🖳 Close
Abort Compilation

- Rrors: 0
- Warnings: 0
- Output Filename: C:\Users\HUNDA\Desktop\Untitled7.exe
- Output Sizes 2.9867342530029 MiB
- Shorten compiler pat
☐ Shorten compiler pat
Type here to search
```



#include <iostream>

using namespace std;

```
int main() {
  const int num = 42;
```

```
const int* ptr = #
  cout << "Value of num: " << num << endl;
  cout << "Value pointed to by ptr: " << *ptr << endl;
  return 0;
}
QUESTION NO:9
#include <iostream>
using namespace std;
int main() {
  int arr[5] = \{10, 20, 30, 40, 50\};
  int (*ptr)[5] = &arr;
  for (int i = 0; i < 5; i++) {
    cout << "Element" << i << ": " << (*ptr)[i] << endl;
  }
  return 0;
}
```

```
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Project Clas • O 1.cpp × Untitled2.cpp × Untitled3.cpp × Untitled3.cpp × Untitled4.cpp × Untitled5.cpp × Untitled6.cpp × Untitled7.cpp × Untitled8.cpp × Untitled9.cpp ×
              1 #include <iostream>
              2 using namespace std;
              4 pint main() {
                      int arr[5] = {10, 20, 30, 40, 50};
                       int (*ptr)[5] = &arr;
                      for (int i = 0; i < 5; i++) {
  cout << "Element" << i << ": " << (*ptr)[i] << endl;</pre>
              8 🖣
              9
             10
             11
             12
                       return 0;
             13 <sup>[</sup> }
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Abort Compilation

- Errors: 0

- Output Filename: C:\Users\HUNDA\Desktop\Untitled9.exe

- Output Size: 2.985734253025 MiB

- Shorten compiler pat
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```

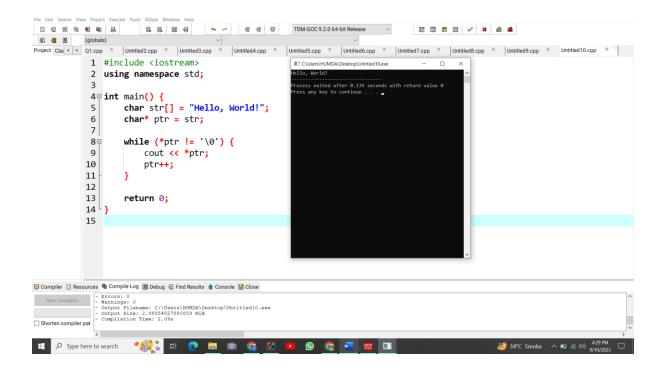
#include <iostream>

```
using namespace std;
int main() {
  char str[] = "Hello, World!";
  char* ptr = str;

while (*ptr != '\0') {
  cout << *ptr;</pre>
```

```
return 0;
```

ptr++;



```
#include <iostream>
using namespace std;

class Rectangle {
public:
    int length;
    int width;

    Rectangle(int l, int w) : length(l), width(w) {}
};

int main() {
    Rectangle rect(5, 10);
}
```

```
Rectangle* ptr = ▭
   cout << "Length: " << ptr->length << endl;</pre>
   cout << "Width: " << ptr->width << endl;</pre>
   return 0;
                            TDM-GCC 9.2.0 64-bit Release
## III ## ## III ## III ##
 a 4 I
                            × Untitled3.cpp
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         Untitled9.cpp
         4₽ class Rectangle {
            public:
               int length;
               int width;
                                                            ocess exited after 0.131 seconds with return value 0
          8
          9
               Rectangle(int 1, int w) : length(1), width(w) {}
         10 <sup>[</sup> };
         11
         12 | int main() {
         13
               Rectangle rect(5, 10);
               Rectangle* ptr = ▭
         15
               cout << "Length: " << ptr->length << endl;
cout << "Width: " << ptr->width << endl;</pre>
         16
         17
         18
         19
               return 0;
S Compiler ☐ Resources Compile Log Debug Find Results Console ☐ Close
QUESTION NO:12
#include <iostream>
using namespace std;
class Calculator {
public:
   int add(int a, int b) {
       return a + b;
```

```
}
    int subtract(int a, int b) {
         return a - b;
};
int main() {
    Calculator calc;
    int (Calculator::*addPtr)(int, int) = &Calculator::add;
    cout << "Addition: " << (calc.*addPtr)(5, 3) << endl;
    return 0;
                                     TDM-GCC 9.2.0 64-bit Release
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                      Untitled2.cpp
            5 public:
                   int add(int a, int b) {
                       return a + b;
                                                                                     cess exited after 0.1119 seconds with return value 0
ss any key to continue
            8
            9₽
                   int subtract(int a, int b) {
           10
                        return a - b;
           11
           12 <sup>[</sup> };
           13
           14 int main() {
           15
                    Calculator calc;
                   int (Calculator::*addPtr)(int, int) = &Calculator::add;
           16
           17
                   cout << "Addition: " << (calc.*addPtr)(5, 3) << endl;</pre>
           18
           19
           20
                    return 0;
           21 <sup>[</sup> }
           22
S Compiler ☐ Resources Compile Log Debug Find Results Console ☐ Close
Abort Compilation

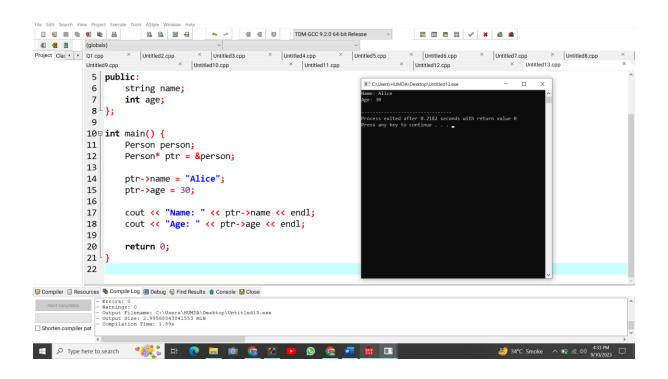
Reference: 0

- Warnings: 0

- Output Filename: C:\Users\HUMDA\Desktop\Untitled12.exe
- Output Filename: 2.9808612197076 MiB

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```

```
QUESTION NO:13
#include <iostream>
using namespace std;
class Person {
public:
  string name;
  int age;
};
int main() {
  Person person;
  Person* ptr = &person;
  ptr->name = "Alice";
  ptr->age = 30;
  cout << "Name: " << ptr->name << endl;</pre>
  cout << "Age: " << ptr->age << endl;
  return 0;
```



```
#include <iostream>
using namespace std;
```

```
class Shape {
public:
    virtual void draw() {
        cout << "Drawing a shape." << endl;
    }
};
class Circle : public Shape {
public:
    void draw() override {</pre>
```

cout << "Drawing a circle." << endl;</pre>

```
}
 };
int main() {
                  Circle circle;
                  Shape* ptr = &circle;
                 ptr->draw();
                 return 0;
File Edit Search View Project Execute Tools AStyle Window Help

Graph Release

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                                            9 <sup>L</sup> };
                                           10
                                           11 pclass Circle : public Shape {
                                                                                                                                                                                                                                                                                   ess exited after 0.1641 seconds with return value 0 s any key to continue
                                           12 public:
                                                                        void draw() override {
   cout << "Drawing a circle." << endl;</pre>
                                           13甲
                                           14
                                           15
                                           16 <sup>[</sup> };
                                           17
                                           18 int main() {
                                                                    Circle circle;
                                           19
                                                                         Shape* ptr = &circle;
                                           20
                                           21
                                           22
                                                                        ptr->draw();
                                           23
                                           24
                                                                         return 0;
                                           25 <sup>[</sup> }
                                           26
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- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\MUMDA\Desktop\Untitled14.exe
- Output Size: 2.9993436431846 MiB
- Shorten compiler nat
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```

#include <iostream>
using namespace std;

```
int main() {
            int num = 42;
            double pi = 3.14159;
             void* ptr1 = #
             void* ptr2 = π
             cout << "Integer value: " << *(int*)ptr1 << endl;</pre>
             cout << "Double value: " << *(double*)ptr2 << endl;</pre>
            return 0;
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                               (globals)
 Project Clas · P Q1.cpp
                                                                    × Untitled5.cpp
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                                  1 #include <iostream>
                                   2 using namespace std;
                                    4 pint main() {
                                                                                                                                                                                                                                  cess exited after 0.1478 seconds with return value 0
                                    5
                                                      int num = 42;
                                    6
                                                        double pi = 3.14159;
                                                       void* ptr1 = #
                                    8
                                    9
                                                       void* ptr2 = π
                                10
                                                      cout << "Integer value: " << *(int*)ptr1 << endl;
cout << "Double value: " << *(double*)ptr2 << endl;</pre>
                                11
                                12
                                13
                                14
                                                        return 0;
                                15 <sup>[</sup> }
                                16
 Under the compiler the compile
 Abort Composition

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\WINDA\Desktop\Untitled15.exe
- Output Size: 2.98873424530029 MiB

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- Compilation Films: 2.02s
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```